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

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

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Signature of Author_____

Derek William Beck
System Design and Management Program
February 2005

Certified by_____

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

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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

Biography

Derek W. Beck, born April 14, 1977, in Cleveland, OH, attended Ohio University's Honors Tutorial College, Athens, OH, where he graduated with a Bachelor of Science in Physics on June 12, 1999. On this same day, he was commissioned a Second Lieutenant in the United States Air Force. Shortly thereafter, he was assigned to the Los Angeles AFB, as a 61S1D Physicist. He served first as a project manager for a key component of the Space-Based Laser (SBL), part of the Space-Based Laser Integrated Flight Experiment project office. In early 2002, after a promotion to First Lieutenant six months before, Derek began working for the Space-Based Infrared (Low) System Program Office (SBIRS-Low, now known as the Satellite Tracking and Surveillance System, or STSS). In July of 2003, Derek was promoted to Captain. In January 2004, Derek began an Educational Leave of Absence to attend the Massachusetts Institute of Technology, Systems Design and Management program, in-residence. Upon leaving Cambridge in early February, Derek will be reassigned to Wright-Patterson AFB, Dayton, OH. There he will work for the National Air and Space Intelligence Center.

Note on Format:

This thesis has been designed in color, but has been optimized to insure printing in either color or black and white will produce readable results. In the text, references to colored parts of a figure will be in this format: red (dark gray). The first, "red" in this case, is the color of what is referenced if it is a color print or digital copy you are looking at. The second, "dark gray" in this case, is the "color" of what is referenced if it is a black and white print or digital copy you are looking at.

Note that for cross-tabulations, the total lines are in a dark gray always. This gray does not match the grays that result in a black and white print. The colors (or resulting grays) in any table are only for the data, and not the totals.

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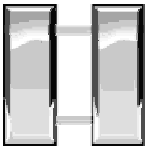
Nomenclature and Acronyms

61S	61	The AFSC prefix for Scientists.
62E	62	The AFSC prefix for Engineers.
63A	63	The AFSC prefix for Program Managers.
Active Duty	AD	To be a member of the full-time USAF.
Active Duty Service Commitment	ADSC	A contract to the USAF that requires active duty service, usually given in exchange for something from the Air Force (such as a university scholarship).
Active Duty Time	ADT	Completed number of years on active duty; same as YOS.
Air Force (short form of USAF)	AF	The short form for USAF.
Air Force Base	AFB	A major base of operations for the USAF.
Air Force Institute of Technology	AFIT	A graduate-level military school for mostly technical degrees. Located at Wright-Patterson AFB, Dayton, OH.
Air Force Materiel Command	AFMC	The acquisitions command of the USAF. Its HQ is located at Wright-Patterson AFB, Dayton, OH.
Air Force Personnel Center	AFPC	The center responsible for all personnel and human resources issues for the military, including the assignment of duty locations and jobs. It is located at Randolph AFB, San Antonio, TX.
Air Force Reserves		The component of the USAF, under the Air Force Reserves Command, that is comprised of part-time military who otherwise are part of the civilian sector.
Air Force Space Command	AFSPC	The space acquisitions and operations command of the USAF. Its HQ is located at Peterson AFB, Colorado Springs, CO.
Air Force Specialty Code	AFSC	The code assigned to personnel which identifies their career field.
Captain	CPT	The third rank up in the officer class.
Colonel	COL	The sixth rank up in the officer class.
Command (or Major Command)		One of the 9 major division of the USAF that includes multiple Air Force Bases working to accomplish a similar mission.
Commissioned		The official signed declaration and associated swearing-in ceremony that makes one an officer in the military.
Commissioned Years of Service	CYOS	CYOS equals YOS for any officer without enlisted time on active duty. If an officer was previously enlisted, their YOS is greater than their CYOS.
Company Grade Officer(s)	CGO	The ranks of Second and First Lieutenants, as well as Captains. The junior most of the officer class.
Department of Defense	DoD	One of the major departments under the US presidency responsible for national defense of the homeland and US interests abroad.
Enlisted		A non-officer rank of the military. Enlisted forces comprise the majority of the military.
Field Grade Officer(s)	FGO	The ranks of Major, Lieutenant Colonel, and Colonel. The senior level of the officer class. (The four ranks of Generals comprise the highest "executive" class of officers.)
First Lieutenant	1LT	The second rank up in the officer class.
Headquarters	HQ	In the case of the Air Force HQ, it is located at the Pentagon, Washington, D.C.

Lieutenant	LT	A generic grouping of all Second and First Lieutenant officer ranks.
Lieutenant Colonel	LTC	The fifth rank up in the officer class.
Major	MAJ	The fourth rank up in the officer class.
Officer		The leadership class of the military.
Officer Performance Report	OPR	The name of the report that records the annual evaluation of an officer in the USAF.
Officer Training School	OTS	A officer commissioning source that allows those who already have a Bachelor's degree to join the AF as a 2LT after undergoing officer training. OTS graduates incur a 4-year ADSC.
Permanent Change of Station	PCS	Being permanently relocated (or reassigned) to a new duty location. Essentially all new job assignments require a PCS.
Reserve Officer Training Corps	ROTC	A officer commissioning source that allows for officer training currently while the candidate is pursuing a Bachelor's degree at a traditional university or college. Successful completion of ROTC culminates in a commission to 2LT on or after graduation from the university or college, and a 4-year ADSC. Most graduates of ROTC are technically considered Active Duty Reserve Officers.
Scientists and Engineers	S&E's	A way of referring to 61S Scientists and 62E Engineers in the USAF.
Second Lieutenant	2LT	The lowest rank in the officer class.
Secretary of the Air Force	SAF	The civilian presidential cabinet member who is ultimately responsible for the USAF and reports to the Secretary of Defense.
Secretary of the Air Force, Acquisitions Office	SAF/AQ	The office under the SAF responsible for major defense acquisitions, and also ultimately responsible for the scientists, engineers, and program managers that accomplish these acquisitions in the USAF.
System Program Office	SPO	A standard unit for development and acquisitions of a major Air Force system.
Temporary Duty	TDY	The military equivalent of a business trip, which may be a day or week trip to a contractor, but also includes deployments to war zones or being sent to a professional or military school for advanced training.
United States Air Force	USAF	The air and space component of the Department of Defense of the United States of America.
United States Air Force Academy	USAFA	A officer commissioning source that allows for officer training currently while the candidate is pursuing a Bachelor's degree at a military undergraduate school. Successful completion of ROTC culminates in a commission to 2LT on or after graduation from the university or college, and a 5-year ADSC.
Years of Service	YOS	Completed number of years on active duty; same as ADT.

Air Force Officer Rank Structure[1]

O1	Second Lieutenant 2nd Lt. (2LT) 	O7	Brigadier General Brig. Gen. (BGEN)
O2	First Lieutenant 1st Lt. (1LT) 	O8	Major General Maj. Gen. (MGEN)
O3	Captain Capt. (CPT) 	O9	Lieutenant General Lt. Gen. (LGEN)
O4	Major Maj. (MAJ) 	O10	General Gen. (GEN)
O5	Lieutenant Colonel Lt. Col. (LTC) 		General of the Air Force (Reserved for wartime only)
O6	Colonel Col. (COL) 		

Ranks are from lowest (O-1) to highest (O-10)

(For B&W prints: all insignias are silver except 2LT and MAJ are gold.)

[1] Source: http://www.defenselink.mil/specials/insignias/officers.html

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.[2]

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. Primarily, all government acquisitions are actually built by civilian companies contracted to build a system. The Air Force then is the customer for such contracts and its technical workforce supervises this multi-year design, test, and manufacturing process known as acquisitions. The oversight conducted by the acquisitions community is necessary to insure the new fighter or space-based satellite meets specifications, and thereby insures the US taxpayer is getting what they paid for.

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. However, there is considerable cost in recruiting young officers only to lose them, particularly when it takes 5 or more years to develop an officer.[3] The other means of retention is to minimize the rate attrition, and this can only be accomplished by addressing the frustrations of the junior officers who are in a position to separate. This thesis attempts to address this latter means of addressing retention by seeking to discover the factors that driver retention rates.

[2] The shorter form, 61's, 62's, and 63's, will also be used throughout this thesis.

[3] Forseth, 12.

Background

The reason I have undertaken this research is that I have seen many good Company Grade Officers (CGO's) leave the AF. In fact, I myself had separation orders before I was able to broker a deal with the AF that would allow me to attend the Massachusetts Institute of Technology. As a Lieutenant, I had seen more than a few presentations on the "serious retention issue" in the acquisitions fields, and this "desperate need for scientists and engineers" was one of the reasons why my coming to MIT was difficult. However, it was one presentation by a senior leader on the issue of retention for scientists and engineers (S&E's), tied with my own impressions, as well as what I knew from other CGO's based on conversations in the hallways, that led me to believe that senior leaders of the AF did not really understand the key issues plaguing young officers.

I decided that perhaps a CGO should present forth to senior leaders the real key retention issues driving not only the S&E's, but also the 63A Program Managers as well. Armed with my own experiences, which still holds relevancy because at the start of this research I had only been a Captain for about year (and therefore was part of the target population), I began to shape my thesis efforts.

To begin with, I felt it worth analyzing the actual manning issue. How bad is it? Figure 1 shows the manning rates from 2002-2004 for Lieutenants[4], Captains, and Majors that serve within the pertinent three career fields (or AFSC's). It also shows the results for the AF as a whole for each category. This first thing that becomes obvious when looking at this figure is that Lieutenants are grossly overmanned. The numbers then drop below (or, given the figure, to the left of) 100% for Captains and Majors.

Manning is determined by taking the number of actual officers assigned and dividing by the number of authorizations (or job slots) that are available for a given category. Using authorizations in this equation, however, makes all manning calculations questionable. Authorizations are determined mostly from the bottom up, beginning at each unit or organization in the Air Force. The maximum authorizations allowed is limited by funding allotted by Congress, but the variability of authorizations, and the respective manning, for any category of rank and AFSC can easily be tweaked (at essentially any level of leadership) to get desired results. It must therefore be a basic assumption for this thesis that the total number of authorizations for a given AFSC is accurate, though I will not assume that within a given AFSC the number of authorizations by rank is also accurate.

The reason for that latter part is simple. When an organization decides what job slots it has available and then passes up the chain of command those requirements, nearly every organization will ask for at least a Captain. Occasionally, however, they will ask for a First Lieutenant as the lowest rank. No organization asks for a Second Lieutenant, since they are the most junior rank.

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[4] Second and First Lieutenants are combined throughout this thesis as on group, as is typical for AF labor analysis. The only difference between the two ranks, other than insignia and pay, is time on active duty. Job slots for Second Lieutenants technically do not exist, and so the sum of all Lieutenants available divided by the jobs (or authorizations) of First Lieutenants really necessitates lumping these two similar ranks together.

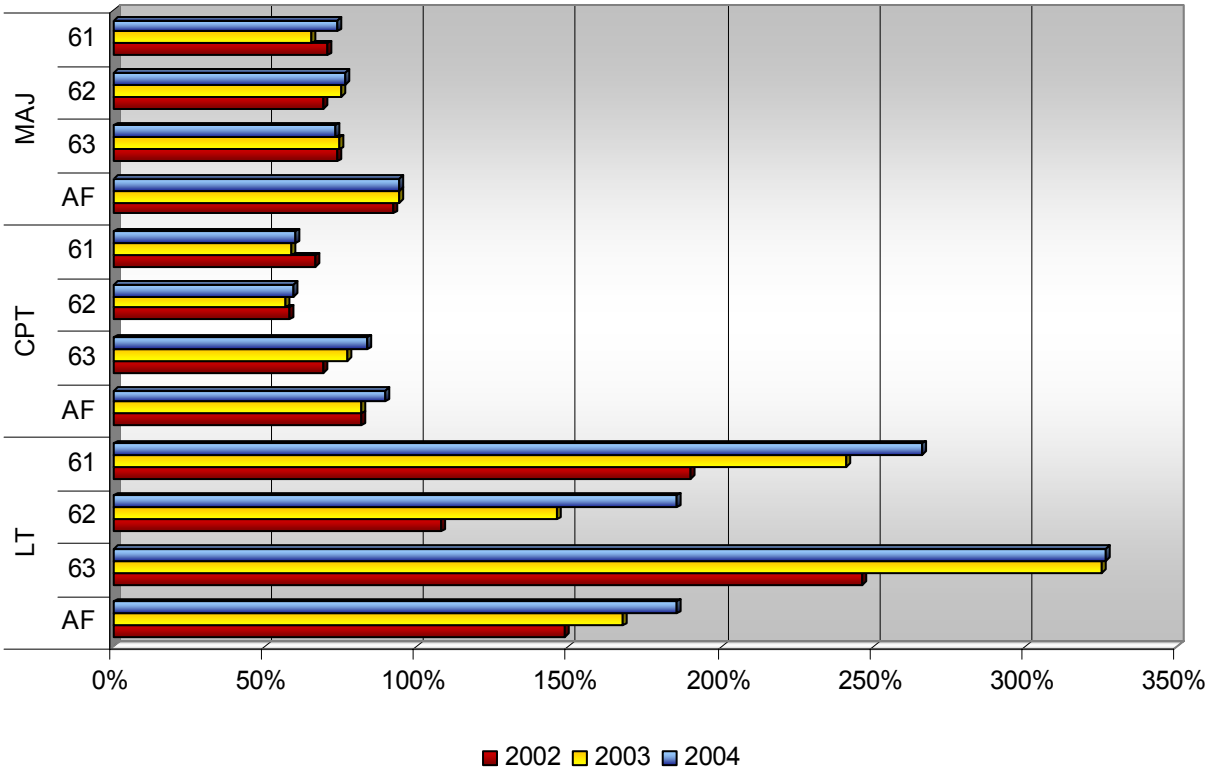

Figure 1 Manning rate comparison for 61, 62, 63, and the AF as a whole.
For LT, CPT, MAJ in 2002-2004.

Meanwhile, in reality, officers join the AF as Second Lieutenants, and after 2 years of service, become First Lieutenants. After 4 years of service, most[5] have the option of separating or becoming a Captain. These promotions occur essentially based on Commissioned Years of Service alone, and so these junior promotions are assured. With the natural attrition of officers after 4-5 years, and the lack of lateral hiring into higher ranks in the military recruitment system, there are (nearly) always more Lieutenants in these career fields than Captains, and likewise more Captains than Majors, etc. Yet the authorizations for Captains are 2 to 3 times more than that of Lieutenants. Put another way, while actual people that are Lieutenants always outnumbers the actual Captains, there are more requests for Captains than Lieutenants. This then gives an artificial appearance that there the AF has too many Lieutenants and not nearly enough Captains. In reality, this is just that organizations far prefer Captains to Lieutenants. In practice, the organizations often have to "settle" for a Second[6] or First Lieutenant to fill a Captain job slot (authorization). (See Appendix E for actual manning data. Notice in this data the authorizations for Captains versus Lieutenants. Also, see Appendix Y for further discussion on the promotion system.)

[5] Graduates of the US Air Force Academy incur a 5-year ADSC. Graduates of OTS or ROTC incur only 4 years. The officer may incur other concurrently running ADSC's due to special training or assignments, taking advantage of educational opportunities, etc.

[6] Which is a good thing because literally no one asks for Second Lieutenants; 2LT's would not have jobs if the AF only gave organizations what rank they asked for.

With the question of the method employed by the Air Force for determining manning now raised, one might be led to think of the "manning rate" instead as a preferential rate for particular ranks. This easy manipulability of manning rates leads us to Figure 2. Employing the assumption that the authorizations of any rank within a given career field is accurate or approximately so, this figure shows only the total number of authorizations from Lieutenants up to Captains for each career field. This way we can represent a more real picture of the career field, since clearly Lieutenants can and do fill available Captain authorizations, as Captains can and do fill available Majors slots, etc. In fact, given the higher ranks are the ones undermanned, but the lower ranks have the higher number of people available, there is no reason in these fields ever to have an officer serve in a job slot that was intended for someone of lower rank.

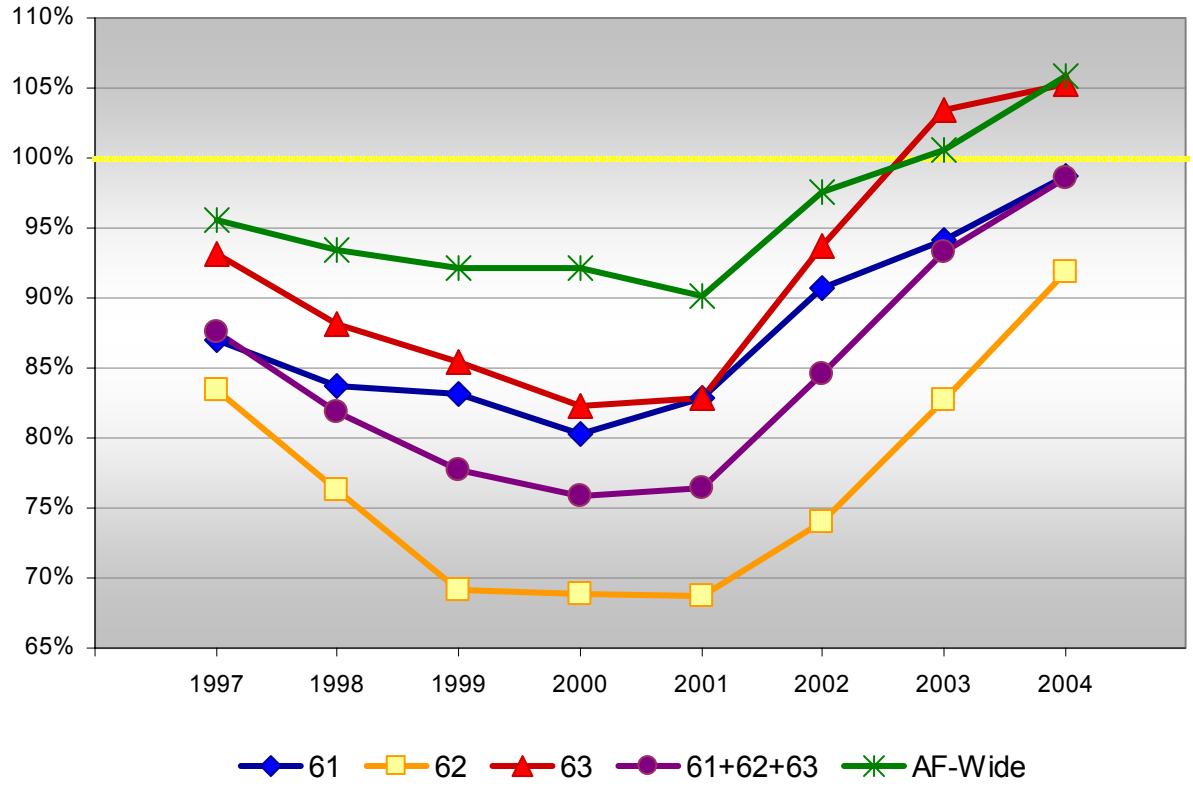

Figure 2 Comparison of total manning rates of 61, 62, 63, and AF-wide.[7]

Figure 2, masking individual rank issues, shows that the AF as a whole, as well as the 63 Program Managers, are now overmanned, though this was not always the case. This over manning is likely a combination of an effect of the post-9/11 economy downturn, a temporary "Stop-Loss" measure imposed selectively from 2001 to 2003[8], recruitment rates staying the same[9] despite "Stop-Loss", and the higher sense of patriotism and serving of the public post 9/11. How-

[7] Excludes STP. See Appendix E.

[8] "Stop Loss" is a policy implemented with Congressional approval that denies certain critical classes of military from leaving the military (by either separation or retirement) for a short time. This policy is reserved for crises.

[9] The Air Force has attempted to quell over manning by limiting recruitment in 2004.

ever, while 61's are nearly at 100%, 62's are still undermanned. If you can assume that 61, 62, and 63 officers are mostly interchangeable at least within acquisitions, where the majority of each of these resides, then that line shows that overall, acquisitions is about at optimal manning. However, these jobs are not interchangeable, since engineers that are not doing engineering will tend to feel undervalued and underutilized. It is in fact the belief by the assignment system that these officers are interchangeable that is likely a large source of dissatisfaction with both the assignment system and an officer's job overall.

While Captains and Majors may in fact be undermanned, it is difficult to know how legitimate this is due to reasons explained above on authorizations. However, it is clear that the engineering field is undermanned as a whole, regardless of what is going on among its ranks. What is also clear is that the military recruitment system, which only hires from the bottom, expects and in fact requires a certain degree of attrition. The problem then is managing the attrition (or separation) rates, or their inverse, retention rates.

Armed with the results of this research, the AF can conceivably manage their current inventory of officers more effectively, thereby minimizing separation rates, which in turn minimizes the missing officers in the middle ranks. Perhaps this research can also serve to help make retention rates at least somewhat more predictable. At the very least, it is hoped that this document will help to educate the senior AF leadership on the issues afflicting the junior officers, thereby bring light to several issues that also affect overall morale.

This research is important because close to half of the acquisitions junior officers in the Air Force are at least considering early separation. This rate of loss also has intangible effects on unit morale in these career fields. The Air Force has mostly addressed retention by recruiting more—front loading the personnel system in anticipation of high loss rates later on in an attempt to ultimately end up with the right numbers of personnel in the senior ranks. But losing so many recruits after 4-5 years, precisely when they are becoming fully developed and most productive to the Air Force, is a serious problem that costs the Air Force, and the taxpayer, lots of money.

The purpose of this thesis is to analyze the driving issues that lead technical officers to separate. These issues primarily affect CGO's, because after about the 8 to 10 Years of Service (YOS), officers are more compelled to remain in until their retirement eligibility at 20 years. The retirement system is in fact a huge motivation for anyone over about 10 YOS not to leave regardless of their satisfaction with military life. However, as will be explored later in this thesis, it may be the case that the retirement system is also a driver for undecided CGO's to <u>leave</u> prematurely. The focus of this research is then "why do officers leave the Air Force", and in particular, "why do acquisitions CGO's leave the Air Force".

My hypotheses of the driving issues I believe affect all junior officers in general, but particularly true of 61, 62, and 63's, are listed in turn.

<u>Job satisfaction is the key problem.</u> 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 S&E's.

<u>Over recruiting leads to lower job satisfaction.</u> The idea that there are so many Lieutenants but not enough senior officers suggest two things. The first is that there is less professional de-

velopment 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 furthered 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 issues 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[10], and stability, is not enough to sway that officer from prematurely leaving. However, once job satisfaction declines, civilian jobs become more attractive.

The rest of this thesis investigates these hypotheses as they apply to the junior officers in the acquisitions community.

[10] I say "perceived-better pay" because once you calculate the cost to buy the benefits you otherwise receive from the military, military pay plus allowances and benefits is very comparable to civilian pay plus benefits for the typical experience and education level in the military.

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.[11] 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. The literature review, whose results are discussed in another section of thesis, served primarily to further my thinking of the key problems and hypotheses. It also was important in determining what types of questions have not been fully recognized or considered, and this proved useful in designing a unique survey tailored for the AF officer population of interest.

Interviews were conducted mostly by telephone with officers and government civilians whose jobs were closely related to the topic of this research. Some of the organizations with which I discussed this thesis, along with my conclusions, include AFPC, SAF/AQ, AFMC HQ, and personnel-related people at Los Angeles AFB, the base at which I was last assigned. Through the course of the earlier interviews, their inputs were able to shape the survey I created. Additionally, some were able to provide other research or data that I had not previously been aware of. Most of this data focused on the wrong kinds of questions for what was important for the population of interest. While these interviews were important in shaping the course of this thesis as well as my understanding, explicit references to interviewees will be excluded from this thesis. This is done to protect the interviewees, whether it is necessary or not, as their thoughts are opinions based on their experiences and do not represent the official position of the AF.

The web-based survey, which was created using the survey website surveymonkey.com, was created with the intent of soliciting, with the Air Force's help, scientists, engineers, and program managers from across the Air Force. The survey was required by public law to be reviewed by a recognized entity qualified to validate research of any kind conducted on humans. In this case, the reviewing body was the Committee on the Use of Humans as Experimental Subjects, or COUHES, an office that is part of the Massachusetts Institute of Technology.[12] Contacts through AFMC HQ and Los Angeles AFB helped facilitate the distribution to the target audience by sending a prewritten email that explained how to login in to the survey. (See Appendix B for this prewritten email.) The survey required a password, which, it is hoped, prevented those outside the target audience from participating. After completion of the survey, respondents were forwarded to my personal MIT website, where they had the option of bookmaking the site and come back later to see posted results.[13] The survey was open in early August, with the first responses received on August 5, 2004, and then the survey was closed on Sept 30, 2004. (See Appendix D for an example of the web-based survey.) Data from the survey was analyzed with the software originally called the Statistical Package for Social Sciences, but now known simply as SPSS. Further analysis, as well as all graphical depictions, was conducted using Microsoft Excel.

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[11] 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.

[12] http://web.mit.edu/committees/couhes/index.shtml

[13] This site has since been moved to a semi-permanent location: http://mit.cartala.com

Literature Review

The area of research on the problems associated with military retention is not new. However, much of this research is focused on the AF as a whole, and while some lessons can be gleaned from it for the purpose of my own more-focused research, it hides some of the idiosyncrasies specific to technical officers in the acquisitions community.

One example that considers the entire AF in its retention study is a 1999 thesis from the Air Command Staff College (ACSC) on retention problems, written by Malackowski and Keesey. However, it may be a bit dated, as it suggests that if the USAF improve compensation it may improve retention. While this was possibly true for the mid to late 90's research on which this thesis was based, it is a basic hypothesis of my own thesis that the USAF should in fact not concentrate on compensation, as it is not a key driver on retention. This ACSC thesis is indicative of an AF-wide problem—myopic fixation on compensation hides the fact that pay is likely a symptom of other larger issues. To this end, compensation is apparently the only driver for career intentions the AF has taken an active role in changing.

"Myopic fixation on compensation hides the fact that pay is likely a symptom of other larger issues."

However, this ACSC thesis is not without merit. One significant finding of the Malackowski and Keesey thesis that is likely still true today, and one which apparently has not yet been acknowledged by senior AF leadership concerned with retention, is that basic "organizational climate" issues are significant drivers on retention.

"Basic 'organizational climate' issues are significant drivers on retention."

One of the most compelling recommendations to senior leaders made by Malackowski and Keesey is that the Air Force needs to begin surveying those that separate—a recommendation that the AF still has yet to implement. Other sources[14] suggest that exit surveys should be conducted by third parties with assurances of anonymity to insure honest results, which often yields very different findings. (This idea also suggests that my own thesis may have better and more accurate results than similar work conducted by the Air Force, since I emphasized my survey was anonymous as well as not funded by or conducted by the AF.)

Another thesis, by Scheuchner in 1996, looked at the entire AF and considered job satisfaction as a driver on retention. In Herzberg's 1959 book (as cited by Scheuchner), Herzberg concluded that there were five variables important to job satisfaction: achievement, advancement, recognition, responsibility, and the work itself.[15] Scheuchner appears to be one of the few researchers to link job satisfaction to retention in the Air Force. Among his conclusions, now likely somewhat outdated, he suggests the availability civilian jobs, a say in the assignment system, geographic stability, job

"…five variables important to job satisfaction (are) achievement, advancement, recognition, responsibility, and the work itself."

[14] Soper

[15] Scheuchner, 8.

challenge, quality of senior leadership, and recognition are all top drivers for non-rated[16] officers to separate.[17] These insights would prove useful as I began to build my own survey.

It was not until about 2001 that research began to appear that was specific to the acquisitions community, and in fact most of it specific to S&E's. The basic premise of Lin's 2003 thesis was that for most people, some single event began the idea of separation, and this single event began a snowball effect for those that ultimately did separate. Lin's research, which was focused on a specific group[18] of former Air Force officers had who are now separated, suggested the top five drivers on separation, in order of importance, were the assignment system, family, promotion, job satisfaction, and policy/bureaucracy.[19] (Compensation was only the sixth most important reason this group had separated.) The reference to promotion was the frustration with the promotion system because it is based on time in service instead of performance. That of family was closely tied with the assignment system in that people were frustrated with the strain of relocating frequently or moving to remote locations where they could not bring their family. One respondent's example of bureaucracy was dissatisfaction with officers having operational backgrounds being in charge of a group of analysts.

There is also an apparent stigma some senior officers have against junior officers with aspirations to leave the AF. This stigma suggests that early separation is somehow not living up to the Air Force Core Value of "Service Before Self". Lin suggests, "...by fulfilling one's Active Duty Service Commitment (ADSC), an officer was patriotic, fulfilled his or her duty, and has done a lot for the Air Force and should not feel guilty at all about separating."[20]

"The (personnel) system rewards retention more than it rewards performance."

Lin's study is also one of the few to look at a theme of the lack of a merit-based system (or lack of a meritocracy, as he refers to it). The idea is that merit is not recognized in the AF as a means to differentiate officers on pay or promotion. Lack of a merit-based promotion system, and its effects, were emphasized in a 1994 RAND report by Asch and Warner which stated, "…although more productive individuals do tend to get promoted more often and thus get pay raises quicker under a time-in-service system, they lose their current pay advantage over less-productive individuals once the less-productive ones are promoted."[21] (It is important to note that in the Air Force, this accelerated promotion schedule is not even an option until the promotion to Lt Colonel.) The RAND report adds that another problem with a system based on time is that "…lower ranking personnel with more seniority receive (in some instances) more than

[16] Non-rated refers to those officers not in direct operational capacities. That is, non-pilots, non-navigators, etc.

[17] Scheuchner, 35.

[18] 61S, 62E, 63A, as well as two other AFSC's (32E Civil Engineering and 33S Communications & Information). (Together, these five AFSC's were the only groups eligible for the Continuing Skills Retention Bonus, or CSRB.) The survey was of 182 people that had separated from these AFSC's in the last 10 years (1993-2003).

[19] Lin, 47.

[20] Lin, 56.

[21] Asch and Warner, 24.

higher-ranking personnel with less seniority. The concern is that the system rewards retention more than it rewards performance."[22]

The Asch and Warner report 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."[23] The report also cites that personnel that leave in their 40's or 50's "…may have worse civilian opportunities than those who either left earlier or (compared to) civilians of similar age."[24]

The RAND report also appears as one of the only documented sources of what every officer knows exists: that the "…implicit tenure point…is promotion to (Major), around (Years of Service equals) 10."[25] This is more commonly known by officers as the "point of know return" for making a career decision. Once past this point, the officer has less time to retirement (at 20 years) than behind them.

Finally, this report also made light of a very well known but rather unchallenged discriminatory act of the military compensation system, that of paying those with dependents (children, spouses) more compensation than those that are single.[26] The report stated, "…payment based on need (number of dependents) rather than on performance weakens motivation and effort."[27]

Lin's thesis led me to another important work: that of Butler and Waldroop's "Job Sculpting" article from the Harvard Business Review. This article 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."[28] The problem is that, according to Butler and Waldroop, "…a good number of people, at least up until midlife, don't actually know what kind of work will make them happy."[29] People that do not yet know their life interests may jump from job to job in a "grass is greener on the other side" mentality, but never being satisfied because they have not yet discovered the root of their dissatisfaction.

"Life interests are what will ultimately make one happy, and this is the key to long-term retention."

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[22] Asch and Warner, 23.

[23] Asch and Warner, xvii.

[24] Asch and Warner, 25.

[25] Asch and Warner, 20.

[26] Specifically, Basic Allowance for Housing and Basic Allowance for Sustenance, which can make up a third of an officer's total pay, are given based on number of dependents.

[27] Asch and Warner, 24.

[28] Butler and Waldroop, 146.

[29] Ibid.

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. Values because most people that join the military appreciate the patriotic ideal of serving, and may value such things as a stable pay, assured retirement benefits (after 20 years), etc. Ability is augmented because most military jobs receive training necessary to make the officer good at any given job they are assigned.[30] However, Butler and Waldroop say 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 later 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.

"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 later 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."

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."[31] 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."[32] These assertions strike at the heart of what are the problems with job satisfaction in the Air Force as well as the assignment system.

Other documents explicitly echoed the problems of the assignment system. For example, an Air Force report by Arreola and Soper that conducted career research on a focus group of 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 that several of the focus group wondered: 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? Related to this issue is that of an option of dual career tracks: one that would remain technical focused and one that would be headed towards management. Many in the report were upset at only being promoted based on advancements along managerial paths. The idea of a dual career path is not new, and is available to pilots, for example.[33]

The Arreola and Soper report also discussed the need for a merit-based system of incentives and the closely related issues with the Air Force evaluation and appraisal system, embodied in a documented form known as the Officer Performance Report (OPR). These sentiments are resonated in an article by Wayland, who states "…many officers don't perceive a direct relationship

[30] Many, however, would claim training for acquisitions-type work is either untimely or incoherent with their daily work.

[31] Butler and Waldroop, 147.

[32] Ibid.

[33] Armstrong, 2.

between advancement and actual duty performance."[34] The article states the major problem with the OPR system is that it is extremely over-inflated and thereby makes the evaluation truly meaningless.

Another key problem the Arreola and Soper report found was that outsourcing more and more S&E officer jobs to government civilians or contractors meant that officers were working side by side with a living example of how they could do the same job, get paid more for it, and likely never having to be relocated again.

The idea of an operational assignment was also suggested in this document. While some of my literature review seemed to unilaterally suggest operational tours as a means of retention, these sentiments often are not representative of the S&E community. According to the Arreola and Soper report, "overall, the military S&E's felt it best to leave (operational tours) as an option."[35] In fact, many agreed in this report with one comment that "the first tour (of duty) in an (operational) assignment would be a kiss of death."[36] It is more likely that individuals are split on their desire for an operational tour, and for those that do desire "Ops", that desire likely wanes with time as officers become more interested in settling down, raising a family, etc. The report also offered a middle ground for the debate of operational tours: an operational temporary duty (TDY) of just weeks or months.

"Outsourcing more and more S&E officer jobs to government civilians or contractors meant that officers were working side by side with a living example of how they could do the same job, get paid more for it, and likely never having to be relocated again."

A recent study by the Air Force Materiel Command (known as the Junior Force Study), looked at junior officers in general (with some specific focus on the acquisitions community) and found some interesting insights in how senior leaders see the world and the Air Force from a very different generational-lens than junior officers. The report highlights differences such as those above 30 tend to think of the Air Force as their life, while junior members tend to feel that one's job is just a part of one's life, and that their lives outside of the workplace are just as important if not more so. It also implies that older generations are of the mind that you work your way up the corporate ladder, while the junior officers are much less loyal to any given corporation and are more concerned with meaningful and challenging experiences. The report also highlights that many in acquisitions felt they were not aware of what they were getting themselves into before joining the Air Force as acquisitions officers.[37]

"Those above 30 tend to think of the Air Force as their life, while junior members tend to feel that one's job is just a part of one's life, and that their lives outside of the workplace are just as important if not more so."

Finally, in preparation for my own survey and statistical analysis, I was able to gain

[34] Wayland, (no page number).

[35] Arreola and Soper, 14.

[36] Ibid.

[37] "The Next Greatest Generation: Junior Force Study", 95.

access to results of a 2003 survey of 62E's as was conducted by a division of SAF/AQ (SAF/AQR).[38] The results showed that for those with 3-5 YOS, about 46% suggested intent to make a career of the Air Force, 34% were leaning to leave the AF, and the remaining 20% were undecided. These numbers were based on 203 respondents. The results mimicked closely (within 1%) a study of 1664 non-pilots. This survey went on to consider top reasons that would influence remaining in the AF, and top reasons influencing leaving the AF, and then compared this to a large number of responses from all non-pilot AFSC's.

According to the study, the top five reasons for 62's with 3-5 YOS to remain in the AF were 1) the retirement system, 2) job security, 3) patriotism, 4) medical care for dependents, and 5) medical care for oneself. Bonuses or special pay ranked #9. These 62E results were based on 93 respondents. In comparison, the Air Force wide population of 746 non-pilots with 3-5 YOS varied slightly in their rankings. They ranked the top five as 1) patriotism, 2) the retirement system, 3) medical care for oneself, 4) job security, and 5) medical care for dependents. In short, they each had the same top five choices, but in a slightly different order. (There were 42 choices available to rank as influences for an AF career.)

The top five reasons for 62's with 3-5 YOS to leave the AF were 1) availability of comparable civilian jobs, 2) compatibility of military with spouse or spouse's job, 3) number of PCS moves (that is, new assignments), 4) potential for outsourcing or privatization of the 62E career field, and 5) Air Force officer or enlisted evaluation system. The assignment system ranked in at #6, overall job satisfaction at #8, pay and allowances at #20, and bonuses or special pay was at #24. These 62E responses were based on 69 respondents. In comparison, the Air Force wide population of 598 non-pilots with 3-5 YOS varied slightly once again. Their top five were 1) availability of comparable civilian jobs, 2) compatibility of military with spouse or spouse's job, 3) job assignment system, 4) number of PCS moves (that is, new assignments), and 5) having a say in the location of the assignment. For this group, overall job satisfaction came in at #6, pay and allowances was at #27, and bonuses or special pay was at #22. (There were 42 choices available to rank as influences to leave the AF.)

"Job satisfaction, the assignment system, and availability of comparable civilian jobs are the primary factors on retention."

These results help affirm my hypothesis that pay is not a major driver for retention. However, in this group, job satisfaction did not ultimately end up as high on the list for a reason to separate, as I would have expected. The assignment system in this study is broken down into many components (i.e. compatibility of military with spouse or spouse's job, job assignment system, number of PCS moves, etc.). Considering this to simplify the SAF/AQR study results, then, for example, the top reasons for 62's with 3-5 YOS to leave the AF were 1) availability of comparable civilian jobs, 2) dissatisfaction with the assignment system, and 3) overall job satisfaction. Therefore, job satisfaction is not as low as it first appears—it just depends on the level at which you break down major themes. I believe, however, that job satisfaction is more significant than this study suggested.

[38] See the "Career Influences of Company Grade 62EX Personnel with 3 to 5 Years of Service" report.

My conclusions from the literature review are that job satisfaction, the assignment system, and availability of comparable civilian jobs are the primary factors on retention. I also believe that pay, despite what some of the older literature suggested, is not a significant factor, but merely a symptom of the first three issues. Finally, I believe that there is some negative retention effect due to the military being primarily devoid of merit-based incentives, whether promotion or pay. The approach of my research is then to focus on job satisfaction and assignment-related issues by asking unique questions that have not been presented in other research. I will also analyze pay and the effects of the recent Continuing Skills Retention Bonus (CSRB), which is so recent that it has yet to be addressed in any research.

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. During these nearly two months of data gathering, 762 unique respondents were gathered. Of these, 40 did not complete the survey.

Of the remaining 722, tests were conducted on the data to insure its validity. The tests were conducted by comparing the results of both Question 12 and Question 29, which both asked the respondent about their career intentions within the AF, but in different ways. Question 12 was posed as innocuous as possible while Question 29 deliberately posed the same question regarding career intentions in a reverse way, forcing the respondent to really read the question. So instead of asking if the respondent intended to remain in the AF, it asks the respondent the chances they will NOT stay in the Air Force. The responses were then compared and if the career intent was widely different from either of these two questions, their entire data record was considered "Suspect". (Details of how these two questions were tested to insure the record was valid are listed in detail in Appendix H.) The tests concluded that 130 records should be labeled as "Suspect" records, and so were specially marked. The likely cause of so many Suspect records is that since the invitation instructions for this web-based survey were delivered to its intended audience via email, often with encouragement of someone of higher rank or position within the given AF organization, this likely influenced respondents to take the survey without regard to answering it correctly. With all the non-suspect data sets, Q12 and Q29[39] were converted to the same scale and then averaged. This average is then used throughout this analysis as the best answer for a respondent's career intention, and is referred to as "Career Intent Normalized to True 5pt Average".[40] The reason I used the average was for two reasons. First, if the responses did vary slightly, it is unclear which is the "right" one. Averaging them together would then give the best answer. Though it should be noted that both are extremely correlated as a result of removing suspect data records. The second reason is that with Q29 being at the end of the survey, there is likely a bias introduced to it due to the other questions asked throughout the survey. This bias's direction would depend on the individual's personal feelings on the various questions posed.

The working data set then was 592 records. In the analysis below, you will see the number specific to a given analysis marked as "N". Reasons the number N may be less than 592 may be due to the type of question. For example, any analysis looking at career intention versus another variable is always N=522 or less. This is because there are 70 respondents in the working data set that had answered one of the N/A choices for career intent (either because they were already retirement-eligible, or already retired or separated). Other examples below may be much smaller because one of the variables analyzed was from a question only asked of respondents who, for example, identified themselves as with an AFSC of 61 or 62. Finally, when it seemed appropri-

[39] Questions will be referred to in the format of "Q12" throughout this section. Consult Appendix A for the actual questions.

[40] See Appendix J for an explanation of how these were averaged.

ate, an N number might appear at the bottom of a column to give context to how accurate the percentages listed in that column may be.

Throughout this section, cross tabulation (technically known as *contingency table analysis*) has been used to test for correlation between two variables. Cross-tabs are symmetric and so will produce the same result regardless of the order of the variables considered. The chi-square statistic (abbreviated Chi-Sq.), the degrees of freedom (d.f.), and the significance probability (Sig.) are shown for each cross-tab. While often not shown in this report, the raw calculations of the cross-tabs include the actual count of respondents answering a given way, and then this count is proportioned out throughout the cross-tab to determine an expected count. The more proportional the rows and columns are to the totals, the smaller the chi-square value will be.[41] The chi-square value and the degrees of freedom aren't useful by themselves, but instead are used to determine the significance probability, or the probability that the proportionality exhibited by the chi-square is significant. The smaller the significance probability, the less likely the association of the variables is purely due to random sampling, and the more likely there is a relationship between the two variables.[42] Confidence then is one minus Sig. and shown as a percent. So if the Sig. is 0.005, then the confidence is 1-0.005=0.995 or 99.5% confidence. Note that there is always some chance the pattern is due to random sampling. However, I show the Sig. number to only three significant figures, and so while it may appear to be zero, and is so close it can be treated as such, it is in fact not exactly zero. In considering the cross-tabs produced during the analysis phase of my research, I have chosen to ignore anything with a Sig. of 0.1 or higher (or equivalently, a confidence of less than or equal to 90%). The confidences of all figures shown in this thesis are 98% or better unless otherwise noted.

The primary consideration of this analysis is to consider career decision factors and influences that lead officers, particularly junior officers, to separate from the Air Force instead of staying in for a career, which is defined as 20 years of Active Duty service.[43] For both simplicity, and to follow the methodology employed by AFPC, all Lieutenants (First and Second Lieutenants) are considered as one category or Rank Class. Also, many of the Colonel respondents do not appear in analysis where career intent is a key variable because they already qualify for retirement[44] (and so have given an "N/A – Retirement Eligible" response). However, Lieutenant Colonels do appear in these charts and may, along with Majors, cause a pro-Air Force bias in cross-tabs that consider the whole data set, since they are very near retirement.

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[41] Alreck and Settle, 327.

[42] Alreck and Settle, 323.

[43] Of the 16 Reservists (Reserve Duty Air Force) in the data record set of 592, 11 identified themselves as separated from the (Active Duty) Air Force. That is, they answered properly in that they are no longer on Active Duty. The other 5 responded to the career intent questions as if they were on active duty, likely considering their aspirations for retirement within the Reserve system (which is quite different from the Active Duty retirement system). These 5 stray results have been left in the data set (they were not discovered until late in analysis) and are hereby acknowledged. However, due to the size of the record set, their effect on the results presented here are negligible.

[44] There were 10 Colonels in the data set. For their career intent responses, they all had either "N/A – Retirement Eligible" or "N/A – Separated/Retired", and because all N/A responses for a given question are excluded in all the cross-tabs used in this research, they are then excluded in any cross-tab that considers career intent. However, in other cross-tabs with other variables, their data is considered.

Whenever practical, 5-point scales will be combined for graphical purposes to an implied 3-point scale, implied because a numerical scale will not be used. For example, for career intentions, it will appear as Leaning to an AF Career, Neutral, and Leaving to Leaving the AF. In this case then, a 1 or a 2, corresponding to a "Probably will Remain in the AF" and "Possibly will Remain in the AF", will all be grouped as "Leaning to an AF Career". Likewise, a 4 or a 5 will be grouped as "Leaning to Leaving the AF", and a 3 will remain as "Neutral". This is done to make figures more readable. However, the statistics involved in the graphs are still those of the 5-point scale. It is best to consider the charts as masking the 5-point scale, but is really the 5-point scale data presented in a friendlier format.

Some of this analysis focuses on comparisons with separation factors (Q31) which were only asked of those respondents with an undecided career intent or with intent to leave the AF (220 respondents or about 37% of the respondents). This group largely reflect the intent of Lieutenants (68%) or junior Captains (Captains of any seniority accounted for 31%). Of this group of 220, 81% had less than 5 years of active duty as of when they took the survey. Another 16% were between 5 and 10 years of active duty. Therefore, whenever the analysis considers separation factors (Q31), the majority are junior officers.

Due to the different sub-populations included in the entire group surveyed, I divide the population based on time on active duty and then further divide those segments by career intent. In many cases, this produces uncorrelated results, such as in the leadership section. This is only useful to analyze the group of junior officers. Analyzing senior ranks in this fashion tend to produce uncorrelated results because those that were dissatisfied enough to have it affect their career intent have already left by the time they would have made these senior ranks.

Whenever I divide by groups of respondents based on their YOS, the population will be divided into two segments as follows. Junior officers are defined as having less than 5 years of completed active duty (YOS) at the time of taking the survey, non-junior officers are 5 years or more of active duty. Junior officers then make up 48% of the 592 records in the data set. The title of "junior officer" is a term I created for simplicity only and does not correspond to the common definition, which is often used to group a set of ranks. In the case of my data, a non-junior officer may include Lieutenants. For example, if the respondent had 4 years of prior-enlisted service and was now a First Lieutenant of 3.5 years as an officer, then they will have 7.5 YOS. Under my scheme, they will be considered among the non-junior officer group. However, in common practice, a First Lieutenant would always be considered a junior officer regardless of YOS.

Before looking at the analysis, I will start with a brief overview of the surveyed population.

Overview of the Entire Population

Of the N=592 respondents, Figure 3 shows the break down by Air Force Specialty Code (AFSC) and Figure 4 by Rank. These figures are showed merely to give an overview of the demographics of the respondents.

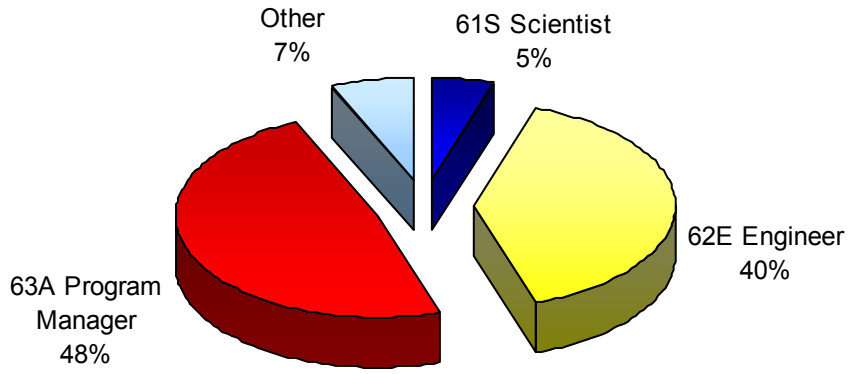

Figure 3 Respondents by AFSC.

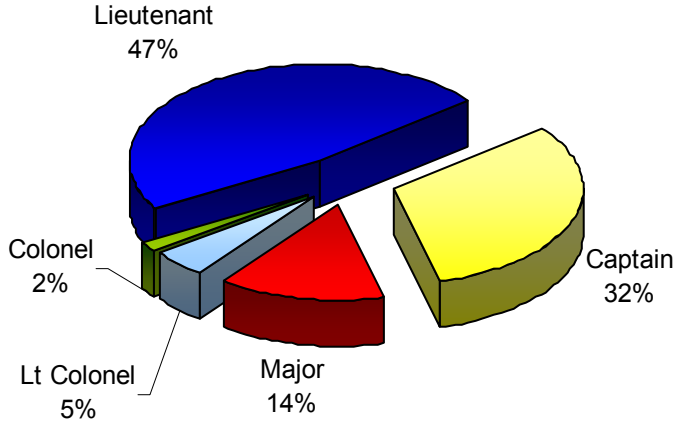

Figure 4 Respondents by rank.

The attrition of junior officers, and the very purpose of this research, is best exemplified in Figure 5, 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.

Figure 6 compares Figure 5 to the actual inventory data from the Air Force Personnel Center.[45] This shows that the survey is indeed a good sample of the actual population.[46] It is impossible to determine the response rate the survey because it was mass distributed and forwarded by email. However, I can use the raw numbers to derive an estimate. The AFPC statistics for Sept 2004 give 6159 total personnel in the Core AFSC's[47] of 61, 62, and 63. My working data set

[45] Figure shows all respondents regardless of AFSC, and so includes 28 records with "Other" AFSC's. In Figure 6, the 28 "Other" records have been removed, thereby providing a more accurate comparison to the AFPC data.

[46] See the footnote(s) to Figure 6.

[47] Core AFSC simply means the AFSC to which the officer belongs. This is opposed to an officer's possible secondary AFSC or their duty AFSC, which is the code for the job authorization the officer is currently filling.

(not including those labeled suspect) includes 528 total current members[48] in these Core AFSC's. Dividing the two, my sample is about 8.6% of the actual population, and is therefore representative of the population.

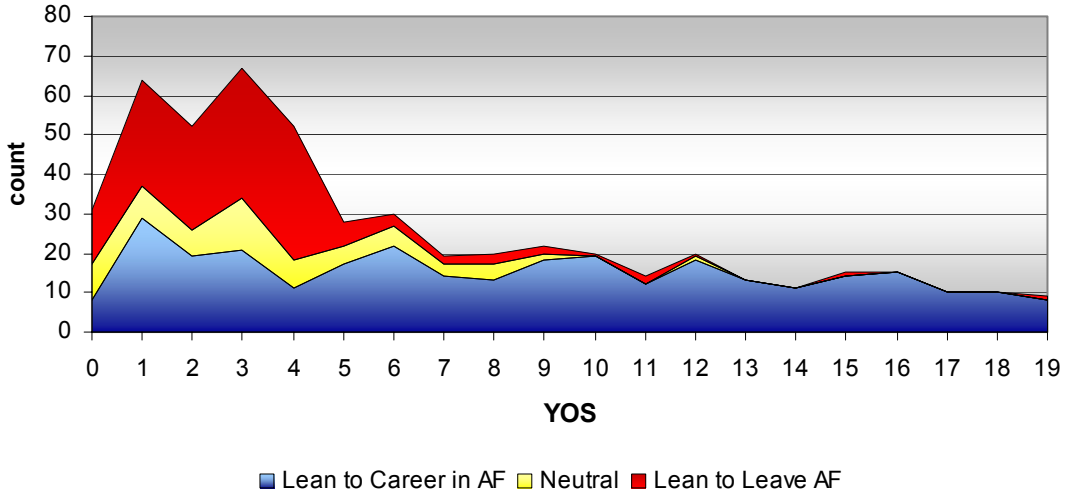

Figure 5 Career intentions vs. YOS (All AFSC's).

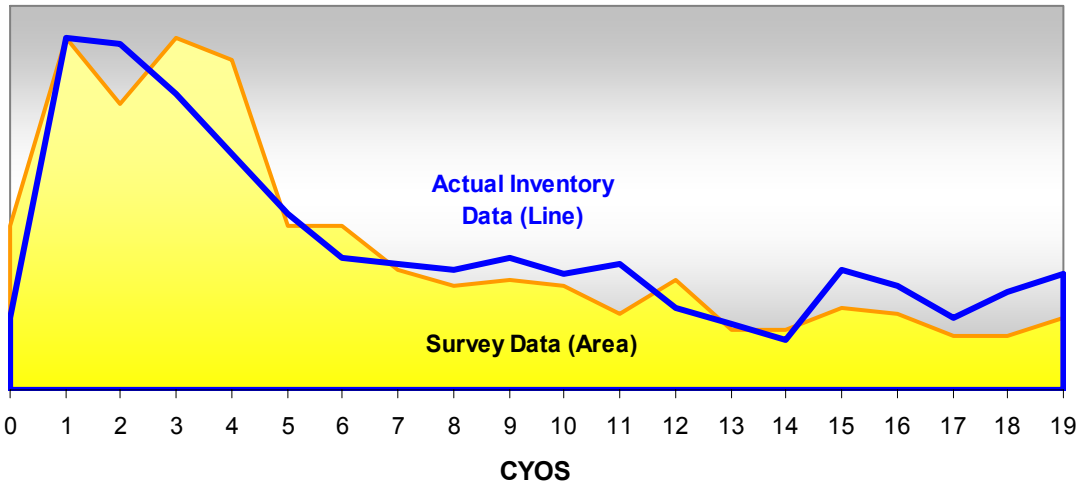

Figure 6 Comparison of survey data to (normalized) actual inventory.[49]
Limited to 61's, 62's, and 63's.

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[48] Respondents that were already separated or retired are not included. These are only current active duty members, plus the previously acknowledge few reservists in the data set.

[49] From AFPC Online Database: http://www.afpc.randolph.af.mil/sasdemog Note my data is actually measured in Years of Service (YOS), while this inventory data was measured in Commissioned Years of Service (CYOS). For officers that have never been enlisted, CYOS = YOS. The only case in which these numbers vary is for those officers who were prior enlisted, which in the case of my data set, is 13% of the population. The initial term of enlistment for these individuals is likely 4 years. So unfortunately, this comparison is very close, but only approximate. It is not possible to accurately calculate CYOS from my data, nor is YOS readily available for actual AF inventory.

Why Officers Separate

In the survey, those who answered the second question to on career intent (Q29), with a response that indicated either undecided or that they were leaning towards separating, were sent to a branch of the survey that included separation factors (Q31). This question asked the respondent to rank the following from 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 survey randomized the order these five choices would appear. The respondent gave a rank from 1 (most influential reason to leave AF) to 5 (least influential), and was allowed an N/A response.[50] The survey software itself prevented the respondent from ranking two factors the same rank. The weighted results appear in Figure 7. This data may not indicate all of the top reasons people separate, but of those shown, the scale and rank is correct. (Appendix L shows the comparison of separation factors to rank.)

The result is that job satisfaction is the primary reason people are leaning towards separating, while the assignment system is in a distant second place. This result supports my hypotheses that job satisfaction and assignment system are the chief reasons that officers separate. It is important to note that since the majority of people separating are junior officers, Figure 7 inherently represents (nearly) only junior officers. One flaw with this survey question on separation factors is that it only gave five choices. While it allowed an N/A response to insure respondents were not forced into ranking a factor not applicable for them, it did not give enough choices to insure that job satisfaction is truly the chief reason people are separating. That is, job satisfaction is clearly the top reason people are separating of the five choices given in the question, but there may be other reasons not offered in the question that may be even more substantial.

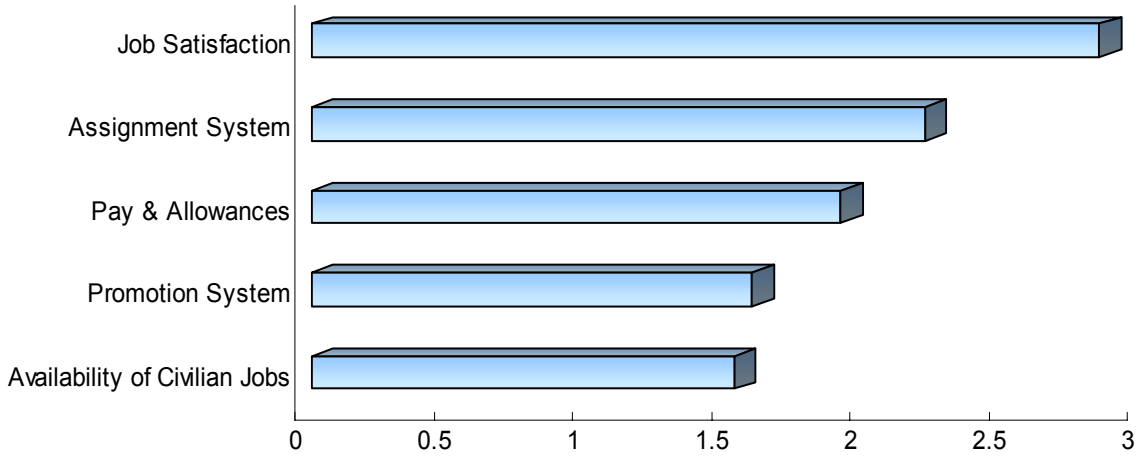

Figure 7 Reasons Air Force acquisitions officers (61's, 62's, and 63's) separate.[51]

[50] It is because of this N/A option that the number of valid responses (N) varies slightly for the five factors of Q31. 291 respondents were given Q31, and N=275 to 283 (valid non-N/A responses were given), depending on the factor.

[51] The scale for the figure is derived in the following manner: the 5-point Likert Scale used in Q31 is averaged to determine the mean. This mean is then subtracted from 5, since lower means indicate more importance for this question, but the figure aims to depict more importance having a longer bar. The mean for job satisfaction was 2.16. 5 - 2.16 = 2.84, and this is depicted in the figure.

Overall Air Force Satisfaction

Q10 and Q30 asked the respondent their satisfaction with eleven aspects of being in the AF, aspects that directly feed into overall satisfaction with life in the AF. Q10 and Q30 asked the eleven sub-questions in two different ways: Q10 asked to rank your peers' satisfaction, while Q30 asked the respondent to rate their own satisfaction. The logic in doing this is that people tend to answer a bit more truthfully for their peers, as if they are projecting their own feelings to their peers, while the ratings they give for themselves are likely a bit biased to a more conservative number. See Appendix J on how these numbers were averaged, and then tested, to insure the method for averaging was found to be valid. The resulting averaged values were true 5-point averages represented in a Likert scale. The eleven Air Force satisfaction sub-questions or factors (1030Ave) were (a) overall job satisfaction, satisfaction with (b) pay, (c) educational opportunities, (d) the promotion system, (e) recognition, (f) Officer Performance Reports (OPR's), (g) leadership opportunities, (h) the retirement system, (i) deployment opportunities, (j) Temporary Duty (TDY) opportunities, and (k) the assignment system. These eleven factors appeared in a random order in the survey.

When compared to career intent, all of the eleven AF satisfaction factors showed over 98% confidence of correlation with the exception of (j) TDY opportunities.[52] Consequently, I will ignore (j) for the remainder of this section. See Appendix M for the detailed data of all of AF satisfaction factors, with the exception of (j).

For those leaning to leave, a majority of people were dissatisfied with six of these aspects of AF life in particular: (a) overall job satisfaction, (e) recognition, (f) OPR's, (g) leadership opportunities, (i) deployment opportunities, and (k) the assignment system. OPR's and the assignment system are the top two dissatisfactions, both with nearly 53% each, while job satisfaction rounds out the top three with about 48%. Despite intent to leave the AF, most (71%) feel they are paid adequately, 68% feel educational opportunities are satisfactory, and 66% are satisfied with the retirement system. This strongly supports a key hypothesis of this paper, which is that pay is not a major driver for people to separate from the AF. (See Figure 21 in Appendix M.)

The fact that OPR's are a significant source of dissatisfaction is unexpected since OPR's do not contribute to the time-based promotion system of junior officers. The dissatisfaction with OPR's, tied with the fact that recognition was also a source of dissatisfaction, seems to indicate a need for recognition of one's performance or merit.

Comparison of the ten AF satisfaction factors to rank revealed only three of the elements, (a) overall job satisfaction, (g) leadership opportunities, and (k) the assignment system, gave a strong (99% or better) confidence. All the others gave such low confidences that they must not be correlated to rank. For the three aspects that do correlate, Lieutenants are more dissatisfied than Captains, who are in turn more dissatisfied than Majors are. This is to be expected, because the junior ranks have more people that are dissatisfied but have not yet had an opportunity to leave the AF. Comparison of the ten AF satisfaction factors to AFSC reveals strong correlation to (a) overall job satisfaction, (b) pay, (g) leadership opportunities, (h) the retirement system, (i)

[52] Other than (j), the lowest confidence of any of the remaining valid components of this question was 98.3%. (j) had a confidence of just 20.5% (or Sig. = 0.795).

deployment opportunities, and (k) the assignment system. This data shows that engineers tend to feel slightly more dissatisfied with pay and their overall job, as well as leadership opportunities. There does not appear to be any noteworthy trends in the correlation to AFSC, however, from which to derive conclusions. (Data is provided in Appendix M for both the comparison to rank and to AFSC.)

Refining our view by now only looking at AF satisfaction factors within the junior officer category (<5 years), regardless of their career intent, pay and the promotion system were mostly sources of satisfaction. (See Figure 8, which shows only the six factors that were significant when the analysis was limited to junior officers. Note this figures summarizes the data nicely, but the areas are not significant statistically.) 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 OPR system all are major sources of dissatisfaction for junior officers, regardless of career intent.

Finally, AF satisfaction factors were analyzed using regression analysis, and here again I divided the population by junior officers (<5 years) and non-junior officers (5+ years), the results of which are detailed in Appendix N. In each case, the dependent variable was career intent, and then the dependent variables were all eleven sub-questions on AF satisfaction, plus Years of Service. For the junior officers[53], overall job satisfaction has the greatest weight on career intent. If job satisfaction is high, the officer is likely to stay in, and if job satisfaction is low, the officer is likely to leave. The promotion system and the retirement system are the next important factors, and encourage junior officers to stay. The final key factor on career intent is deployment opportunities, which is seen as a driver to leave the AF. This is because the deployment opportunities are few or none for these career fields.[54]

For the non-junior officer category[55], the amount of time the officer has in the service is the largest contributor to career intent. The more time in, the more likely they are to remain in the Air Force. The promotion system is the next, followed by the opportunities for advanced education, and both are factors that encourage non-junior officers to stay in the AF. The next most important is leadership opportunities, which was a reason to separate. Finally, the last significant factor was the retirement system, which was of course a reason to remain in the AF for this group.

The regression analysis confirms the findings from the cross tabulations by naming overall job satisfaction as the primary factor on career intent for junior officers. However, the assignment system was not indicated, and so must be statistically correlated to one of the factors that was. (It will be shown below that the assignment system is correlated to job satisfaction.)

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[53] See model 4.

[54] Interestingly, the non-junior officers are much more satisfied (48% satisfied) with deployment opportunities than junior officers (27% satisfied). It is unclear if this is because they are receiving opportunities the junior officers are not, or if they are simply satisfied not having opportunities at all. In my experience, very few of these career fields ever deploy, of any rank. If indeed more senior officers are simply satisfied because they do not necessarily care for the opportunity of deploying, then factors like senior officers are more likely to have a family certainly play a role in this difference.

[55] See model 5.

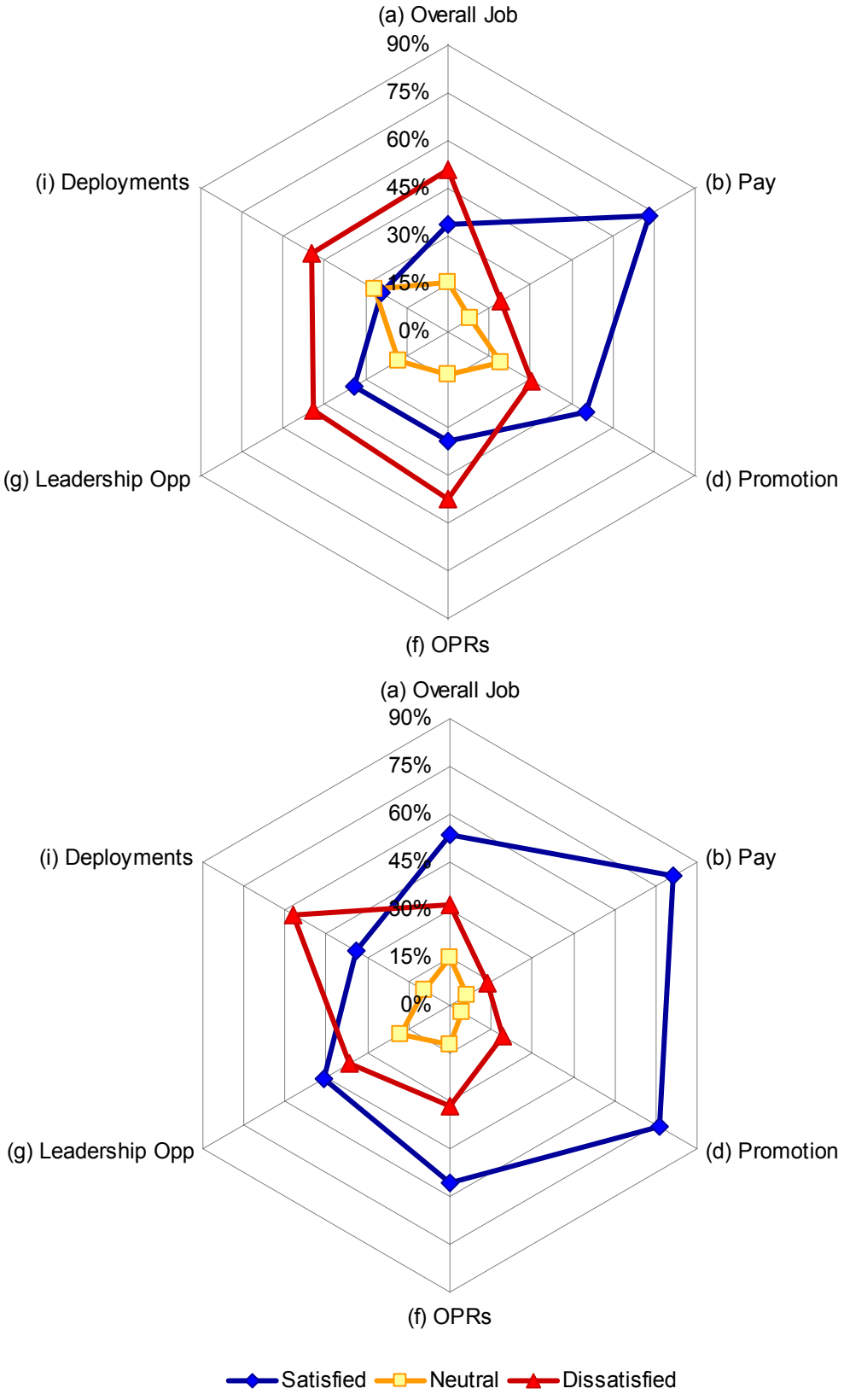

Figure 8 For respondents with YOS < 5yrs, career intent vs. 1030Ave.
(Top) is for those respondents leaning to leave the AF (N=134), (Bottom) is for those leaning to a career in the AF (N=88). Those that are undecided for career intent are not depicted.

Regardless of the analysis conducted (all of the population but limited to those separating, all of junior officers that were separating, or regression analysis of junior officers on career intent), overall job satisfaction was the largest source of dissatisfaction and most correlated influence for those intending to separate. Deployment opportunities, leadership opportunities, and the OPR system were also large sources of dissatisfaction and influenced career intent.

Job Satisfaction Factors

Job satisfaction can mean different things to different people. So one of the first ways in which the survey tested for job satisfaction was to question the respondent's satisfaction with several aspects of job satisfaction (Q18). This job satisfaction question had five sub-questions that asked, in a randomized order, the respondent's satisfaction level with (a) the meaningfulness of their current job to their unit, (b) the challenge of the job, (c) the ability to use their degrees or skills, (d) the feeling of being valued, and (e) the amount of additional duties associated with their job. For each of the five, they were then compared to career intent, rank, and AFSC. All of these job aspects proved to have a very strong correlation to the respondent's career intent. (See Appendix O for the complete cross tabulations analysis.) However, most of these factors proved to be uncorrelated to career intent when the comparisons were limited to either junior or non-junior officers (even though they were correlated to rank, which is strongly linked to tenure).

In turning to those leaning to separate or undecided career intent, there were greater levels of dissatisfaction with all of the five factors of job satisfaction among this group than compared to those whose intent was to remain in the Air Force. Of those with intent to separate or undecided, the only factor where a majority of respondents expressed dissatisfaction was that of use of one's skills or degree. For the other four factors, feeling valued was the second largest at 37% dissatisfied, and the other three ranged from about 31% to 34%. However, even for the group that is intending to leave, more than 60% of them found job challenge to be satisfying.

As is expected, the respondents that indicated dissatisfaction can be correlated to rank, since rank and Years of Service and strongly correlated. Logically, as these factors are a driver for career intention, the higher the rank, the less remaining dissatisfied personnel, as they have already had the opportunity to leave the AF. All five job satisfaction sub-questions were then highly correlated to rank.[56] There is also some correlation of these factors to AFSC. The trend is that engineers are slightly more dissatisfied than program managers with job challenge (Q18b), 25% and 23% respectively. Scientists are more satisfied with job challenge (only 17% indicated dissatisfaction). For use of degree (Q18c), 41% of engineers reported dissatisfaction, compared to 37% for program managers and 30% for scientists. For the aspect of feeling valued (Q18d), nearly 29% of both engineers and program managers felt dissatisfied, compared to 20% of scientists.

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.

[56] See Appendix O.

Feeling valued was the second largest source of dissatisfaction for those separating, though this one and the other factors did not represent the majority of those with intent to separate.

The Assignment System

I have shown above that assignment system was ranked as the number two reason to separate. Here, I look at some assignment-related issues.

When I compared the desire for an AF policy allowing personnel to remain at one base for an entire career (a "homesteading" policy, Q20) to ranking of the assignment system as a separation factor, nearly 25% that favored such a policy also ranked assignment system as a major reason to separate (1 or 2). In fact, the more the respondent agreed with such a homesteading policy, the higher they ranked the assignment system as an influence to leave. Strong support (a 1) for homesteading is slightly greater for Captains and than with Lieutenants, and overall homesteading correlates to rank with 96.6% confidence. The reason this may become a bigger desire in the mid ranks is likely tied to people wanting to settle down, raise a family, buy a long-term home, etc, something that their civilian counterparts at that point of their career are doing. Obviously, those that are burdened or bothered by the requirement to relocate to new duty stations every 3 or so years have likely left the AF by the time they would have otherwise been a Lt Colonel, or have otherwise grown to tolerate it. Lieutenants, on the other hand, are more likely to be eager for the opportunity to "see the world" by relocating every few years.

When I compared desire for more operational experience (Q26b) to ranking of the assignment system as a separation factor, while 50% of respondents desired more operational experience, only about 23% ranked assignment system as their number 1 or 2 reason to separate. Further analysis of desire for operational experience indicates that whether we focus on the group leaning towards separating, or the entire population, respondents are only slightly swayed towards wanting more operational experience. Since, in general, most people in this career field are not given the opportunity for operational experience, we can assume that those that were not in favor were not because they do not want that experience at all, not because they have received some already and had enough. The issue of operational experience from the standpoint of the respondent then tends to be an issue that is split. This means that if an AF policy was created that forced an initial operational tour upon commissioning, the result would be that such a policy would do just as much damage as it does good. Similar issues, those of deployment opportunities and TDY opportunities, proved to have no correlation.

The most remarkable finding is that of Table 1, which compares satisfaction with the assignment system to overall job satisfaction, and represents the entire group of respondents, regardless of career intent. The strong correlation shows that those happy with their jobs are happy with the assignment system, and vice-versa. Since this shows the entire population, it is clear that satisfaction with the assignment system and job satisfaction are directly linked, and not just a peculiarity for those with intent to leave the AF.

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 population, but forcing operational tours on everyone instead of making them voluntary would cause major turmoil in satisfaction and likely hurt overall retention. Details of this section are available in Appendix P.

		Ave 10&30a: Job					
	N=592	1 Satisfied	2	3	4	5 Dissatisfied	Total
Ave 10&30k: Assignment Sys	1 Satisfied	7.6%	3.2%	0.3%	1.7%	0.2%	13.0%
	2	8.6%	13.0%	3.2%	4.9%	2.2%	31.9%
	3	3.0%	5.6%	2.5%	2.7%	1.5%	15.4%
	4	2.5%	6.9%	3.7%	6.4%	3.7%	23.3%
	5 Dissatisfied	1.9%	1.9%	1.7%	4.1%	6.9%	16.4%
	Total	23.6%	30.6%	11.5%	19.8%	14.5%	100.0%
	Chi-Sq. =	165.859	d.f. =	16	Sig. =	0.000	

Table 1 Cross tabulation of 1030Ave(a) on job satisfaction vs. 1030Ave(k) on the assignment system.[57]

Pay

I now turn again to only those respondents who expressed undecided career intent or were leaning towards separating from the AF, and thereby were asked what factors influenced their possible separation (Q31). As it was revealed above, pay (Q31a) turned out to be only the third ranked influence as a reason to separate. Obviously, those that considered they were underpaid (Q21) or felt that S&E's should have special pay for their unique skills (Q14b) were more prone to rank pay as a significant reason to separate. However, this effect of ranking pay as a separation influence was not as strong (though still significant) for those that felt officers with advanced technical degrees (Q16) should be paid more. 56% of all respondents felt they were adequately paid, while another 20% were neutral on the issue, leaving 24% that felt they were underpaid. Among junior officers alone, 72% were satisfied with pay and allowances.

One interesting result was found when comparing overall job satisfaction to satisfaction with pay. It shows that regardless of job satisfaction, the majority of respondents were satisfied with pay. Thus, those that are dissatisfied with their job and therefore more prone to leave are not overly concerned with pay, or at least consider it a smaller career influence. What this means is, if people are separating due to low job satisfaction, then pay is inconsequential. This also suggests that retention bonuses will only retain those that intended to stay in the AF in the first place. (See Table 2 below.)

[57] For all cross tabulations presented in this section, unless otherwise noted: red (dark gray) cells are with percentages greater than 6%, orange (gray) is for ranges between 3.5% and 6%, light yellow (light gray) cells are for ranges between 1 and 3.5%, and white cells are less than 1%. Percentages are percent of the whole group N.

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 minority. Consequently, bonuses used for retention will not likely be successful at mitigating attrition—a theory I test in the following section. (Consult Appendix Q for detailed data on pay, and Appendix W for further analysis of pay that is specific to S&E's.)

		Ave 10&30a: Job					
	N=592	1 Satisfied	2	3	4	5 Dissatisfied	Total
Ave 10&30b: Pay	1 Satisfied	14.7%	9.5%	3.4%	6.8%	3.9%	38.2%
	2	6.1%	14.0%	5.2%	6.6%	5.9%	37.8%
	3	1.5%	3.0%	1.5%	2.4%	1.7%	10.1%
	4	0.8%	3.7%	1.0%	3.2%	1.9%	10.6%
	5 Dissatisfied	0.5%	0.3%	0.3%	0.8%	1.2%	3.2%
	Total	23.6%	30.6%	11.5%	19.8%	14.5%	100.0%
	Chi-Sq. =	62.809	d.f. =	16	Sig. =	0.000	

Table 2 Cross tabulation of satisfaction with pay in 1030Ave(b) vs. 1030Ave(a) on overall job satisfaction.[58]
For entire population.

Bonuses (the CSRB, etc)

This leads me to the next analysis of pay: that of the Continuing Skills Retention Bonus (CSRB). Based on the relationship of pay to separation as described above, I theorize bonuses do not have a significant effect on retention. Here I take an in-depth look at the recent CSRB and put this theory to the test.

The CSRB, or "Engineering Bonus", was in fact offered to more than just engineers. According to the AFPC website[59], among other requirements, the applicant must have a Core AFSC of 32E, 33S, 61S, 62E, or 63A. The CSRB was available only for a short window, from 6 Feb 03 to 30 Sept 03. In analyzing the CSRB data, I insured the applicant was indeed qualified for the CSRB when they said they were, and not when they said they were not. Those that identified themselves blatantly incorrectly were not included in this section of analysis, and the resulting dataset was of 482 respondents.[60]

The dataset included 118 active duty respondents that were qualified for and accepted the CSRB, 64% of which were Captains, and only 61% of these were sure they would remain in the AF for a career. What is interesting is that, as a touted retention bonus, the CSRB likely had no

[58] For all cross tabulations presented in this section, unless otherwise noted: red (dark gray) cells are with percentages greater than 6%, orange (gray) is for ranges between 3.5% and 6%, light yellow (light gray) cells are for ranges between 1 and 3.5%, and white cells are less than 1%. Percentages are percent of the whole group N.

[59] http://www.afpc.randolph.af.mil/csrb/csrb/faq.htm

[60] Those records filtered out were done so from the working data set of 592, which was the data set that resulted after eliminating suspect records, as described in Appendix H. Those filtered out for CSRB reasons were done so just for the questions pertaining to the CSRB and otherwise their records were used throughout the rest of this report's research. See Appendix I for details on how the data was filtered, and Appendix R for a supplement to this section.

retention impact on the Major class, considering all of them have more than 10+ years of active duty service and are more than half way to retirement.[61] Table 3 attempts to grade the effectiveness of the CSRB by comparing career intent for these 118 to the respondent's own assessment on whether or not the CSRB made a difference in their career intent (Q23). According to the data, only 11% of the 118 indicated a strong effect due to the CSRB and gave a strong indication of staying in the AF. If I am a bit more generous[62], I could say the CSRB was likely effective at long-term retention with less than 31% of those that accepted it.

		Career Intent Normalized to True 5pt Average					
	N=118	1 Career in AF	2	3 Neutral	4	5 Leave AF	Total
23 CSRB Vs. Retention	1 Strongly Agree	9.3%	1.7%	0.0%	3.4%	0.8%	15.3%
	2	14.4%	5.1%	5.9%	3.4%	1.7%	30.5%
	3 Neutral	9.3%	0.8%	0.0%	0.0%	0.0%	10.2%
	4	26.3%	2.5%	0.8%	0.0%	0.0%	29.7%
	5 Strongly Disagree	13.6%	0.0%	0.0%	0.8%	0.0%	14.4%
	Total	72.9%	10.2%	6.8%	7.6%	2.5%	100.0%
	Chi-Sq. =	35.082	d.f. =	16	Sig. =	0.004	

63.6%	45.8%	11.0%
no long-term effect with CSRB	some effect of CSRB (long or short-term)	definite long-term effect of CSRB

Table 3 Cross tabulation of whether the CSRB had an effect (Q23) vs. career intent.
Q23, which rates the respondent's feelings of how much of an effect the CSRB had on how long they planned to stay in the AF versus their indicated career intent.

Therefore, from a standpoint of long-term effect, the CSRB seems to have been widely unsuccessful. It is of course unclear if the intent of the CSRB was to fix a short-term problem. However, if this were the case, then it seems less likely that they would have offered it to Majors, or that the AF would have cancelled the CSRB after less than one year of being offered. In fact, had the CSRB not been offered to Majors, it is possible that the excess funding could have been stretched for use for a second year.

The other aspect of the CSRB is that it may have done more damage than it did good. Of the 202 active duty respondents who missed the opportunity to accept the CSRB due to their tenure, about 20% probably have been swayed to leave the Air Force due to the cancellation of the CSRB. About 50% of these (10% of the total) definitely will leave the AF due to the CSRB cancellation. (See Table 4.) However, these respondents may have otherwise always been destined

[61] The idea of a "point of no return" at 8-10 years is widely considered the last logical chance to voluntarily leave active military duty. Otherwise, the huge benefits of the military retirement system become more and more a major factor in your career intent. This can be graphically seen in Figure 5 where nearly all doubt on career intent is gone by YOS = 10.

[62] 31% is found from including the all four values in Table 3 where a 1 or 2 was given for Career Intent and Q23, and are the top-left four values in the cross tabulation. These four values sum to 30.5%, or about 31%.

to separate from the AF, and they simply point to the cancellation of the CSRB as a tangible scapegoat for why they wish to separate. (See Appendix R for details.)

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 the target group a bonus opportunity does not really address the root cause(s) for the problem in the first place (and hence this thesis).

		Career Intent Normalized to True 5pt Average					
	N=202	1 Career in AF	2	3 Neutral	4	5 Leave AF	Total
24 CSRB Not Available Vs. Retention	1 Strongly Agree	2.5%	1.0%	5.0%	3.0%	4.0%	15.3%
	2	4.5%	3.0%	5.0%	6.9%	5.9%	25.2%
	3 Neutral	9.4%	5.4%	3.5%	2.0%	7.9%	28.2%
	4	4.0%	1.5%	1.5%	1.5%	11.9%	20.3%
	5 Strongly Disagree	2.5%	0.5%	1.0%	3.0%	4.0%	10.9%
	Total	22.8%	11.4%	15.8%	16.3%	33.7%	100.0%
	Chi-Sq. =	39.125	d.f. =	16	Sig. =	0.001	

43.1%	possible effect of discontinuation of CSRB
19.8%	probable effect of discontinuation of CSRB
9.9%	definite effect of discontinuation of CSRB

Table 4 Cross tabulation of effect of cancellation of the CSRB (Q24) vs. career intent .
Q24, which rates the respondent's feelings of how much of an effect the CSRB's cancellation had on their AF career decision versus their indicated career intent.

Promotion System

The promotion system was ranked as the fourth most influential reason to separate (Q31b). Appendix L shows the distribution of ranking the promotion system as compared to the rank of the respondent and suggests Lieutenants are not as influenced to separate by the promotion system as were Captains, and especially Majors. (Majors showed a greater concern for the promotion system, likely because the performance-based promotion to Lt Colonel is much more difficult than the performance-based promotion to Major.[63] Those few Majors that are considering

[63] The promotion from Second to First Lieutenant, and from First Lieutenant to Captain, are time-based, occurring at the 2-year and 4-year point, respectively. Extremely poor performance or illegal or immoral conduct is the only way one might not make these first two promotions. The promotion to Major is the first performance-based promotion, though it also occurs in a window of time based on years of service. The promotion rate (for line officers) to Major was 92% (for non-rated mission support officers in the primary zone) in the 1 Nov 2003 review board, whose results were published in March 2004. See Appendix Y for more details.
Source: http://www.afpc.randolph.af.mil/offprom/default.htm

separating late in their career are likely doing so because of fear of not being promoted again.) Yet, as shown in the Overall Air Force Satisfaction section above, promotion system (1030Ave(d)) was significant. About 24% of junior officers were dissatisfied with the promotion system, while about 22% of non-junior officers were dissatisfied. While dissatisfaction with the promotion system may be correlated to career intent, it is likely not a key reason junior officers are separating. For this reason, the promotion system being ranked fourth may have been ranked this high simply due to only being offered five choices to rank as separation influences. It could in fact be lower for junior officers if more options were offered.

The question that asked respondents if they were in favor of a performance-based only promotion system (Q25), which would essentially only affect Lieutenants and Captains and to a degree, Majors, yielded a lack of interest in such a system. The results were mostly neutral (34%), with about an even split around the neutral point (23% responded with a 2 suggesting slight agreement for such a policy while 25% responded with a 4 suggesting slight opposition to such a policy.) However, interest of lack therefore in a performance-based promotion system had no correlation to career intent, nor did it correlate to rank or AFSC.

Based on the regression analysis detailed in the Overall Air Force Satisfaction section, for the junior officer category, 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

I now turn to an analysis of the ranking of the availability of equivalent civilian jobs as an influencing factor to separate (Q31d). Comparing availability of civilian jobs versus overall job satisfaction, for those that are dissatisfied with their jobs, they are slightly more likely to rank availability of civilian jobs as a higher influence to separate. However, the results of this comparison do not yield any striking trends, and it may be that, despite the option to enter N/A when ranking factors that influence separation, the limited five factors offered gave some artificial boost to the factor of availability of civilian jobs.

Appendix L shows the comparison of the ranking of the availability of equivalent civilian jobs to rank. Lieutenants ranked availability of civilian jobs mostly from 3 to 5, while Captains were most likely to rank it a 5. This suggests a Lieutenant's perspective on the civilian world may be more optimistic than that of a Captain.

In looking again at all respondents, about 75% of all respondents felt their AF job was at least as good as or better than their civilian counterpart was (Q19). 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. This is evidence that job satisfaction affects one's perspective on other jobs and prospects. This clearly indicates that job satisfaction is once again a root cause for even this factor. It should be noted, however, that the comparison of one's AF job to that of a civilian counterpart is most definitely

linked to the perception or reality of the civilian job market and the economy. Perception that civilian jobs are less secure during economic turmoil is certainly a factor in the results of these questions. Likewise, if this survey were administered in the dot-com boom, opposite results would likely have been exhibited.

Leadership Factors

One leadership factor that is the concern of several respondents, as indicated in their open-ended comments, is that there is a perception that senior leadership is mostly pilots or non-acquisitions officers. If true, such a lack of example of senior officers who started in acquisitions would have a negative effect on morale for junior officers who may be contemplating an AF career.

The respondents were asked if they started out in Acquisitions or another field within the AF upon commissioning (Q9) to see whether their initial job was led to different career intention results. While the resulting comparison proved to be almost completely uncorrelated[64], there is nearly 100% confidence when comparing the initial job to rank (see Figure 9). Note this figure has limited the data set to those respondents that are currently in acquisitions. Figure 9 might suggest attrition as you progress in rank within acquisitions, since higher-ranking officer positions are fewer.[65] Clearly, this data also supports the perception that the AF is bringing in officers from other fields to fill acquisition jobs for the senior ranks. This data seems to confirm the perception that there is a decrease in acquisitions-grown officers as you move up in rank. The survey did not measure how this might effect junior officers, but the open-ended comments did express some frustration with the lack of indigenous leadership.

This brings us to consider how leadership may play a role in the career intent of an individual. The survey asked each respondent to rate their satisfaction for (a) their immediate supervisor, (b) their unit leadership, (c) their base leadership, (d) their command leadership, and (e) AF Headquarters-level leadership (Q11). Figure 10 shows the overall satisfaction of the population with leadership. Overall, most people are satisfied. However, as we move up the chain of command, more people have a neutral attitude towards higher leadership. This suggests that many officers are either unaware of or out of touch with the higher levels of the chain. Conversely, higher segments of the chain of command are out of touch with lower ranking officers.

When comparing each of these five leadership levels to career intent, the results were insignificant until (d) command leadership (97.8% confidence) and (e) AF Headquarters leadership (~100% confidence) were considered. A summary, based on the cross tabulation for these two factors, is shown in Appendix T. For the respondent leaning towards staying in the AF, 69% are satisfied with their command leadership, compared to only about 46% among respondents leaning towards leaving the AF. These numbers are nearly identical for satisfaction with AF HQ leadership. However, for those leaning towards leaving, they tend to be either neutral towards

[64] Exhibiting a Sig. of 0.914.

[65] Acknowledging the few Colonels in the data set and the question of whether my data is representative of this high rank, if this is indicative of reality, then it is particularly interesting to see less than 40% of Colonels currently in acquisitions actually started in acquisitions.

their command and the AF HQ, or slightly more dissatisfied than those intending a career in the AF. This suggests that more of those leaning towards leaving the AF have not been exposed enough to their command or HQ leadership or have not been happy with the leadership they have seen. This might also indicate that those leaning towards separating are doing so because of AF-wide policies.

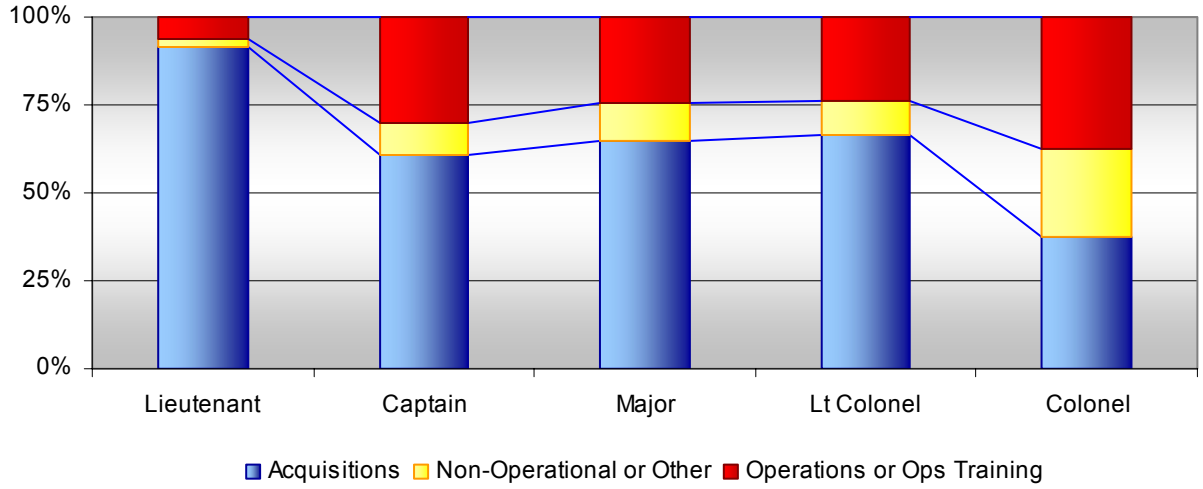

Figure 9 For respondents currently in acquisitions, initial job in the AF by rank; N=478. [66]

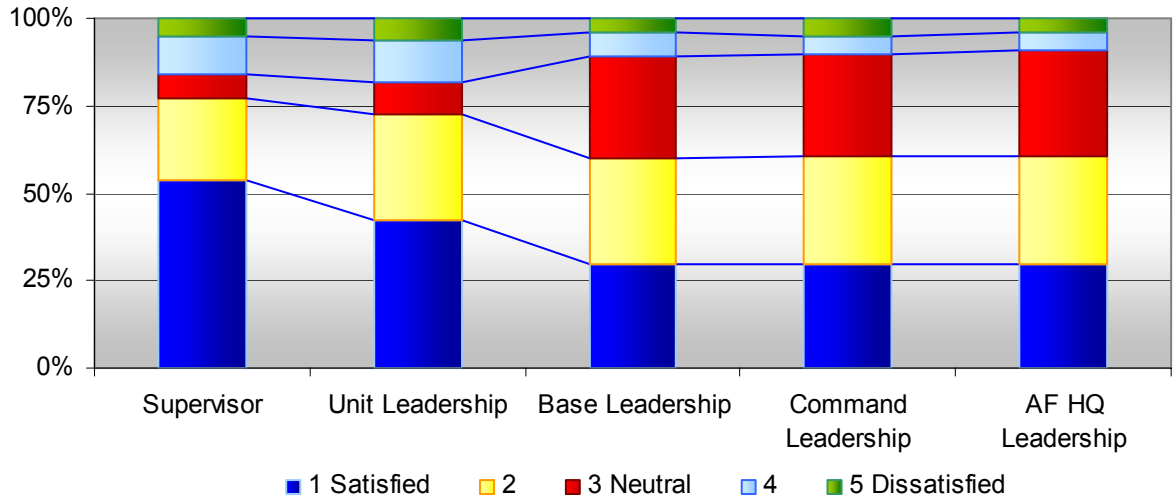

Figure 10 Leadership satisfaction of the population; N≥511.[67]

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 levels, the majority is satisfied. The correlation with the top levels of leadership to career intent surely in-

[66] There are 241 Lieutenants, 143 Captains, 65 Majors, 21 Lt Colonels, and 8 Colonels that contribute to Figure 9. The smaller numbers at the higher ranks means that the results on the right side of the figure may not be accurate.

[67] N/A responses were allowed in the leadership questions, hence N≥511.

dicates a need for senior leadership to do more to address the concerns of junior officers who are apt to separate. Additionally, the Air Force should look closely at who they choose to put in command positions at the base level, and whenever possible, insure they are acquisitions officers that are in command of other acquisitions officers. These commanders serve as an example of how junior officers in these career fields can also rise to such a high rank and position if they apply themselves.

Discussion of Key Open-Ended Comments

An optional question (Q32) allowing open-ended feedback was available at the end of the survey. There were 224 respondents that left some sort of comment, and this is of the entire population that took the survey (N = 762).[68] Key comments and themes are listed in Appendix U. This section will discuss a few of these themes.

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. This sentiment puts a different spin on the question asked in the survey as to whether respondents understood the career field before joining the Air Force, to which a majority of the scientist and engineers reported they did not (see Appendix V). 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. Additionally, few comments existed on pay, and the lack of such comments further reinforces my belief that pay is not a serious drive on career intent. The comments also highlighted several nuances of job satisfaction and assignment system, some of which were measured indirectly in the survey, and some not at all.

[68] The comments have <u>not</u> been limited to the non-suspect data set used for analysis above (N = 592).

Discussion and Conclusions[69]

"To turbocharge retention, you must first know the hearts and minds of your employees and then undertake the tough and rewarding task of sculpting careers that bring joy to both."

—Butler and Waldroop (p. 152)

Job and Air Force Satisfaction

47% of junior officers in this survey expressed intent to separate.[70] 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. While this did not correlate directly to one's career intent when limited to just junior officers, it was very significant for the population as a whole. The same is true of lack of challenging work.

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 issue for the Air Force is that this is precisely the group that should be catered to the most, as they are the ones most likely to leave the Air Force. Being a Lieutenant should mean being subject to a marketing campaign from the Air Force—Air Force marketing should not stop once an officer is commissioned. The Air Force focuses on bringing in new Lieutenants through recruiting initiatives to fill the large number of vacancies that appear as officers separate. Instead, the AF should be spending this effort on retention.

The opportunity to use one's degree or skills, particularly true for the many in this research with technical degrees, is very important, especially as you are just leaving college to join the Air Force. This is partly tied to job value, but it is mostly tied to the fact that engineers and scientists are mostly doing managerial work, even as brand new officers. This is a major source of frustration for the entire population considered (more than 50% of S&E's were dissatisfied with the opportunities to use their degree), and is even true for those who intend to make the AF a career.

Based on both open-ended comments and the fact that 66% of Lieutenants did not understand how S&E's were utilized by the Air Force, there is a severe problem that begins with the com-

[69] Much of this discussion is focused on junior officers, defined as having less than 5 YOS, since this is largely the group that is likely to separate. See Appendix G for demographics related to this group.

[70] 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). If we limit the officers to just those with 3-5 completed YOS, then the intent to separate totals 42.7%, with 29.8% giving a 5, and 12.9% giving a 4. Each of these measures uses the 5-point true average of Questions 12 and 29. See Appendix J for details.

missioning 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. This is again partly due to the misconceptions generated in commissioning sources like ROTC. ROTC gives the impression that officers lead enlisted, and indeed this is true for the vast majority of the military. However, ROTC programs fail to educate their officer-candidates about the very different acquisitions community, where leadership opportunities may not exist until Major or even Lt Colonel. The acquisitions world is a very different world than ROTC or likely USAFA portrays, and this is partly because this field is unlike the rest of the USAF. Again, the need for better education through commissioning sources is paramount. It is at this early indoctrination to the AF that the image of military life is formed, and when acquisitions proves to be contrary to this image, it leads many junior officers to be disappointed.

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. Since maybe only 50% of junior officers would be interested in such experience, it would likely minimize cost not to mandate such assignments. Alternatively, the Air Force could create a program, and mandate it if necessary, that is limited to operational TDY's of weeks of a few months. Finally, the Air Force should consider pairing System 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. On one occasion, I was able to witness a presentation of retention issues by senior leadership to the acquisitions community. Expectedly, deployment opportunities were brought up by someone in the audience. The response was that the Air Force does not wish to train and equip acquisitions officers for combat, and so deployment opportunities are not likely to appear. This is curious, since all the while the Air Force tries to invigorate these officers by calling them "war fighters" and trying to tell them of the big picture and how their work matters. However, regardless of the number of memos, emails, or visits by Generals, junior officers will never connect their jobs to the operational Air Force if they cannot see that part of the Air Force. The Air Force cannot call the acquisition officer a war fighter, or a soldier, if that officer cannot fight, deploy, or experience operations, even when many are literally begging for these experiences. Without these opportunities, the Air Force should seriously consider if officers are needed to fulfill the acquisitions needs of the AF, or if civil servants would be better suited for this role.

The Assignment System

Related to opportunities for deployment and operational experience is the assignment system. The assignment system is clearly the second most important source of frustration, behind job satisfaction. In fact, Table 1 shows the two are directly linked. If an officer is satisfied with their job, they attribute this to the assignment system, and vice versa. Job satisfaction, which is intangible and hard to quantify, can then be improved by improving the assignment system. That is, fixing problems with the assignment system means fixing two major problems in the acquisitions community. In fact, job satisfaction is linked to one's current job, while the assignment system is a more global factor in Air Force satisfaction. Therefore, solving problems with the assignment system will have more far-reaching effects than just one's individual job.

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 leads to job satisfaction).[71]

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, AFPC is reluctant to allow officers in these fields to change their AFSC. What this means is that officers feel, and indeed 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.[72] 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

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[71] There is a space on the assignment preference worksheet for the comments of both the officer and one's supervisor. Additionally, there is politicking for assignments, which can be more easily facilitated if one's supervisor is of a rank or position of influence. However, for the vast majority of junior officers, the group that is of the biggest concern of my research, these supervisor factors are limited.

[72] USAFA students, who do not choose their major until their junior year, have tuition and cost of living paid for.

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.

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. There exists no logical reason to force personnel, particularly non-rated non-operational personnel, to relocate for a new assignment every 3-4 years. The Air Force does this because that is the way it has always been done, and because it makes sense to some degree for operational personnel. However, unless the Air Force indeed begins offering operations and deployments and otherwise treats the acquisitions community more as war fighters, it is 1) not economical, 2) not conducive to acquisitions or research & development, and 3) a negative effect for many on their quality of life to force these relocations so often. As one open-ended comment stated, "…several bases provide the opportunity to do a lab, SPO, test, staff job at 3-4 years a piece and therefore, could still build depth and breadth at one location." So not even "depth and breadth" is an adequate reason to deny this change. The key point is, if people are getting out of the Air Force because they cannot stay in one location longer than the standard 3-4 years, then why not let them stay in the Air Force and remain at one base? (Indeed, many of these bases are also undermanned, so if they were to retain people for longer than 3-4 years, it certainly would not harm base level manning.) Changing this can only improve many factors for the Air Force and these officers. 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

Another area of concern, the OPR system, was dissatisfactory for many junior officers (44%, with another 13% undecided) and was linked to their career decisions, but to a lesser degree. Recognition proved an even smaller driver on retention, though was still significant with 40% of junior officers dissatisfied with recognition. Those concerned most with recognition, as well as the promotion system, were higher-ranking officers who are less likely to separate due to the greater influence of the retirement system with more time spent in the military. Since these factors appeared to have a small influence on retention, further discussion is reserved for Appendix Y.

The OPR system leads us to a similar topic, that of the promotion system. It is interesting that while many open-ended statements referred to the lack of incentive to excel ahead, and that recognition did prove to have an impact on career decisions, 62% of junior officers were satisfied with the current time-based promotion system.[73] When asked if they favored a performance or

[73] Results from those with a 1 or 2 response for 1030Ave(d), limited to junior officers.

merit-based promotion system, 36% were undecided, with the rest split just around the center point (about 22% slightly agreed or favored, 23% slight disagreed or did not favor).

Yet, since recognition was 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 Colonel[74], 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 over-achievers. 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 underachievers and at the same time a tool to expel the sharpest and brightest of young military officers.

Those that feel the need for merit-based performance are likely to leave the Air Force, though likely these sentiments were not adequately tested for in my survey, except perhaps with the question on feeling valued or on recognition. It is likely a problem to get a real measure on this issue, since senior officers are likely to appreciate the non-merit-based system (having grown up in it) and junior officers tend to be focused on other issues for their career decisions. (Recognition and feeling valued were lesser drivers, after all.)

Pay and Bonuses

Pay turns out to be a small factor for separation, with 72% of junior officers satisfied with pay and allowances. (24% of the entire population felt they were underpaid for their skills and experience). If pay is largely unimportant as a driver to stay or leave the Air Force, then logically monetary-based incentives for merit should also be met with minimal support. It is therefore inconclusive whether more merit-based initiatives should be available, and if so, where to implement them. It is also unclear if they would be met with support or not. More research should be conducted in this area.

It was interesting, however, that pay was largely inconsequential, regardless of one's job satisfaction. Since pay is not a major driver, 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.[75] Those that missed the CSRB were frustrated by its cancellation, but the data suggests only about 10% were definitely affected enough to drive them from the Air Force. However, these 10% would have likely left for other reasons if not the CSRB, as the total expected separation rate for this group is unchanged.[76] The real negative outcome from canceling the CSRB is from continuing to offer

[74] See Appendix Y.

[75] Soper, 10.

[76] However, all of this data is necessarily affected in some way by the CSRB. See Appendix R.

flight pay to pilots when the civilian economy is not hiring pilots, sending a very negative message to the acquisitions community. As for what was gained by the CSRB: only about 11% of those that accepted it were definitely swayed to a career in the AF that they had not previously envisioned.

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 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 elsewhere[77] 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.[78] Conclusion: my hypothesis is correct.

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[77] Arreola and Soper, 12.

[78] There are major political issues with removing flight pay. The best alternative may then be to institute engineering pay, but again, it is more for morale and a show of support from senior leadership. Flight pay is unnecessary in today's economy, and it sends a negative message to undermanned groups like acquisitions. It is further acknowledged that senior leadership is mostly pilots, and this will likely affect acceptance of this recommendation.

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."[79] 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 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.

[79] S&E CONOPS, 8.

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 research & 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 reinstituting 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 elsewhere[80], 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.

[80] Malackowski and Keesey for example.

Recommendations for Future Research

Further research should be conducted in on assessing the nuances of the assignment system. My own survey did not focus enough on these individual nuances. More focus should be placed on issues of relocation, how having a family affects this, and other issues related to frequency of reassignment. Reassignment should also be differentiated from relocation, since one can be re-assigned to a different job at a given location. Focus should also be given to the actual assignment process, including job selection, control given to the individual, etc. All of these factors should be compared to rank, AFSC, whether the respondent has a family and/or children, etc.

Another avenue of research should be on the OPR and promotion system. Many people are frustrated with these issues, and they are certainly key factors influencing career intent. Ways to fix the subjective OPR system in particular and problems with the "one opportunity" promotion system should be explored. The relationship with OPR's and promotion at the higher grades are also important to research, as well as analyzing effectiveness of a hyper-inflated OPR system in adequately differentiating performance and promote-ability. The promotion system should be further analyzed for its effectiveness as a time-based promotion system, and contrasted to a performance-based system.

Future research should look more closely at the considerations of whether a merit-based system of promotion, pay, or other recognition, may have positive effects on the military. My own results are inconclusive, but suggest there is a desire for merit-based incentives, though perhaps not a more merit or performance-based promotion system.

Another area that should be studied is that of the retirement system. The system tends to feel that once an officer is above the 10-year point, they are fully vested and so, regardless of performance, mid-level officers and senior officers are kept in the system so they can make retirement. Such a system retains low-performing officers who may have been rightfully passed-over for promotion to Major or Lt Colonel. Research should expand on these RAND report findings, focusing on how the retirement system may push junior officers with uncertain career intent in the direction to leave the Air Force, since the system does not reward careers less than 20 years.

Research should be conducted on how retention, morale, and job satisfaction are impacted for junior acquisitions officers with commanders that are not from acquisitions, such as a pilot. This research should look at how junior officers perceive non-acquisitions leadership. For those intending an AF career, how they rate their own chances of attaining such leadership levels.

Yet another area that should be studied is that of education opportunities, as this was considered important to some, but ultimately not a separation factor. Educational opportunities did appear to have some influence to remain in the AF, though there were several open-ended comments expressing frustration with these opportunities and their limitations.

Finally, a system dynamics modeling should be done of all retention issues.[81] This powerful and insightful approach has never yet been conducted on these issues, and would allow a modeling of all of the variables, such as job satisfaction, the assignment system, etc. System dynamics

[81] See http://web.mit.edu/sdg/www and click on "what is system dynamics".

also captures the feedback loops inherent in any system, and so could quantitatively forecast retention rates and how they would be impacted by fixing issues like job satisfaction, changing incentives, etc. The power offered by system dynamics is that it can simulate "what-if" scenarios, and see how the feedback or backlash of policy changes will ripple through the system, thereby forecasting both short and long-term outcomes. This is useful because many policy changes in an organization can apparently have no effect simply because of the momentum of the previous policies. If leadership does not adequately understand the system (Air Force manpower is the system in this case), it may lead to canceling a new and what would become successful policy even before it had time to change the system for the better. For example, changing the assignment system would likely not have a positive impact for at least three years, due the average length of an assignment. Other policy changes may also yield delayed results, though due to more complicated interactions with competing forces in the system. Hence, the need for such a model, which would give leadership insight into the system, and help avoid canceling new pro-retention policies before they have had sufficient time to affect positive results. With a system dynamics model, one could test my hypothesis that overstocking new Lieutenants, who appear to be given less meaningful work, thus leading to more Lieutenants with even less work, and thereby leads to decreased job satisfaction for all. (That is, assuming there is only so much valuable and meaningful work that will be entrusted to Lieutenants, recruiting more Lieutenants means each officer gets a smaller piece of that pie.) Other such interaction would also become apparent in a system dynamics model.

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Appendix A Survey Questions

The following pages show the actual survey with simplified explanations of the answer types. This example of the survey clearly depicts the logic behind the questions which would reroute the respondent to different branches of the survey depending upon their responses.

No.	Survey Question	Answer
1	What is your current military status?	select
2	What is your military pay grade (or highest pay grade achieved)?	select
3	How old are you?	select
4	What field is your undergraduate degree?	select
5	Do you have an advanced degree(s) (masters level or higher)?	select
6	Do you intend to pursue (another) advanced degree?	select
7	What is your total time on active duty? (Do not include reserve duty unless you were active reserve.)	select
8	Which field of the USAF do you currently work in?	select
9	Did you join the Acquisitions career field immediately upon being commissioned an officer, or were you in a different career field or training first?	select
10	For PEERS in your unit, please indicate the average level of satisfaction among your peers. Peers are people of your rank and Air Force Specialty Code (AFSC).	
	Educational Opportunities (Advanced Degrees)	5-point
	Officer Performance Report (Evaluation System)	5-point
	Assignment System	5-point
	Promotion System	5-point
	Job Satisfaction	5-point
	Leadership Opportunities	5-point
	Retirement System	5-point
	Pay and Allowances	5-point
	Travel/TDY Opportunities	5-point
	Reward System and Recognition	5-point
	Operational Opportunities or Deployments	5-point
11	How satisfied are YOU with the following aspects of your chain of command:	
	Your immediate supervisor	5-point
	Your unit leadership	5-point
	Your base leadership	5-point
	Your command leadership	5-point
	Air Force HQ leadership	5-point

No.	Survey Question		Answer
12	What are your current intentions toward remaining (active duty) in the Air Force for at least 20 years?		8-point
13	What is your primary Air Force Specialty Code (AFSC)?		select
14	AFSC BRANCH: only visible if 61X or 62X selected	Please state how much you agree or disagree with each of the following statements. Note S&E's means Scientists & Engineers.	
		I understood how scientist and engineers were utilized in the USAF before joining this career field.	5-point
		If "Engineering Pay" (similar to Flight Pay for pilots) was offered for scientists and engineers, I'd be more likely to make the AF a career.	5-point
		I am NOT satisfied with the opportunity to use my science/engineering degree(s).	5-point
		I am NOT satisfied with the opportunity to apply my science/engineering skills.	5-point
15		Imagine a new AF policy that allows you to stay in science/engineering, never go into management, and still be promoted on time. However, if you accept this policy, you will never get promoted beyond Lt Colonel. With such a policy, I would be MORE likely to make the AF a career.	5-point
16		If S&E's with advanced technical degrees were paid more, I would be MORE likely to make the AF a career.	5-point
17	only if 63X selected	I understood what acquisitions was before joining this career field.	5-point
18	How satisfied are you with the following aspects of your current job:		
	Challenge of your Job		5-point
	Feeling Valued by your Unit		5-point
	Use of your Skills/Degree		5-point
	Meaningfulness to Unit		5-point
	Amount of Additional Duties		5-point
19	When you compare your Air Force job to the equivalent civilian job, how does your AF job compare?		5-point
20	Imagine a new AF policy that allows you to stay at one Air Force Base for your entire career. If you accept this policy, you will still be promoted on time, but will never get promoted beyond Lt Colonel. With such a policy, I would be MORE likely to make the AF a career.		5-point
21	My skills, work experience, and workload are adequately compensated in terms of pay and benefits.		5-point

No.	Survey Question		Answer
22	Could you have accepted (did you qualify for) the Critical Skills Retention Bonus (CSRB, aka "Engineering Bonus") in 2003?		Multiple Choice
23	Only if Yes I Qualified AND Accepted	Being offered the CSRB bonus increased how long I was planning to stay in the AF.	5-point
24	Only if No: Under Time Req	The CSRB Bonus has been discontinued indefinitely. This has had a significant impact on my AF career decision.	5-point
25	The promotion system, especially for junior officers, is essentially service-based (promotions occur after a length of time). If the promotion system were changed to be merit-based (performance-based), I would be MORE likely to stay in the AF.		5-point
26	Please state how much you agree or disagree with each of the following statements.		
	More opportunities to relocate would increase my likelihood of remaining in the AF.		5-point
	More operational experience would increase my likelihood of remaining in the AF.		5-point
27	Imagine a new AF policy that allows you to transfer your accrued retirement benefits to your new job (like a 401K plan) if you separate before 20 years. If this policy existed, I would be MORE likely to remain in the AF. (If you are already separated, answer based on how you felt before you separated.)		5-point
28	I am in favor of the policy described in the last question (a 401K-like retirement plan).		5-point

No.	Survey Question		Answer
29	Do you expect to SEPARATE (before retirement) from the Air Force?		5-point
30	You previously answered a question like this, but it was about your peers. Now, please indicate YOUR level of satisfaction with each of the following:		
		Educational Opportunities (Advanced Degrees)	5-point
		Officer Performance Report (Evaluation System)	5-point
		Assignment System	5-point
		Promotion System	5-point
		Job Satisfaction	5-point
		Leadership Opportunities	5-point
		Retirement System	5-point
		Pay and Allowances	5-point
		Travel/TDY Opportunities	5-point
		Reward System and Recognition	5-point
		Operational Opportunities or Deployments	5-point
31	SEPARATION BRANCH: Only if undecided, separated/ retired, maybe will separate	Please rank the following. The most important reasons I am considering separating (or have separated or retired) from the AF are:	
		Pay & Allowances	5-point
		Assignment System	5-point
		Availability of Comparable Civilian Jobs	5-point
		Job Satisfaction	5-point
		Promotion System	5-point

Appendix B Survey Solicitation Email

The following is the email used to invite Air Force officers and former officers to take the web-based survey for this thesis:

From: Derek W Beck [survey@cartala.com]
Sent: Thursday, August 05, 2004 4:47 PM
Subject: USAF Issues: MIT survey by a fellow AF officer
Flag Status: Flagged

Greetings. My name is Derek Beck and I am a CGO at Los Angeles AFB, currently on a special assignment to the Massachusetts Institute of Technology. For my master's thesis, I am conducting an independent survey on issues related to US Air Force officers in the Acquisitions and related career fields.

Please take a few minutes to complete my survey. Not only will you be helping me out on my research, but also your responses will help to shape policy recommendations to the US Air Force through the MIT Lean Aerospace Initiative. This survey is independent and is NOT conducted by the USAF.

Your participation is completely voluntary and completely anonymous. The survey will take LESS than 10 minutes. If you leave the survey early, you can come back to it and it will pick up where you left off (assuming you are using the same computer). Please complete the survey by September 15th, 2004.

To take the survey, go to: http://www.surveymonkey.com/s.asp?u=88505559795
The password is: goairforce

Feel free to pass along this email to Acquisitions people outside of LA AFB, and especially to any people you know that have recently retired or separated from the USAF and these career fields.

If you have any questions or comments, don't hesitate to email me directly at survey@cartala.com

Thank you for your time! Your participation is greatly appreciated!

Sincerely,
Derek Beck

Derek W Beck
Systems Design and Management Fellow
MIT Sloan School of Management
MIT School of Engineering
Massachusetts Institute of Technology

Appendix C Survey Key

Question #	Question Text	Question Key	Data Type	Variable Name
0	*Record#*	Auto	Nominal	Records
Post-Survey	*Completed Survey*	Switch	Nominal	CompletedSurvey
Post-Survey	*Suspect Data*	Switch	Nominal	SuspectData
Post-Survey	*CSRB Suspect*	Switch	Nominal	CSRBSuspect
0	*RespondentID*	Auto	Nominal	Respondents
0	*StartDate*	Auto	Scale	StartDate
0	*EndDate*	Auto	Scale	EndDate
1	1. What is your current military status?	Select Demographic	Nominal	Question1
Post-Survey	Officer Class	Demographic Inferred from Q2	Ordinal	OfficerClass
Post-Survey	Rank Class	Demographic Inferred from Q2	Ordinal	RankClass
2	2. What is your military pay grade (or highest pay grade achieved)?	Select Demographic	Ordinal	Question2
Post-Survey	Min Age	Demographic Inferred from Q3	Scale	MinAge
Post-Survey	Max Age	Demographic Inferred from Q3	Scale	MaxAge
3	3. How old are you?	Select Demographic	Ordinal	Question3
Post-Survey	Undergrad Class	Demographic Inferred from Q4	Nominal	UgradClass
4	4. What field is your undergraduate degree?	Select Demographic	Nominal	Question4
5	5. Do you have an advanced degree(s) (masters level or higher)?	Select Demographic	Nominal	Question5
6	6. Do you intend to pursue (another) advanced degree?	Select Demographic	Nominal	Question6
Post-Survey	Min ADT	Demographic Inferred from Q7	Scale	MinADT
Post-Survey	Max ADT	Demographic Inferred from Q7	Scale	MaxADT
7	7. What is your total time on active duty? (Do not include reserve duty unless you were active reserve.)	Select Demographic	Ordinal	Question7
8	8. Which field of the USAF do you currently work in? (If you are separated or retired, answer for your last AF job.)	Select Demographic	Nominal	Question8

Post-Survey	Initial Job Class	Demographic Inferred from Q9	Nominal	JobClass
9	9. Did you join the Acquisitions career field immediately upon being commissioned an officer, or were you in a different career field or training first?	Select Demographic	Nominal	Question9
10a	10a. For PEERS in your unit, their satisfaction on: Job Satisifaction	1=Satisfied, 5=Dissatisfied	Ordinal	Question10a
10b	10b. For PEERS in your unit, their satisfaction on: Pay and Allowances	1=Satisfied, 5=Dissatisfied	Ordinal	Question10b
10c	10c. For PEERS in your unit, their satisfaction on: Educational Opportunities (Advanced Degrees)	1=Satisfied, 5=Dissatisfied	Ordinal	Question10c
10d	10d. For PEERS in your unit, their satisfaction on: Promotion System	1=Satisfied, 5=Dissatisfied	Ordinal	Question10d
10e	10e. For PEERS in your unit, their satisfaction on: Reward System and Recognition	1=Satisfied, 5=Dissatisfied	Ordinal	Question10e
10f	10f. For PEERS in your unit, their satisfaction on: Officer Performance Report (Evaluation System)	1=Satisfied, 5=Dissatisfied	Ordinal	Question10f
10g	10g. For PEERS in your unit, their satisfaction on: Leadership Opportunities	1=Satisfied, 5=Dissatisfied	Ordinal	Question10g
10h	10h. For PEERS in your unit, their satisfaction on: Retirement System	1=Satisfied, 5=Dissatisfied	Ordinal	Question10h
10i	10i. For PEERS in your unit, their satisfaction on: Operational Opportunities or Deployments	1=Satisfied, 5=Dissatisfied	Ordinal	Question10i
10j	10j. For PEERS in your unit, their satisfaction on: Travel/TDY Opportunities	1=Satisfied, 5=Dissatisfied	Ordinal	Question10j
10k	10k. For PEERS in your unit, their satisfaction on: Assignment System	1=Satisfied, 5=Dissatisfied	Ordinal	Question10k
11a	11a. How satisfied are YOU with your immediate supervisor	1=Satisfied, 5=Dissatisfied	Ordinal	Question11a
11b	11b. How satisfied are YOU with your unit leadership	1=Satisfied, 5=Dissatisfied	Ordinal	Question11b
11c	11c. How satisfied are YOU with your base leadership	1=Satisfied, 5=Dissatisfied	Ordinal	Question11c
11d	11d. How satisfied are YOU with your command leadership	1=Satisfied, 5=Dissatisfied	Ordinal	Question11d
11e	11e. How satisfied are YOU with Air Force HQ leadership	1=Satisfied, 5=Dissatisfied	Ordinal	Question11e
12	12. What are your current intentions toward remaining (active duty) in the Air Force for at least 20 years?	1=Definitely Will Remain, 8=Definitely Will Not Remain	Ordinal	Question12

Post-Survey	AFSC Class	Demographic Inferred from Q13	Nominal	AFSCclass
13	13. What is your primary Air Force Specialty Code (AFSC)? (If you are separated or retired, answer for your last AF job.)	Select Demographic	Nominal	Question13
14a	14a. I understood how S&E's were utilized in the AF before I joined this career field.	1=Agree, 5=Disagree	Ordinal	Question14a
14b	14b. If 'Engineering Pay' (similar to Flight Pay for pilots) was offered for S&E's, I'd be MORE likely to make the AF a career.	1=Agree, 5=Disagree	Ordinal	Question14b
14c	14c. I am NOT satisfied with the opportunity to use my science/engineering degree(s).	1=Agree, 5=Disagree	Ordinal	Question14c
14d	14d. I am NOT satisfied with the opportunity to apply my science/engineering skills.	1=Agree, 5=Disagree	Ordinal	Question14d
15	15. Imagine a new AF policy that allows you to stay in science/engineering, never go into management, and still be promoted on time. However, if you accept this policy, you will never get promoted beyond Lt Colonel. With such a policy, I would be MORE likely to make the AF a career.	1=Agree, 5=Disagree	Ordinal	Question15
16	16. If S&E's with advanced technical degrees were paid more, I would be MORE likely to make the AF a career.	1=Agree, 5=Disagree	Ordinal	Question16
17	17. I understood what acquisitions was before joining this career field.	1=Agree, 5=Disagree	Ordinal	Question17
18a	18a. How satisfied are you with the following aspects of your current job: Meaningfulness to Unit	1=Satisfied, 5=Dissatisfied	Ordinal	Question18a
18b	18b. How satisfied are you with the following aspects of your current job: Challenge of your Job	1=Satisfied, 5=Dissatisfied	Ordinal	Question18b
18c	18c. How satisfied are you with the following aspects of your current job: Use of your Skills/Degree	1=Satisfied, 5=Dissatisfied	Ordinal	Question18c
18d	18d. How satisfied are you with the following aspects of your current job: Feeling Valued by your Unit	1=Satisfied, 5=Dissatisfied	Ordinal	Question18d
18e	18e. How satisfied are you with the following aspects of your current job: Amount of Additional Duties	1=Satisfied, 5=Dissatisfied	Ordinal	Question18e
19	19. When you compare your Air Force job to the equivalent civilian job, how does your Air Force job compare?	1=Better, 5=Worse	Ordinal	Question19

20	20. Imagine a new AF policy that allows you to stay at one Air Force Base for your entire career. If you accept this policy, you will still be promoted on time, but will never get promoted beyond Lt Colonel. With such a policy, I would be MORE likely to make the AF a career.	1=Agree, 5=Disagree	Ordinal	Question20
21	21. My skills, work experience, and workload are adequately compensated in terms of pay and benefits.	1=Agree, 5=Disagree	Ordinal	Question21
22	22. Could you have accepted (did you qualify for) the Critical Skills Retention Bonus (CSRB, aka 'Engineering Bonus') in 2003?	Select Demographic	Nominal	Question22
23	23. Being offered the CSRB bonus increased how long I was planning to stay in the AF.	1=Agree, 5=Disagree	Ordinal	Question23
24	24. The CSRB Bonus has been discontinued indefinitely. This has had a significant impact on my AF career decision.	1=Agree, 5=Disagree	Ordinal	Question24
25	25. The promotion system, especially for junior officers, is essentially service-based (promotions occur after a length of time). If the promotion system were changed to be merit-based (performance-based), I would be MORE likely to stay in the AF.	1=Agree, 5=Disagree	Ordinal	Question25
26a	26a. More opportunities to relocate would increase my likelihood of remaining in the AF.	1=Agree, 5=Disagree	Ordinal	Question26a
26b	26b. More operational experience would increase my likelihood of remaining in the AF.	1=Agree, 5=Disagree	Ordinal	Question26b
27	27. Imagine a new AF policy that allows you to transfer your accrued retirement benefits to your new job (like a 401K plan) if you separate before 20 years. If this policy existed, I would be MORE likely to remain in the AF.	1=Agree, 5=Disagree	Ordinal	Question27
28	28. I am in favor of the policy described in the last question (a 401K-like retirement plan).	1=Agree, 5=Disagree	Ordinal	Question28
29	29. Do you expect to SEPARATE (before retirement) from the Air Force?	1=Probably NOT, 5=Probably	Ordinal	Question29
Post-Survey	Career Intent Normalized to True 5pt Average	1=Stay in AF, 5=Leave AF	Ordinal	CareerIntentTrue 5pt

30a	30a. For YOU, what is your level of satisfaction on: Job Satisfaction	1=Satisfied, 5=Dissatisfied	Ordinal	Question30a
30b	30b. For YOU, what is your level of satisfaction on: Pay and Allowances	1=Satisfied, 5=Dissatisfied	Ordinal	Question30b
30c	30c. For YOU, what is your level of satisfaction on: Educational Opportunities (Advanced Degrees)	1=Satisfied, 5=Dissatisfied	Ordinal	Question30c
30d	30d. For YOU, what is your level of satisfaction on: Promotion System	1=Satisfied, 5=Dissatisfied	Ordinal	Question30d
30e	30e. For YOU, what is your level of satisfaction on: Reward System and Recognition	1=Satisfied, 5=Dissatisfied	Ordinal	Question30e
30f	30f. For YOU, what is your level of satisfaction on: Officer Performance Report (Evaluation System)	1=Satisfied, 5=Dissatisfied	Ordinal	Question30f
30g	30g. For YOU, what is your level of satisfaction on: Leadership Opportunities	1=Satisfied, 5=Dissatisfied	Ordinal	Question30g
30h	30h. For YOU, what is your level of satisfaction on: Retirement System	1=Satisfied, 5=Dissatisfied	Ordinal	Question30h
30i	30i. For YOU, what is your level of satisfaction on: Operational Opportunities or Deployments	1=Satisfied, 5=Dissatisfied	Ordinal	Question30i
30j	30j. For YOU, what is your level of satisfaction on: Travel/TDY Opportunities	1=Satisfied, 5=Dissatisfied	Ordinal	Question30j
30k	30k. For YOU, what is your level of satisfaction on: Assignment System	1=Satisfied, 5=Dissatisfied	Ordinal	Question30k
Post-Survey	Ave 10&30a: Job	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30a
Post-Survey	Ave 10&30b: Pay	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30b
Post-Survey	Ave 10&30c: Edu	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30c
Post-Survey	Ave 10&30d: Promotion Sys	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30d
Post-Survey	Ave 10&30e: Recognition	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30e
Post-Survey	Ave 10&30f: OPRs	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30f
Post-Survey	Ave 10&30g: Leadership Opp	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30g
Post-Survey	Ave 10&30h: Retirement	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30h
Post-Survey	Ave 10&30i: Deployments	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30i
Post-Survey	Ave 10&30j: TDY	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30j
Post-Survey	Ave 10&30k: Assignment Sys	1=Satisfied, 5=Dissatisfied	Ordinal	Ave10and30k

31a	31a. Please rank the reasons you are considering (or have) separating or retired: Pay & Allowances	1=Most Important, 5=Least	Ordinal	Question31a
31b	31b. Please rank the reasons you are considering (or have) separating or retired: Promotion System	1=Most Important, 5=Least	Ordinal	Question31b
31c	31c. Please rank the reasons you are considering (or have) separating or retired: Job Satisfaction	1=Most Important, 5=Least	Ordinal	Question31c
31d	31d. Please rank the reasons you are considering (or have) separating or retired: Availability of Comparable Civilian Jobs	1=Most Important, 5=Least	Ordinal	Question31d
31e	31e. Please rank the reasons you are considering (or have) separating or retired: Assignment System	1=Most Important, 5=Least	Ordinal	Question31e

Appendix D The Survey

The following pages show the actual survey as it appeared in design mode. The survey was built using the website http://www.surveymonkey.com. Design mode was the best way to show the actual survey since the survey, as it appeared to respondents, spanned multiple screens. Some questions, such as Q3, appear open-ended but in fact have drop-down menu boxes, however these drop-down boxes do not print. This example of the survey also hides the logic behind the questions which would reroute the respondent to different branches of the survey depending upon their responses. To see this logic, it is best to consult Appendix A.

Design Survey

Show All Pages and Questions

<< Back Preview

To change the **look** of your survey, select a choice below. Click 'Add' to create your own custom theme.

Theme: Cloudy Day Add

USAF Issues for 61, 62, 63, and related career fields (MIT Master's Thesis) Edit Title E

Add Page

Introduction (H) Edit Page Delete Page Copy/Move Add Logic

Add Question Add Page

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Thank you for participating in my graduate research project on issues related to Air Force officers in the 61 (Scientists), 62 (Engineers), 63 (Program Managers), and related career fields. Your participation is completely voluntary and is completely anonymous. Since there is no way for me to trace your responses back to you, please answer this survey as honestly as possible. This is not an Air Force survey, but is a study being conducted at the Massachusetts Institute of Technology (MIT).

This survey is expected to take LESS than 10 minutes. If you leave the survey prematurely and return later, you will be able to continue where you left off (assuming you are on the same computer).

Again, thank you for your participation.

Sincerely,

Derek W Beck

Systems Design and Management Fellow
MIT Sloan School of Management
MIT School of Engineering
Massachusetts Institute of Technology

This data will be used for the purposes of completion of a Master of Science thesis and this thesis may be published. The data will be shared with the United States Air Force along with recommendations on how to improve issues related to the applicable career fields. However, this survey is NOT conducted by the USAF, nor is it financially supported by the USAF in any way. No personally identifiable information will be collected on this survey, and your completion of this survey is completely anonymous. Your participation is completely voluntary, and you may stop the survey at any time. This survey has been reviewed by and approved for release by the MIT Committee On the Use of Humans as Experimental Subjects (COUHES).

Add Question | Add Page

Basic Information

Edit Page | Delete Page | Copy/Move | Add Logic

Add Question | Add Page

Edit | Delete | Copy/Move

Maximize this internet window for best results.

Add Question | Add Page

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*** 1. What is your current military status?**

- Active Duty
- Active Reserve (Activated Full-Time Reservist)
- Reserve Duty
- National Guard Duty
- Recently Separated (<1 year)
- Separated (>1 year)
- Retired

Add Question Add Page

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*** 2. What is your military pay grade (or highest pay grade achieved)?**

- O-1 Second Lieutenant
- O-1E Second Lieutenant (w/ Enlisted Experience)
- O-2 First Lieutenant
- O-2E First Lieutenant (w/ Enlisted Experience)
- O-3 Captain
- O-3E Captain (w/ Enlisted Experience)
- O-4 Major
- O-5 Lieutenant Colonel
- O-6 Colonel
- Other (please specify)

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*** 3. How old are you?**

Add Question Add Page

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*** 4. What field is your undergraduate degree?**

Add Question Add Page

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*** 5. Do you have an advanced degree(s) (masters level or higher)?**

- Yes (Non-Technical Degree)
- Yes (Technical Degree)
- Yes (One or more Technical AND Non-Technical Degrees)
- No

Add Question | Add Page

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*** 6. Do you intend to pursue (another) advanced degree?**

- Yes (Non-Technical Degree)
- Yes (Technical Degree)
- No

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*** 7. What is your total time on active duty?**
(Do not include reserve duty unless you were active reserve.)

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*** 8. Which field of the USAF do you currently work in?**
(If you are separated or retired, answer for your last AF job.)

- Acquisitions
- Reseach & Development (at an Air Force Research Lab or another Lab)
- Flight Test & Evaluation (including Flight Test Engineers)
- NRO, CIA, NASA, MDA, or other US Gov't Agency
- Currently on a Career Broadening Assignment outside my AFSC
- Other (please specify)

_____

Add Question | Add Page

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*** 9. Did you join the Acquisitions career field immediately upon being commissioned an officer, or were you in a different career field or training first?**

- Yes, came directly to Acquisitions
- No, went to Pilot or Navigator TRAINING first (but didn't continue in this field)
- No, went to Missileer or Space Operations TRAINING first (but didn't continue in this field)
- No, was working in an operational field first
- No, was in another non-operational field first
- Other (please specify) _____

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This ends the basic info section. Now, on to the survey. Please be as honest as possible. Again, your responses are completely anonymous.

Add Question | Add Page

The Survey

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Add Question | Add Page

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*** 10. For PEERS in your unit, please indicate the average level of satisfaction among your peers. Peers are people of your rank and Air Force Specialty Code (AFSC).**

	Satisfied	Somewhat Satisified	Neither Satisified nor Dissatisfied	Somewhat Dissatisfied	Dissatisfied
Educational Opportunities (Advanced Degrees)					
Promotion System					

Pay and Allowances					
Reward System and Recognition					
Officer Performance Report (Evaluation System)					
Operational Opportunities or Deployments					
Retirement System					
Leadership Opportunities					
Travel/TDY Opportunities					
Assignment System					
Job Satisfaction					

Add Question Add Page

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*** 11. How satisfied are YOU with the following aspects of your chain of command:**

	Satisfied	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Dissatisfied	N/A
Your immediate supervisor						
Your unit leadership						
Your base leadership						
Your command leadership						
Air Force HQ leadership						

Add Question Add Page

Your Career Intentions (H)

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Add Question Add Page

Edit Delete Copy/Move Edit Logic

*** 12. What are your current intentions toward remaining (active duty) in the Air Force for at least 20 years?**

- Definitely will remain in the Air Force
- Probably will remain in the Air Force
- Possibly will remain in the Air Force
- Leaning towards remaining in the Air Force
- Leaning towards NOT remaining in the Air Force
- Possibly will NOT remain in the Air Force
- Probably will NOT remain in the Air Force
- Definitely will NOT remain in the Air Force
- N/A (Already Separated or Retired)
- N/A (I'm Active Duty but already Retirement Eligible)

Add Question Add Page

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The choice you make for this question will be referred throughout this survey as your "Career Decision".

Add Question Add Page

If Already Out of Air Force (H)

Edit Page Delete Page Copy/Move Add Logic

Add Question Add Page

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Most of the questions assume you are still in the Air Force. Since you are no longer in the Air Force, please answer each question based on your last assignment or how you felt before you left.

Add Question Add Page

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Your Air Force Specialty Code (AFSC)

Add Question | Add Page

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*** 13. What is your primary Air Force Specialty Code (AFSC)?**
(If you are separated or retired, answer for your last AF job.)

- 61X Scientist
- 62X Engineer
- 63X Program Manager
- Other (please specify) _____

Add Question | Add Page

61/62 Specific Questions (H)

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Add Question | Add Page

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*** 14. Please state how much you agree or disagree with each of the following statements. Note S&E's means Scientists & Engineers.**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
I am NOT satisfied with the opportunity to use my science/engineering degree(s).						
I am NOT satisfied with the opportunity to apply my science/engineering skills.						
I understood how S&E's were utilized in the AF before I joined this career field.						
If "Engineering Pay" (similar to Flight Pay for pilots) was offered for S&E's, I'd be MORE likely to make the AF a career.						

Add Question Add Page

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*** 15. Imagine a new AF policy that allows you to stay in science/engineering, never go into management, and still be promoted on time. However, if you accept this policy, you will never get promoted beyond Lt Colonel. With such a policy, I would be MORE likely to make the AF a career.**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- N/A

Add Question Add Page

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*** 16. If S&E's with advanced technical degrees were paid more, I would be MORE likely to make the AF a career.**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- N/A

Add Question Add Page

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You have completed more than half of the survey. You have 12-13 questions left (depending on your responses).

Add Question Add Page

63 / Other AFSC Specific Questions (H)

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Add Question | Add Page

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*** 17. I understood what acquisitions was before joining this career field.**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- N/A

Add Question | Add Page

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You have completed more than half of the survey. You have 12-13 questions left (depending on your responses).

Add Question | Add Page

Job Satisfaction (H)

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Add Question | Add Page

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*** 18. How satisfied are you with the following aspects of your current job:**

	Satisified	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Dissatisfied
Amount of Additional Duties					
Feeling Valued by your Unit					
Meaningfulness to Unit					

Use of your Skills/Degree					
Challenge of your Job					

Add Question Add Page

Edit Delete Copy/Move Add Logic

*** 19. When you compare your Air Force job to the equivalent civilian job, how does your Air Force job compare?**

- Better than Civilian Equivalent Job
- Somewhat Better than Civilian Equivalent Job
- Similiar to Civilian Equivalent Job
- Somewhat Worse than Civilian Equivalent Job
- Worse than Civilian Equivalent Job
- N/A

Add Question Add Page

Edit Delete Copy/Move Add Logic

*** 20. Imagine a new AF policy that allows you to stay at one Air Force Base for your entire career. If you accept this policy, you will still be promoted on time, but will never get promoted beyond Lt Colonel. With such a policy, I would be MORE likely to make the AF a career.**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

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You have just 9-10 questions left (depending on your responses).

Add Question Add Page

Pay and Allowances (H)

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Add Question | Add Page

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*** 21. My skills, work experience, and workload are adequately compensated in terms of pay and benefits.**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Add Question | Add Page

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*** 22. Could you have accepted (did you qualify for) the Critical Skills Retention Bonus (CSRB, aka "Engineering Bonus") in 2003?**

- Yes, I Qualified AND Accepted the CSRB
- Yes, I Qualified BUT did NOT Accept the CSRB
- No, Didn't Qualify due to NOT ENOUGH time on active duty
- No, Didn't Qualify due to TOO MUCH time on active duty
- No, Didn't Qualify due to my AFSC
- Don't Know

Add Question | Add Page

CSRBYesYes (H)

Edit Page | Delete Page | Copy/Move | Edit Logic

Add Question | Add Page

Edit | Delete | Copy/Move | Add Logic

*** 23. Being offered the CSRB bonus increased how long I was planning to stay in the AF.**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Add Question | Add Page

CSRBNoNotEnoughOrDidn'tAccept (H)

Edit Page | Delete Page | Copy/Move | Add Logic

Add Question | Add Page

Edit | Delete | Copy/Move | Add Logic

*** 24. The CSRB Bonus has been discontinued indefinitely. This has had a significant impact on my AF career decision.**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- N/A (I am now Separated)

Add Question | Add Page

Air Force Policies (H)

Edit Page | Delete Page | Copy/Move | Add Logic

Add Question | Add Page

Edit | Delete | Copy/Move | Add Logic

*** 25. The promotion system, especially for junior officers, is essentially service-based (promotions occur after a length of time). If the promotion system were changed to be merit-based (performance-based), I would be MORE likely to stay in the AF.**

- Strongly Agree

- Agree
- Neutral
- Disagree
- Strongly Disagree
- N/A

Add Question | Add Page

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*** 26. Please state how much you agree or disagree with each of the following statements.**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
More operational experience would increase my likelihood of remaining in the AF.						
More opportunities to relocate would increase my likelihood of remaining in the AF.						

Add Question | Add Page

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*** 27. Imagine a new AF policy that allows you to transfer your accrued retirement benefits to your new job (like a 401K plan) if you separate before 20 years. If this policy existed, I would be MORE likely to remain in the AF.**

(If you are already separated, answer based on how you felt before you separated.)

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- N/A (I'm Retirement Eligible or already Retired)

Add Question | Add Page

Edit | Delete | Copy/Move | Add Logic

*** 28. I am in favor of the policy described in the last question (a 401K-like retirement plan).**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- Don't Know

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Almost done! You have just 2-3 questions left (depending on your responses).

Add Question | Add Page

Final Question (H) Edit Page | Delete Page | Copy/Move | Add Logic

Add Question | Add Page

Edit | Delete | Copy/Move | Edit Logic

*** 29. Do you expect to SEPARATE (before retirement) from the Air Force?**

- Probably
- Possibly
- Undecided
- Possibly NOT
- Probably NOT
- N/A (Already Separated or Retired)
- N/A (I'm Active Duty but already Retirement Eligible)

Add Question | Add Page

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*** 30. You previously answered a question like this, but it was about your peers. Now, please indicate YOUR level of satisfaction with each of the following:**

	Satisfied	Somewhat Satisified	Neither Satisified nor Dissatisfied	Somewhat Dissatisfied	Dissatisfied
Pay and Allowances					
Officer Performance Report (Evaluation System)					
Retirement System					
Assignment System					
Leadership Opportunities					
Travel/TDY Opportunities					
Promotion System					
Operational Opportunities or Deployments					
Job Satisfaction					
Reward System and Recognition					
Educational Opportunities (Advanced Degrees)					

Add Question Add Page

Separating (H)

Edit Page Delete Page Copy/Move Add Logic

Add Question Add Page

Edit Delete Copy/Move

*** 31. Please rank the following. The most important reasons I am considering separating (or have separated or retired) from the AF are:**

	Most Important 1	2	3	4	Least Important 5	N/A

Pay & Allowances						
Job Satisfaction						
Availability of Comparable Civilian Jobs						
Promotion System						
Assignment System						

Add Question Add Page

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If you click "Next" and you get an error: Make sure you have a checkmark on every row above.

Add Question Add Page

Comments? Edit Page Delete Page Copy/Move Add Logic

Add Question Add Page

Edit Delete Copy/Move

32. OPTIONAL:
If you would like to add additional comments, please do so below.

Add Question Add Page

Edit Delete Copy/Move

You may also send comments and questions to survey@cartala.com.

Add Question Add Page

Thank You

Edit Page | Delete Page | Copy/Move | Add Logic

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Thank you for taking the time to complete this survey.

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This research is conducted under the auspices of the Massachusetts Institute of Technology (MIT), the Systems Design and Management (SDM) program, the Lean Aerospace Initiative (LAI), the MIT Sloan School of Management, and the MIT School of Engineering.

Add Question | Add Page

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Send comments and questions to survey@cartala.com.

Add Question | Add Page

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Please Exit the Survey.

Add Question | Add Page

<< Back | Preview

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Appendix E Manning Statistics

The following data are the actual manning statistics[82] of the USAF from 1997 to 2004. Manning is determined by taking the number of actual officers assigned[83] and dividing by the number of authorizations (or job slots) that are available for a given category. Authorizations are determined by the individual organizations and are in flux throughout the fiscal year, which runs from October 1st to September 30th for the US Government. The numbers then that appear for 2004 may not be the final numbers for FY04, but are accurate as of the end of August 2004.

		2004	2003	2002	2001	2000	1999	1998	1997
61S	**LT**	266.0%	241.4%	190.4%	183.8%	166.7%	152.9%	140.4%	158.4%
	CPT	60.0%	58.8%	66.7%	60.3%	57.0%	63.0%	65.3%	64.3%
	MAJ	73.6%	65.4%	70.4%	67.5%	75.4%	86.0%	86.2%	94.5%
	LTC	87.9%	94.4%	96.6%	84.9%	85.1%	81.5%	87.7%	89.4%
	COL	85.0%	95.0%	70.0%	71.9%	82.8%	80.6%	78.3%	80.0%
62E	**LT**	185.2%	146.0%	108.1%	88.6%	84.0%	73.4%	88.2%	102.3%
	CPT	59.4%	57.1%	57.8%	57.3%	56.5%	60.1%	65.6%	70.3%
	MAJ	76.3%	75.0%	69.0%	68.3%	79.5%	85.7%	88.6%	96.0%
	LTC	91.3%	88.7%	90.7%	79.8%	77.7%	76.4%	86.8%	87.0%
	COL	61.9%	85.0%	67.4%	74.5%	83.7%	95.8%	64.9%	80.0%
63A	**LT**	326.8%	325.1%	246.8%	162.4%	172.7%	166.1%	171.0%	182.5%
	CPT	83.8%	77.0%	69.4%	64.1%	55.0%	59.2%	60.1%	64.2%
	MAJ	73.4%	74.3%	74.0%	76.9%	87.2%	94.5%	95.3%	113.3%
	LTC	83.5%	82.8%	82.0%	76.6%	79.7%	83.8%	91.4%	82.8%
	COL	85.0%	78.6%	81.3%	77.0%	75.0%	74.0%	77.8%	78.2%
61+62+63	**LT**	236.8%	209.6%	157.5%	120.3%	115.7%	104.9%	113.6%	126.8%
	CPT	67.1%	63.5%	62.8%	59.8%	56.1%	60.3%	63.9%	67.5%
	MAJ	74.5%	73.3%	71.7%	72.4%	82.8%	90.1%	91.3%	103.2%
	LTC	85.7%	85.2%	85.3%	78.1%	79.7%	81.8%	89.8%	84.8%
	COL	81.4%	80.7%	77.8%	76.0%	77.4%	78.6%	75.1%	78.8%
AF-Wide	**LT**	185.4%	168.1%	148.9%	119.0%	112.8%	103.6%	99.4%	103.0%
	CPT	89.7%	81.7%	81.9%	79.9%	81.3%	84.0%	88.3%	94.3%
	MAJ	94.0%	94.1%	92.4%	87.5%	94.5%	94.3%	94.4%	93.8%
	LTC	99.5%	99.1%	98.1%	90.6%	96.8%	97.6%	98.8%	94.6%
	COL	98.0%	100.5%	100.1%	97.3%	97.5%	101.0%	97.4%	96.0%

Table 5 Official manning rates for 61, 62, and 63 AF officers as well as AF-wide.

[82] Source: Air Force Personnel Center (AFPC), Randolph AFB, San Antonio, TX. Additional sources include the AFPC online and public personnel database http://www.afpc.randolph.af.mil/sasdemog , which is particularly important for inventory numbers. Additionally, the authorization numbers are available to government officials from the Defense Manpower Data Center (DMDC), at https://www.dmdc.osd.mil/drs .

[83] The number of officers assigned may be less than the actual inventory of officers of a given category due to those officers in Student status, Transient status (reassignment), or Personnel Holdee status (covering unusual circumstances like extended medical leave, prisoners, etc). This group of exceptions is collectively referred to as STP.

		2004	2003	2002	2001	2000	1999	1998	1997
61S	**LT**	375	350	278	250	235	214	212	236
	CPT	259	250	291	282	289	317	337	349
	MAJ	162	142	140	133	147	172	187	207
	LTC	80	85	85	73	80	88	100	110
	COL	17	19	21	23	24	25	18	20
	TOTAL	893	846	815	761	775	816	854	922
62E	**LT**	1039	867	684	607	595	524	649	787
	CPT	776	767	801	835	878	947	1052	1185
	MAJ	424	420	398	399	422	438	480	553
	LTC	230	220	215	205	181	172	190	194
	COL	26	34	31	38	41	46	37	48
	TOTAL	2495	2308	2129	2084	2117	2127	2408	2767
63A	**LT**	902	933	733	505	461	427	436	460
	CPT	663	606	558	507	496	534	553	580
	MAJ	566	576	570	572	634	648	625	681
	LTC	590	596	574	531	521	517	511	447
	COL	176	165	169	154	147	142	147	147
	TOTAL	2897	2876	2604	2269	2259	2268	2272	2315
61S+62E+63A	**LT**	2316	2150	1695	1362	1291	1165	1297	1483
	CPT	1698	1623	1650	1624	1663	1798	1942	2114
	MAJ	1152	1138	1108	1104	1203	1258	1292	1441
	LTC	900	901	874	809	782	777	801	751
	COL	219	218	221	215	212	213	202	215
	TOTAL	6285	6030	5548	5114	5151	5211	5534	6004
AF-Wide	**LT**	15553	14405	13107	10731	10266	9833	9724	10448
	CPT	22001	20306	20579	20197	21883	23313	25018	27318
	MAJ	14336	14314	13987	13363	13838	14113	14198	14308
	LTC	10109	10065	9877	9199	9402	9540	9668	9401
	COL	3677	3707	3668	3552	3585	3784	3658	3651
	TOTAL	65676	62820	61227	57124	58974	60583	62266	65126

Table 6 Official assigned officers for 61, 62, and 63 career fields as well as AF-wide.[84]

[84] STP numbers excluded. See previous footnote.

		2004	2003	2002	2001	2000	1999	1998	1997
61S	**LT**	141	145	146	136	141	140	151	149
	CPT	432	425	436	468	507	503	516	543
	MAJ	220	217	199	197	195	200	217	219
	LTC	91	90	88	86	94	108	114	123
	COL	20	20	30	32	29	31	23	25
	TOTAL	904	898	899	919	966	982	1021	1059
62E	**LT**	561	594	633	685	708	714	736	769
	CPT	1306	1343	1386	1458	1553	1576	1603	1686
	MAJ	556	560	577	584	531	511	542	576
	LTC	252	248	237	257	233	225	219	223
	COL	42	40	46	51	49	48	57	60
	TOTAL	2717	2791	2879	3035	3074	3074	3157	3314
63A	**LT**	276	287	297	311	267	257	255	252
	CPT	791	787	804	791	902	902	920	904
	MAJ	771	775	770	744	727	686	656	601
	LTC	707	720	700	693	654	617	559	540
	COL	207	210	208	200	196	192	189	188
	TOTAL	2752	2779	2779	2739	2746	2654	2579	2485
61S+62E+63A	**LT**	978	1026	1076	1132	1116	1111	1142	1170
	CPT	2529	2555	2626	2717	2962	2981	3039	3133
	MAJ	1547	1552	1546	1525	1453	1397	1415	1396
	LTC	1050	1058	1025	1036	981	950	892	886
	COL	269	270	284	283	274	271	269	273
	TOTAL	6373	6468	6557	6693	6786	6710	6757	6858
AF-Wide	**LT**	8388	8570	8801	9015	9098	9493	9778	10141
	CPT	24515	24868	25116	25263	26920	27766	28329	28984
	MAJ	15257	15208	15131	15271	14640	14964	15038	15258
	LTC	10163	10153	10073	10159	9708	9779	9787	9935
	COL	3753	3690	3663	3651	3678	3748	3754	3805
	TOTAL	62076	62505	62784	63359	64044	65750	66686	68123

Table 7 Official authorizations of officers for 61, 62, and 63 career fields as well as AF-wide.[85]

[85] In reality, all LT authorizations are specifically First Lieutenant authorizations. 2LT authorizations do not exist for these career fields.

Appendix F Summary of All Non-Suspect Data (N=592)

The following pages show the summarized demographics for the entire data set (N=592). The CSRB page depicts only the data considered valid for the CSRB analysis (N=482).

Records Shown:		592	of	762	77.7%
Question1					
1. What is your current military status?					
Active Duty		549	of	592	92.7%
Active Reserve (Activated Full-Time Reservist)		0	of	592	0.0%
Reserve Duty		16	of	592	2.7%
National Guard Duty		0	of	592	0.0%
Recently Separated (<1 year)		4	of	592	0.7%
Separated (>1 year)		18	of	592	3.0%
Retired		5	of	592	0.8%
	Total	592			
	# Skipped Q	0			
Question2					
2. What is your military pay grade (or highest pay grade achieved?					
O-1 Second Lieutenant		106	of	592	17.9%
O-1E Second Lieutenant (w/ Enlisted Experience)		17	of	592	2.9%
O-2 First Lieutenant		119	of	592	20.1%
O-2E First Lieutenant (w/ Enlisted Experience)		39	of	592	6.6%
O-3 Captain		169	of	592	28.5%
O-3E Captain (w/ Enlisted Experience)		21	of	592	3.5%
O-4 Major		83	of	592	14.0%
O-5 Lieutenant Colonel		28	of	592	4.7%
O-6 Colonel		10	of	592	1.7%
Other		0	of	592	0.0%
	Total	592			
	# Skipped Q	0			
Inferred Data:					
Second Lieutenant		123	of	592	20.8%
First Lieutenant		158	of	592	26.7%
Lieutenants (All)		281	of	592	47.5%
Captain		190	of	592	32.1%
Major	*duplicated*	83	of	592	14.0%
Lieutenant Colonel	*from*	28	of	592	4.7%
Colonel	*above*	10	of	592	1.7%
CGO (Lt and Capt)		471	of	592	79.6%
FGO (Maj, Lt Col, Col)		121	of	592	20.4%

Question3 3. How old are you?					
18-20		0	of	592	0.0%
21-24		89	of	592	15.0%
25-29		216	of	592	36.5%
30-34		124	of	592	20.9%
35-40		92	of	592	15.5%
40+		71	of	592	12.0%
	Total	592			
	# Skipped Q	0			

Question4 4. What field is your undergraduate degree?					
Accounting/Financial Management		8	of	592	1.4%
Aerospace Engineering		88	of	592	14.9%
Biological Sciences (including Medical)		6	of	592	1.0%
Business		143	of	592	24.2%
Chemistry and Biochemistry		24	of	592	4.1%
Civil Engineering		2	of	592	0.3%
Computer Science		16	of	592	2.7%
Economics		7	of	592	1.2%
English		1	of	592	0.2%
Geological Sciences		1	of	592	0.2%
Mathematics		18	of	592	3.0%
Mechanical Engineering		75	of	592	12.7%
Physics		23	of	592	3.9%
Political Science		8	of	592	1.4%
Electrical Engineering		88	of	592	14.9%
Chemical Engineering		11	of	592	1.9%
Operations Research		5	of	592	0.8%
Psychology/Behavioral Science		6	of	592	1.0%
Other		62	of	592	10.5%
	Total	592			
	# Skipped Q	0			

Inferred Data:					
Technical		384	of	592	64.9%
Non-Technical		208	of	592	35.1%
	Total	592			
	# Skipped Q	0			

Question5					
5. Do you have an advanced degree(s) (masters level or higher)?					
Yes (Non-Technical Degree)	154	of	592	26.0%	
Yes (Technical Degree)	114	of	592	19.3%	
Yes (One or more Technical AND Non-Technical Degrees)	22	of	592	3.7%	
No	302	of	592	51.0%	
Total	592				
# Skipped Q	0				

Question6					
6. Do you intend to pursue (another) advanced degree?					
Yes (Non-Technical Degree)	242	of	592	40.9%	
Yes (Technical Degree)	167	of	592	28.2%	
No	183	of	592	30.9%	
Total	592				
# Skipped Q	0				

Question7

7. What is your total time on active duty? (Do not include reserve duty unless you were active reserve.)

<1 year	31	of	592	5.2%
1-2 years	64	of	592	10.8%
2-3 years	52	of	592	8.8%
3-4 years	75	of	592	12.7%
4-5 years	63	of	592	10.6%
5-6 years	33	of	592	5.6%
6-7 years	32	of	592	5.4%
7-8 years	23	of	592	3.9%
8-9 years	20	of	592	3.4%
9-10 years	24	of	592	4.1%
10-11 years	21	of	592	3.5%
11-12 years	16	of	592	2.7%
12-13 years	20	of	592	3.4%
13-14 years	13	of	592	2.2%
14-15 years	11	of	592	1.9%
15-16 years	15	of	592	2.5%
16-17 years	15	of	592	2.5%
17-18 years	10	of	592	1.7%
18-19 years	10	of	592	1.7%
19-20 years	14	of	592	2.4%
20+ years	30	of	592	5.1%
Total	592			
# Skipped Q	0			

Question8

8. Which field of the USAF do you currently work in? (If you are separated or retired, answer for your last AF job.)

Acquisitions	478	of	592	80.7%
Research & Development (at an Air Force Research Lab or another Lab)	49	of	592	8.3%
Flight Test & Evaluation (including Flight Test Engineers)	24	of	592	4.1%
NRO, CIA, NASA, MDA, or other US Gov't Agency	5	of	592	0.8%
Currently on a Career Broadening Assignment outside my AFSC	12	of	592	2.0%
Other	24	of	592	4.1%
Total	592			
# Skipped Q	0			

Question9

9. Did you join the Acquisitions career field immediately upon being commissioned an officer, or were you in a different career field or training first?

Yes, came directly to Acquisitions	434	of	592	73.3%
No, went to Pilot or Navigator TRAINING first (but didn't continue in this field)	45	of	592	7.6%
No, went to Missileer or Space Operations TRAINING first (but didn't continue in this field)	15	of	592	2.5%
No, was working in an operational field first	40	of	592	6.8%
No, was in another non-operational field first	29	of	592	4.9%
Other	29	of	592	4.9%
Total	592			
# Skipped Q	0			

Inferred Data:

Acquisitions	434	of	592	73.3%
Operations or Ops Training	107	of	592	18.1%
Non-Operational or Other	51	of	592	8.6%
Total	592			
# Skipped Q	0			

Question10

10. For PEERS in your unit, please indicate the average level of satisfaction among your peers.
Peers are people of your rank and Air Force Specialty Code (AFSC).

		Satisfied		Somewhat Satisfied		Neither Satisfied nor Dissatisfied		Somewhat Dissatisfied		Dissatisfied		Average	Respo-nses
		%	1	%	2	%	3	%	4	%	5		
Job Satisfaction	Q10a	14.4%	85	36.3%	215	13.2%	78	25.3%	150	10.8%	64	2.82	592
Pay and Allowances	Q10b	30.4%	180	44.1%	261	14.2%	84	8.6%	51	2.7%	16	2.09	592
Educational Opportunities (Advanced Degrees)	Q10c	38.0%	225	37.5%	222	13.0%	77	8.4%	50	3.0%	18	2.01	592
Promotion System	Q10d	19.6%	116	36.8%	218	24.0%	142	14.7%	87	4.9%	29	2.48	592
Reward System and Recognition	Q10e	10.3%	61	27.7%	164	28.0%	166	25.2%	149	8.8%	52	2.94	592
Officer Performance Report (Evaluation System)	Q10f	11.7%	69	31.6%	187	26.4%	156	20.4%	121	10.0%	59	2.85	592
Leadership Opportunities	Q10g	12.0%	71	27.4%	162	17.9%	106	29.1%	172	13.7%	81	3.05	592
Retirement System	Q10h	39.5%	234	34.6%	205	21.5%	127	2.9%	17	1.5%	9	1.92	592
Operational Opportunities or Deployments	Q10i	10.5%	62	17.4%	103	28.0%	166	24.5%	145	19.6%	116	3.25	592
Travel/TDY Opportunities	Q10j	35.8%	212	37.3%	221	17.2%	102	7.4%	44	2.2%	13	2.03	592
Assignment System	Q10k	9.5%	56	31.1%	184	24.5%	145	23.5%	139	11.5%	68	2.96	592
												Total	592
												# That Skipped This Q	0

Question11

11. How satisfied are YOU with the following aspects of your chain of command:

		Satisfied		Somewhat Satisfied		Neither Satisfied nor Dissatisfied		Somewhat Dissatisfied		Dissatisfied		Average	Respo-nses -N/A	Respo-nses +N/A
		%	1	%	2	%	3	%	4	%	5			
Your immediate supervisor	Q11a	52.6%	311	23.9%	141	7.4%	44	10.7%	63	5.4%	32	1.92	591	592
Your unit leadership	Q11b	40.5%	240	30.9%	183	9.8%	58	12.3%	73	6.4%	38	2.13	592	592
Your base leadership	Q11c	29.7%	172	29.1%	169	29.0%	168	8.1%	47	4.1%	24	2.28	580	592
Your command leadership	Q11d	28.9%	169	29.9%	175	28.9%	169	6.7%	39	5.6%	33	2.30	585	592
Air Force HQ leadership	Q11e	28.6%	166	29.3%	170	30.3%	176	7.2%	42	4.5%	26	2.30	580	592
												Total	580	592
												# That Skipped This Q		0

Question12

12. What are your current intentions toward remaining (active duty) in the Air Force for at least 20 years?

Definitely will remain in the Air Force	1	159	of	592	26.9%
Probably will remain in the Air Force	2	91	of	592	15.4%
Possibly will remain in the Air Force	3	42	of	592	7.1%
Leaning towards remaining in the Air Force	4	60	of	592	10.1%
Leaning towards NOT remaining in the Air Force	5	49	of	592	8.3%
Possibly will NOT remain in the Air Force	6	24	of	592	4.1%
Probably will NOT remain in the Air Force	7	50	of	592	8.4%
Definitely will NOT remain in the Air Force	8	47	of	592	7.9%
N/A (Already Separated or Retired)		39	of	592	6.6%
N/A (I'm Active Duty but already Retirement Eligible)		31	of	592	5.2%
	Average	3.49			
	Total -N/A	522			
	Total +N/A	592			
	# Skipped Q	0			

Inferred Data (5-point True Average of Question 12 and Question 29):					
Probably Stay in Air Force	1	252	of	592	42.6%
Possibly Stay in Air Force	2	50	of	592	8.4%
Undecided	3	64	of	592	10.8%
Possibly NOT Stay in Air Force	4	53	of	592	9.0%
Probably NOT Stay in Air Force	5	103	of	592	17.4%
N/A (Already Separated or Retired)		39	of	592	6.6%
N/A (I'm Active Duty but already Retirement Eligible)		31	of	592	5.2%
Bad Records		0	of	592	0.0%
	5-pt Average	2.43			
	Total -N/A	522			
	Total +N/A	592			
	Total +N/A+Bad	592			

Question13

13. What is your primary Air Force Specialty Code (AFSC)? (If you are separated or retired, answer for your last AF job.)

61X Scientist	30	of	592	5.1%	This Response: Branch **A**
62X Engineer	236	of	592	39.9%	This Response: Branch **A**
63X Program Manager	287	of	592	48.5%	This Response: Branch **B**
Other	39	of	592	6.6%	This Response: Branch **B**
Total	592				
# Skipped Q	0				

Branch A from Question 13

Question14

14. Please state how much you agree or disagree with each of the following statements. Note S&E's means Scientists & Engineers.

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Average	Respo-nses -N/A	Respo-nses +N/A
		%	1	%	2	%	3	%	4	%	5			
I understood how S&E's were utilized in the AF before I joined this career field.	Q14a	4.2%	11	20.8%	55	13.6%	36	34.7%	92	26.8%	71	3.59	265	265
If "Engineering Pay" (similar to Flight Pay for pilots) was offered for S&E's, I'd be MORE likely to make the AF a career.	Q14b	35.9%	92	28.9%	74	18.4%	47	12.5%	32	4.3%	11	2.20	256	264
I am NOT satisfied with the opportunity to use my science/engineering degree(s).	Q14c	20.8%	55	31.1%	82	20.1%	53	20.8%	55	7.2%	19	2.63	264	264
I am NOT satisfied with the opportunity to apply my science/engineering skills.	Q14d	20.9%	55	30.8%	81	19.8%	52	21.3%	56	7.2%	19	2.63	263	264
												Total	256	264
												# That Skipped This Q		328

Branch A from Question 13

Question15

15. Imagine a new AF policy that allows you to stay in science/engineering, never go into management, and still be promoted on time.
However, if you accept this policy, you will never get promoted beyond Lt Colonel. With such a policy, I would be MORE likely to make the AF a career.

Strongly Agree	1	46	of	264	17.4%
Agree	2	68	of	264	25.8%
Neutral	3	56	of	264	21.2%
Disagree	4	57	of	264	21.6%
Strongly Disagree	5	32	of	264	12.1%
N/A		5	of	264	1.9%
	Average	2.85			
	Total -N/A	259			
	Total +N/A	264			
	# Skipped Q	328			

Branch A from Question 13

Question16

16. If S&E's with advanced technical degrees were paid more, I would be MORE likely to make the AF a career.

Strongly Agree	1	75	of	264	28.4%
Agree	2	97	of	264	36.7%
Neutral	3	46	of	264	17.4%
Disagree	4	25	of	264	9.5%
Strongly Disagree	5	13	of	264	4.9%
N/A		8	of	264	3.0%
	Average	2.23			
	Total -N/A	256			
	Total +N/A	264			
	# Skipped Q	328			

End Branch A Go To Question 18

Branch B from Question 13

Question17

17. I understood what acquisitions was before joining this career field.

Strongly Agree	1	27	of	328	8.2%
Agree	2	99	of	328	30.2%
Neutral	3	57	of	328	17.4%
Disagree	4	77	of	328	23.5%
Strongly Disagree	5	67	of	328	20.4%
N/A		1	of	328	0.3%
	Average	3.18			
	Total -N/A	327			
	Total +N/A	328			
	# Skipped Q	264			

End Branch B Go To Question 18

Question18

18. How satisfied are you with the following aspects of your current job:

		Satisfied		Somewhat Satisfied		Neither Satisfied nor Dissatisfied		Somewhat Dissatisfied		Dissatisfied		Average	Respo-nses
		%	1	%	2	%	3	%	4	%	5		
Meaningfulness to Unit	Q18a	30.6%	181	31.4%	186	14.7%	87	13.3%	79	10.0%	59	2.41	592
Challenge of your Job	Q18b	36.8%	218	30.1%	178	10.3%	61	11.8%	70	11.0%	65	2.30	592
Use of your Skills/Degree	Q18c	20.8%	123	29.7%	176	12.2%	72	19.4%	115	17.9%	106	2.84	592
Feeling Valued by your Unit	Q18d	29.2%	173	31.8%	188	11.5%	68	17.9%	106	9.6%	57	2.47	592
Amount of Additional Duties	Q18e	24.0%	142	24.5%	145	26.4%	156	15.2%	90	10.0%	59	2.63	592
												Total	592
												# That Skipped This Q	0

Question19

19. When you compare your Air Force job to the equivalent civilian job, how does your Air Force job compare?

Better than Civilian Equivalent Job	1	108	of	592	18.2%
Somewhat Better than Civilian Equivalent Job	2	152	of	592	25.7%
Similar to Civilian Equivalent Job	3	167	of	592	28.2%
Somewhat Worse than Civilian Equivalent Job	4	99	of	592	16.7%
Worse than Civilian Equivalent Job	5	43	of	592	7.3%
N/A		23	of	592	3.9%
	Average	2.68			
	Total -N/A	569			
	Total +N/A	592			
	# Skipped Q	0			

Question20

20. Imagine a new AF policy that allows you to stay at one Air Force Base for your entire career. If you accept this policy, you will still be promoted on time, but will never get promoted beyond Lt Colonel. With such a policy, I would be MORE likely to make the AF a career.

Strongly Agree	1	160	of	592	27.0%
Agree	2	129	of	592	21.8%
Neutral	3	118	of	592	19.9%
Disagree	4	109	of	592	18.4%
Strongly Disagree	5	76	of	592	12.8%
	Average	2.68			
	Total	592			
	# Skipped Q	0			

Question21

21. My skills, work experience, and workload are adequately compensated in terms of pay and benefits.

Strongly Agree	1	75	of	592	12.7%
Agree	2	246	of	592	41.6%
Neutral	3	121	of	592	20.4%
Disagree	4	110	of	592	18.6%
Strongly Disagree	5	40	of	592	6.8%
	Average	2.65			
	Total	592			
	# Skipped Q	0			

Question22

22. Could you have accepted (did you qualify for) the Critical Skills Retention Bonus (CSRB, aka "Engineering Bonus") in 2003?

Yes, I Qualified AND Accepted the CSRB	119	of	482	24.7%	This Response: Branch **C**
Yes, I Qualified BUT did NOT Accept the CSRB	20	of	482	4.1%	This Response: Branch **D**
No, Didn't Qualify due to NOT ENOUGH time on active duty	203	of	482	42.1%	This Response: Branch **D**
No, Didn't Qualify due to TOO MUCH time on active duty	43	of	482	8.9%	Skip Branches; GoTo Question 25
No, Didn't Qualify due to my AFSC	39	of	482	8.1%	Skip Branches; GoTo Question 25
Don't Know	58	of	482	12.0%	Skip Branches; GoTo Question 25
Total	482				
# Skipped Q	0				

This CSRB Data has been optimized by removing CSRB Suspect Data; N=482

Branch C from Question 22

Question23

23. Being offered the CSRB bonus increased how long I was planning to stay in the AF.

Strongly Agree	1	18	of	119	15.1%
Agree	2	36	of	119	30.3%
Neutral	3	12	of	119	10.1%
Disagree	4	36	of	119	30.3%
Strongly Disagree	5	17	of	119	14.3%
Average		2.98			
Total		119			
# Skipped Q		363			

End Branch C Go To Question 25

Branch D from Question 22

Question24

24. The CSRB Bonus has been discontinued indefinitely. This has had a significant impact on my AF career decision.

Strongly Agree	1	31	of	223	13.9%
Agree	2	53	of	223	23.8%
Neutral	3	63	of	223	28.3%
Disagree	4	45	of	223	20.2%
Strongly Disagree	5	25	of	223	11.2%
N/A (I am now Separated)		6	of	223	2.7%
Average		2.91			
Total -N/A		217			
Total +N/A		223			
# Skipped Q		259			

End Branch D Go To Question 25

Question25

25. The promotion system, especially for junior officers, is essentially service-based (promotions occur after a length of time). If the promotion system were changed to be merit-based (performance-based), I would be MORE likely to stay in the AF.

Strongly Agree	1	47	of	592	7.9%
Agree	2	105	of	592	17.7%
Neutral	3	222	of	592	37.5%
Disagree	4	139	of	592	23.5%
Strongly Disagree	5	53	of	592	9.0%
N/A		26	of	592	4.4%
	Average	3.08			
	Total -N/A	566			
	Total +N/A	592			
	# Skipped Q	0			

Question26

26. Please state how much you agree or disagree with each of the following statements.

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Average	Respo-nses -N/A	Respo-nses +N/A
		%	1	%	2	%	3	%	4	%	5			
More opportunities to relocate would increase my likelihood of remaining in the AF.	Q26a	8.8%	51	18.1%	105	31.7%	184	29.6%	172	11.9%	69	3.18	581	592
More operational experience would increase my likelihood of remaining in the AF.	Q26b	22.9%	132	29.3%	169	22.6%	130	16.8%	97	8.3%	48	2.58	576	592
												Total	576	592
												# That Skipped This Q		0

Question27

27. Imagine a new AF policy that allows you to transfer your accrued retirement benefits to your new job (like a 401K plan) if you separate before 20 years. If this policy existed, I would be MORE likely to remain in the AF. (If you are already separated, answer based on how you felt before you separated.)

Strongly Agree	1	115	of	592	19.4%
Agree	2	159	of	592	26.9%
Neutral	3	163	of	592	27.5%
Disagree	4	99	of	592	16.7%
Strongly Disagree	5	37	of	592	6.3%
N/A (I'm Retirement Eligible or already Retired)		19	of	592	3.2%
	Average	2.62			
	Total -N/A	573			
	Total +N/A	592			
	# Skipped Q	0			

Question28

28. I am in favor of the policy described in the last question (a 401K-like retirement plan).

Strongly Agree	1	224	of	592	37.8%
Agree	2	202	of	592	34.1%
Neutral	3	95	of	592	16.0%
Disagree	4	35	of	592	5.9%
Strongly Disagree	5	22	of	592	3.7%
Don't Know		14	of	592	2.4%
	Average	2.01			
	Total -N/A	578			
	Total +N/A	592			
	# Skipped Q	0			

Question29

29. Do you expect to SEPARATE (before retirement) from the Air Force?

Probably	5	101	of	592	17.1%	Answer All Questions (Include 31)
Possibly	4	50	of	592	8.4%	Answer All Questions (Include 31)
Undecided	3	101	of	592	17.1%	Answer All Questions (Include 31)
Possibly NOT	2	46	of	592	7.8%	Skip Question 31 (Still Answer 30)
Probably NOT	1	224	of	592	37.8%	Skip Question 31 (Still Answer 30)
N/A (Already Separated or Retired)		39	of	592	6.6%	Answer All Questions (Include 31)
N/A (I'm Active Duty but already Retirement Eligible)		31	of	592	5.2%	Skip Question 31 (Still Answer 30)
	Average	2.54				
	Total -N/A	522				
	Total +N/A	592				
	# Skipped Q	0				

See Inferred Data under Question 12

Question30

30. You previously answered a question like this, but it was about your peers. Now, please indicate YOUR level of satisfaction with each of the following:

		Satisfied		Somewhat Satisfied		Neither Satisfied nor Dissatisfied		Somewhat Dissatisfied		Dissatisfied		Average	Respo-nses
		%	1	%	2	%	3	%	4	%	5		
Job Satisfaction	Q30a	24.2%	143	31.3%	185	12.2%	72	17.1%	101	15.4%	91	2.68	592
Pay and Allowances	Q30b	34.0%	201	36.7%	217	12.5%	74	12.5%	74	4.4%	26	2.17	592
Educational Opportunities (Advanced Degrees)	Q30c	40.5%	240	31.1%	184	11.5%	68	11.7%	69	5.2%	31	2.10	592
Promotion System	Q30d	18.1%	107	35.8%	212	19.3%	114	16.7%	99	10.1%	60	2.65	592
Reward System and Recognition	Q30e	14.0%	83	26.0%	154	23.8%	141	22.6%	134	13.5%	80	2.96	592
Officer Performance Report (Evaluation System)	Q30f	13.5%	80	26.2%	155	18.2%	108	25.5%	151	16.6%	98	3.05	592
Leadership Opportunities	Q30g	19.3%	114	29.1%	172	17.2%	102	22.6%	134	11.8%	70	2.79	592
Retirement System	Q30h	37.0%	219	33.3%	197	16.9%	100	9.1%	54	3.7%	22	2.09	592
Operational Opportunities or Deployments	Q30i	15.4%	91	21.8%	129	26.2%	155	19.3%	114	17.4%	103	3.02	592
Travel/TDY Opportunities	Q30j	37.3%	221	34.6%	205	16.2%	96	8.6%	51	3.2%	19	2.06	592
Assignment System	Q30k	11.8%	70	29.6%	175	19.9%	118	21.6%	128	17.1%	101	3.03	592
												Total	592
												# That Skipped This Q	0

Inferred Data from Averaging Question 10 with Question 30

		Satisfied		Somewhat Satisfied		Neither Satisfied nor Dissatisfied		Somewhat Dissatisfied		Dissatisfied		Average	Respo-nses
	1030Ave	%	1	%	2	%	3	%	4	%	5		
Job Satisfaction	(a)	23.6%	140	30.6%	181	11.5%	68	19.8%	117	14.5%	86	2.71	592
Pay and Allowances	(b)	38.2%	226	37.8%	224	10.1%	60	10.6%	63	3.2%	19	2.03	592
Educational Opportunities (Advanced Degrees)	(c)	45.8%	271	30.6%	181	10.3%	61	8.4%	50	4.9%	29	1.96	592
Promotion System	(d)	22.3%	132	38.3%	227	14.2%	84	17.1%	101	8.1%	48	2.50	592
Reward System and Recognition	(e)	15.0%	89	27.0%	160	20.3%	120	25.2%	149	12.5%	74	2.93	592
Officer Performance Report (Evaluation System)	(f)	14.9%	88	30.6%	181	14.5%	86	24.0%	142	16.0%	95	2.96	592
Leadership Opportunities	(g)	18.1%	107	29.2%	173	13.3%	79	24.2%	143	15.2%	90	2.89	592
Retirement System	(h)	44.9%	266	32.3%	191	14.2%	84	7.1%	42	1.5%	9	1.88	592
Operational Opportunities or Deployments	(i)	12.2%	72	25.2%	149	19.4%	115	23.1%	137	20.1%	119	3.14	592
Travel/TDY Opportunities	(j)	42.9%	254	34.6%	205	11.5%	68	8.3%	49	2.7%	16	1.93	592
Assignment System	(k)	13.0%	77	31.9%	189	15.4%	91	23.3%	138	16.4%	97	2.98	592
												Total	592

Question 31 Appears Only for some answers from Question 29

Question31

31. Please rank the following. The most important reasons I am considering separating (or have separated or retired) from the AF are:

		Most Important								Least Important		Average	Respo-nses -N/A	Respo-nses +N/A
		%	1	%	2	%	3	%	4	%	5			
Pay & Allowances	Q31a	16.5%	46	19.7%	55	22.9%	64	19.7%	55	21.1%	59	3.09	279	290
Promotion System	Q31b	9.0%	25	16.8%	47	23.3%	65	25.8%	72	25.1%	70	3.41	279	290
Job Satisfaction	Q31c	49.8%	141	18.0%	51	11.3%	32	8.1%	23	12.7%	36	2.16	283	290
Availability of Comparable Civilian Jobs	Q31d	8.4%	23	17.5%	48	22.5%	62	21.5%	59	30.2%	83	3.48	275	291
Assignment System	Q31e	17.3%	48	29.2%	81	19.9%	55	24.2%	67	9.4%	26	2.79	277	290
												Total	275	290
												# That Skipped This Q		302

End Selectively Available Question 31 Branch

Question32

32. OPTIONAL: If you would like to add additional comments, please do so below.

Total	224
# Skipped Q	538

Appendix G Summary of Non-Suspect Data (<5 YOS)

The following pages show the summarized demographics for the entire data set (N=285). The CSRB page depicts only the data considered valid for the CSRB analysis (N=264).

Records Shown:		285	of	762	37.4%

Question1 1. What is your current military status?					
Active Duty		266	of	285	93.3%
Active Reserve (Activated Full-Time Reservist)		0	of	285	0.0%
Reserve Duty		3	of	285	1.1%
National Guard Duty		0	of	285	0.0%
Recently Separated (<1 year)		3	of	285	1.1%
Separated (>1 year)		13	of	285	4.6%
Retired		0	of	285	0.0%
	Total	285			
	# Skipped Q	0			

Question2 2. What is your military pay grade (or highest pay grade achieved?					
O-1 Second Lieutenant		106	of	285	37.2%
O-1E Second Lieutenant (w/ Enlisted Experience)		0	of	285	0.0%
O-2 First Lieutenant		114	of	285	40.0%
O-2E First Lieutenant (w/ Enlisted Experience)		2	of	285	0.7%
O-3 Captain		61	of	285	21.4%
O-3E Captain (w/ Enlisted Experience)		0	of	285	0.0%
O-4 Major		2	of	285	0.7%
O-5 Lieutenant Colonel		0	of	285	0.0%
O-6 Colonel		0	of	285	0.0%
Other		0	of	285	0.0%
	Total	285			
	# Skipped Q	0			

Inferred Data:					
Second Lieutenant		106	of	285	37.2%
First Lieutenant		116	of	285	40.7%
Lieutenants (All)		222	of	285	77.9%
Captain		61	of	285	21.4%
Major	*duplicated*	2	of	285	0.7%
Lieutenant Colonel	*from*	0	of	285	0.0%
Colonel	*above*	0	of	285	0.0%
CGO (Lt and Capt)		283	of	285	99.3%
FGO (Maj, Lt Col, Col)		2	of	285	0.7%

Question3 3. How old are you?					
18-20		0	of	285	0.0%
21-24		87	of	285	30.5%
25-29		166	of	285	58.2%
30-34		22	of	285	7.7%
35-40		5	of	285	1.8%
40+		5	of	285	1.8%
	Total	285			
	# Skipped Q	0			

Question4 4. What field is your undergraduate degree?					
Accounting/Financial Management		4	of	285	1.4%
Aerospace Engineering		39	of	285	13.7%
Biological Sciences (including Medical)		2	of	285	0.7%
Business		69	of	285	24.2%
Chemistry and Biochemistry		17	of	285	6.0%
Civil Engineering		1	of	285	0.4%
Computer Science		10	of	285	3.5%
Economics		3	of	285	1.1%
English		1	of	285	0.4%
Geological Sciences		0	of	285	0.0%
Mathematics		9	of	285	3.2%
Mechanical Engineering		38	of	285	13.3%
Physics		12	of	285	4.2%
Political Science		4	of	285	1.4%
Electrical Engineering		36	of	285	12.6%
Chemical Engineering		8	of	285	2.8%
Operations Research		3	of	285	1.1%
Psychology/Behavioral Science		3	of	285	1.1%
Other		26	of	285	9.1%
	Total	285			
	# Skipped Q	0			

Inferred Data:					
Technical		184	of	285	64.6%
Non-Technical		101	of	285	35.4%
	Total	285			
	# Skipped Q	0			

Question5					
5. Do you have an advanced degree(s) (masters level or higher)?					
Yes (Non-Technical Degree)	41	of	285	14.4%	
Yes (Technical Degree)	30	of	285	10.5%	
Yes (One or more Technical AND Non-Technical Degrees)	4	of	285	1.4%	
No	210	of	285	73.7%	
Total	285				
# Skipped Q	0				

Question6					
6. Do you intend to pursue (another) advanced degree?					
Yes (Non-Technical Degree)	142	of	285	49.8%	
Yes (Technical Degree)	100	of	285	35.1%	
No	43	of	285	15.1%	
Total	285				
# Skipped Q	0				

Question7

7. What is your total time on active duty? (Do not include reserve duty unless you were active reserve.)

<1 year	31	of	285	10.9%
1-2 years	64	of	285	22.5%
2-3 years	52	of	285	18.2%
3-4 years	75	of	285	26.3%
4-5 years	63	of	285	22.1%
5-6 years	0	of	285	0.0%
6-7 years	0	of	285	0.0%
7-8 years	0	of	285	0.0%
8-9 years	0	of	285	0.0%
9-10 years	0	of	285	0.0%
10-11 years	0	of	285	0.0%
11-12 years	0	of	285	0.0%
12-13 years	0	of	285	0.0%
13-14 years	0	of	285	0.0%
14-15 years	0	of	285	0.0%
15-16 years	0	of	285	0.0%
16-17 years	0	of	285	0.0%
17-18 years	0	of	285	0.0%
18-19 years	0	of	285	0.0%
19-20 years	0	of	285	0.0%
20+ years	0	of	285	0.0%
Total	285			
# Skipped Q	0			

Question8

8. Which field of the USAF do you currently work in? (If you are separated or retired, answer for your last AF job.)

Acquisitions	239	of	285	83.9%
Research & Development (at an Air Force Research Lab or another Lab)	27	of	285	9.5%
Flight Test & Evaluation (including Flight Test Engineers)	6	of	285	2.1%
NRO, CIA, NASA, MDA, or other US Gov't Agency	2	of	285	0.7%
Currently on a Career Broadening Assignment outside my AFSC	4	of	285	1.4%
Other	7	of	285	2.5%
Total	285			
# Skipped Q	0			

Question9

9. Did you join the Acquisitions career field immediately upon being commissioned an officer, or were you in a different career field or training first?

Yes, came directly to Acquisitions	237	of	285	83.2%
No, went to Pilot or Navigator TRAINING first (but didn't continue in this field)	25	of	285	8.8%
No, went to Missileer or Space Operations TRAINING first (but didn't continue in this field)	2	of	285	0.7%
No, was working in an operational field first	6	of	285	2.1%
No, was in another non-operational field first	5	of	285	1.8%
Other	10	of	285	3.5%
Total	285			
# Skipped Q	0			

Inferred Data:

Acquisitions	237	of	285	83.2%
Operations or Ops Training	36	of	285	12.6%
Non-Operational or Other	12	of	285	4.2%
Total	285			
# Skipped Q	0			

Question10

10. For PEERS in your unit, please indicate the average level of satisfaction among your peers.
Peers are people of your rank and Air Force Specialty Code (AFSC).

		Satisfied		Somewhat Satisfied		Neither Satisfied nor Dissatisfied		Somewhat Dissatisfied		Dissatisfied		Average	Respo-nses
		%	1	%	2	%	3	%	4	%	5		
Job Satisfaction	Q10a	10.5%	30	29.5%	84	13.7%	39	30.9%	88	15.4%	44	3.11	285
Pay and Allowances	Q10b	29.8%	85	42.1%	120	14.7%	42	9.5%	27	3.9%	11	2.15	285
Educational Opportunities (Advanced Degrees)	Q10c	34.4%	98	41.1%	117	12.6%	36	8.8%	25	3.2%	9	2.05	285
Promotion System	Q10d	18.6%	53	34.4%	98	28.8%	82	14.0%	40	4.2%	12	2.51	285
Reward System and Recognition	Q10e	9.8%	28	26.0%	74	29.5%	84	23.2%	66	11.6%	33	3.01	285
Officer Performance Report (Evaluation System)	Q10f	9.8%	28	30.2%	86	27.7%	79	20.7%	59	11.6%	33	2.94	285
Leadership Opportunities	Q10g	9.8%	28	21.4%	61	21.4%	61	29.5%	84	17.9%	51	3.24	285
Retirement System	Q10h	39.6%	113	30.5%	87	25.3%	72	2.8%	8	1.8%	5	1.96	285
Operational Opportunities or Deployments	Q10i	10.2%	29	12.3%	35	23.5%	67	27.7%	79	26.3%	75	3.48	285
Travel/TDY Opportunities	Q10j	36.8%	105	38.6%	110	14.7%	42	7.4%	21	2.5%	7	2.00	285
Assignment System	Q10k	6.7%	19	28.4%	81	21.8%	62	28.4%	81	14.7%	42	3.16	285
												Total	285
												# That Skipped This Q	0

Question11

11. How satisfied are YOU with the following aspects of your chain of command:

		Satisfied		Somewhat Satisfied		Neither Satisfied nor Dissatisfied		Somewhat Dissatisfied		Dissatisfied		Average	Respo-nses -N/A	Respo-nses +N/A
		%	1	%	2	%	3	%	4	%	5			
Your immediate supervisor	Q11a	54.2%	154	23.2%	66	4.6%	13	11.6%	33	6.3%	18	1.93	284	285
Your unit leadership	Q11b	40.4%	115	30.2%	86	9.8%	28	12.3%	35	7.4%	21	2.16	285	285
Your base leadership	Q11c	26.4%	74	30.4%	85	32.1%	90	6.8%	19	4.3%	12	2.32	280	285
Your command leadership	Q11d	26.8%	75	27.5%	77	32.9%	92	5.7%	16	7.1%	20	2.39	280	285
Air Force HQ leadership	Q11e	24.9%	69	27.8%	77	34.7%	96	7.6%	21	5.1%	14	2.40	277	285
												Total	277	285
												# That Skipped This Q		0

Question12

12. What are your current intentions toward remaining (active duty) in the Air Force for at least 20 years?

Definitely will remain in the Air Force	1	25	of	285	8.8%
Probably will remain in the Air Force	2	30	of	285	10.5%
Possibly will remain in the Air Force	3	29	of	285	10.2%
Leaning towards remaining in the Air Force	4	40	of	285	14.0%
Leaning towards NOT remaining in the Air Force	5	36	of	285	12.6%
Possibly will NOT remain in the Air Force	6	18	of	285	6.3%
Probably will NOT remain in the Air Force	7	45	of	285	15.8%
Definitely will NOT remain in the Air Force	8	43	of	285	15.1%
N/A (Already Separated or Retired)		19	of	285	6.7%
N/A (I'm Active Duty but already Retirement Eligible)		0	of	285	0.0%
	Average	4.81			
	Total -N/A	266			
	Total +N/A	285			
	# Skipped Q	0			

Inferred Data (5-point True Average of Question 12 and Question 29):					
Probably Stay in Air Force	1	57	of	285	20.0%
Possibly Stay in Air Force	2	31	of	285	10.9%
Undecided	3	44	of	285	15.4%
Possibly NOT Stay in Air Force	4	41	of	285	14.4%
Probably NOT Stay in Air Force	5	93	of	285	32.6%
N/A (Already Separated or Retired)		19	of	285	6.7%
N/A (I'm Active Duty but already Retirement Eligible)		0	of	285	0.0%
Bad Records		0	of	285	0.0%
	5-pt Average	3.31			
	Total -N/A	266			
	Total +N/A	285			
	Total +N/A+Bad	285			

Question13

13. What is your primary Air Force Specialty Code (AFSC)? (If you are separated or retired, answer for your last AF job.)

61X Scientist		18	of	285	6.3%	This Response: Branch **A**
62X Engineer		127	of	285	44.6%	This Response: Branch **A**
63X Program Manager		125	of	285	43.9%	This Response: Branch **B**
Other		15	of	285	5.3%	This Response: Branch **B**
	Total	285				
	# Skipped Q	0				

Branch A from Question 13

Question14

14. Please state how much you agree or disagree with each of the following statements. Note S&E's means Scientists & Engineers.

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Average	Respo-nses -N/A	Respo-nses +N/A
		%	1	%	2	%	3	%	4	%	5			
I understood how S&E's were utilized in the AF before I joined this career field.	Q14a	2.8%	4	18.1%	26	16.0%	23	32.6%	47	30.6%	44	3.70	144	144
If "Engineering Pay" (similar to Flight Pay for pilots) was offered for S&E's, I'd be MORE likely to make the AF a career.	Q14b	35.0%	50	30.8%	44	18.2%	26	11.2%	16	4.9%	7	2.20	143	144
I am NOT satisfied with the opportunity to use my science/engineering degree(s).	Q14c	28.5%	41	33.3%	48	17.4%	25	16.0%	23	4.9%	7	2.35	144	144
I am NOT satisfied with the opportunity to apply my science/engineering skills.	Q14d	28.7%	41	32.2%	46	16.8%	24	17.5%	25	4.9%	7	2.38	143	144
												Total	143	144
												# That Skipped This Q		141

Branch A from Question 13

Question15

15. Imagine a new AF policy that allows you to stay in science/engineering, never go into management, and still be promoted on time.
However, if you accept this policy, you will never get promoted beyond Lt Colonel. With such a policy, I would be MORE likely to make the AF a career.

Strongly Agree	1	17	of	144	11.8%
Agree	2	44	of	144	30.6%
Neutral	3	32	of	144	22.2%
Disagree	4	31	of	144	21.5%
Strongly Disagree	5	17	of	144	11.8%
N/A		3	of	144	2.1%
	Average	2.91			
	Total -N/A	141			
	Total +N/A	144			
	# Skipped Q	141			

Branch A from Question 13

Question16

16. If S&E's with advanced technical degrees were paid more, I would be MORE likely to make the AF a career.

Strongly Agree	1	38	of	144	26.4%
Agree	2	61	of	144	42.4%
Neutral	3	23	of	144	16.0%
Disagree	4	14	of	144	9.7%
Strongly Disagree	5	5	of	144	3.5%
N/A		3	of	144	2.1%
	Average	2.20			
	Total -N/A	141			
	Total +N/A	144			
	# Skipped Q	141			

End Branch A Go To Question 18

Branch B from Question 13

Question17

17. I understood what acquisitions was before joining this career field.

Strongly Agree	1	12	of	141	8.5%
Agree	2	34	of	141	24.1%
Neutral	3	27	of	141	19.1%
Disagree	4	30	of	141	21.3%
Strongly Disagree	5	37	of	141	26.2%
N/A		1	of	141	0.7%
	Average	3.33			
	Total -N/A	140			
	Total +N/A	141			
	# Skipped Q	144			

End Branch B Go To Question 18

Question18

18. How satisfied are you with the following aspects of your current job:

		Satisfied		Somewhat Satisfied		Neither Satisfied nor Dissatisfied		Somewhat Dissatisfied		Dissatisfied		Average	Respo-nses
		%	1	%	2	%	3	%	4	%	5		
Meaningfulness to Unit	Q18a	19.6%	56	34.7%	99	15.8%	45	16.8%	48	13.0%	37	2.69	285
Challenge of your Job	Q18b	25.3%	72	32.6%	93	10.5%	30	17.9%	51	13.7%	39	2.62	285
Use of your Skills/Degree	Q18c	13.7%	39	26.3%	75	10.5%	30	25.6%	73	23.9%	68	3.20	285
Feeling Valued by your Unit	Q18d	21.1%	60	33.7%	96	12.3%	35	21.1%	60	11.9%	34	2.69	285
Amount of Additional Duties	Q18e	17.2%	49	25.3%	72	24.6%	70	17.5%	50	15.4%	44	2.89	285
												Total	285
												# That Skipped This Q	0

Question19

19. When you compare your Air Force job to the equivalent civilian job, how does your Air Force job compare?

Better than Civilian Equivalent Job	1	47	of	285	16.5%
Somewhat Better than Civilian Equivalent Job	2	68	of	285	23.9%
Similar to Civilian Equivalent Job	3	74	of	285	26.0%
Somewhat Worse than Civilian Equivalent Job	4	56	of	285	19.6%
Worse than Civilian Equivalent Job	5	29	of	285	10.2%
N/A		11	of	285	3.9%
	Average	2.82			
	Total -N/A	274			
	Total +N/A	285			
	# Skipped Q	0			

Question20

20. Imagine a new AF policy that allows you to stay at one Air Force Base for your entire career. If you accept this policy, you will still be promoted on time, but will never get promoted beyond Lt Colonel. With such a policy, I would be MORE likely to make the AF a career.

Strongly Agree	1	72	of	285	25.3%
Agree	2	70	of	285	24.6%
Neutral	3	53	of	285	18.6%
Disagree	4	49	of	285	17.2%
Strongly Disagree	5	41	of	285	14.4%
	Average	2.71			
	Total	285			
	# Skipped Q	0			

Question21

21. My skills, work experience, and workload are adequately compensated in terms of pay and benefits.

Strongly Agree	1	38	of	285	13.3%
Agree	2	109	of	285	38.2%
Neutral	3	60	of	285	21.1%
Disagree	4	56	of	285	19.6%
Strongly Disagree	5	22	of	285	7.7%
	Average	2.70			
	Total	285			
	# Skipped Q	0			

Question22

22. Could you have accepted (did you qualify for) the Critical Skills Retention Bonus (CSRB, aka "Engineering Bonus") in 2003?

Yes, I Qualified AND Accepted the CSRB	3	of	264	1.1%	This Response: Branch **C**
Yes, I Qualified BUT did NOT Accept the CSRB	6	of	264	2.3%	This Response: Branch **D**
No, Didn't Qualify due to NOT ENOUGH time on active duty	203	of	264	76.9%	This Response: Branch **D**
No, Didn't Qualify due to TOO MUCH time on active duty	0	of	264	0.0%	Skip Branches; GoTo Question 25
No, Didn't Qualify due to my AFSC	10	of	264	3.8%	Skip Branches; GoTo Question 25
Don't Know	42	of	264	15.9%	Skip Branches; GoTo Question 25
Total	264				
# Skipped Q	0				

This CSRB Data has been optimized by removing CSRB Suspect Data; N=264

Branch C from Question 22

Question23

23. Being offered the CSRB bonus increased how long I was planning to stay in the AF.

Strongly Agree	1	1	of	3	33.3%
Agree	2	2	of	3	66.7%
Neutral	3	0	of	3	0.0%
Disagree	4	0	of	3	0.0%
Strongly Disagree	5	0	of	3	0.0%
Average		1.67			
Total		3			
# Skipped Q		261			

End Branch C Go To Question 25

Branch D from Question 22

Question24

24. The CSRB Bonus has been discontinued indefinitely. This has had a significant impact on my AF career decision.

Strongly Agree	1	31	of	209	14.8%
Agree	2	53	of	209	25.4%
Neutral	3	58	of	209	27.8%
Disagree	4	43	of	209	20.6%
Strongly Disagree	5	23	of	209	11.0%
N/A (I am now Separated)		1	of	209	0.5%
Average		2.88			
Total -N/A		208			
Total +N/A		209			
# Skipped Q		55			

End Branch D Go To Question 25

Question25

25. The promotion system, especially for junior officers, is essentially service-based (promotions occur after a length of time). If the promotion system were changed to be merit-based (performance-based), I would be MORE likely to stay in the AF.

Strongly Agree	1	26	of	285	9.1%
Agree	2	62	of	285	21.8%
Neutral	3	103	of	285	36.1%
Disagree	4	66	of	285	23.2%
Strongly Disagree	5	25	of	285	8.8%
N/A		3	of	285	1.1%

Average	3.01
Total -N/A	282
Total +N/A	285
# Skipped Q	0

Question26

26. Please state how much you agree or disagree with each of the following statements.

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Average	Respo-nses -N/A	Respo-nses +N/A
		%	1	%	2	%	3	%	4	%	5			
More opportunities to relocate would increase my likelihood of remaining in the AF.	Q26a	12.0%	34	21.5%	61	27.8%	79	26.4%	75	12.3%	35	3.06	284	285
More operational experience would increase my likelihood of remaining in the AF.	Q26b	25.1%	71	30.7%	87	20.8%	59	14.1%	40	9.2%	26	2.52	283	285
												Total	283	285
												# That Skipped This Q		0

Question27

27. Imagine a new AF policy that allows you to transfer your accrued retirement benefits to your new job (like a 401K plan) if you separate before 20 years. If this policy existed, I would be MORE likely to remain in the AF. (If you are already separated, answer based on how you felt before you separated.)

Strongly Agree	1	54	of	285	18.9%
Agree	2	99	of	285	34.7%
Neutral	3	78	of	285	27.4%
Disagree	4	39	of	285	13.7%
Strongly Disagree	5	14	of	285	4.9%
N/A (I'm Retirement Eligible or already Retired)		1	of	285	0.4%
	Average	2.51			
	Total -N/A	284			
	Total +N/A	285			
	# Skipped Q	0			

Question28

28. I am in favor of the policy described in the last question (a 401K-like retirement plan).

Strongly Agree	1	112	of	285	39.3%
Agree	2	106	of	285	37.2%
Neutral	3	49	of	285	17.2%
Disagree	4	7	of	285	2.5%
Strongly Disagree	5	2	of	285	0.7%
Don't Know		9	of	285	3.2%
	Average	1.84			
	Total -N/A	276			
	Total +N/A	285			
	# Skipped Q	0			

Question29

29. Do you expect to SEPARATE (before retirement) from the Air Force?

Probably	5	91	of	285	31.9%	Answer All Questions (Include 31)
Possibly	4	40	of	285	14.0%	Answer All Questions (Include 31)
Undecided	3	69	of	285	24.2%	Answer All Questions (Include 31)
Possibly NOT	2	26	of	285	9.1%	Skip Question 31 (Still Answer 30)
Probably NOT	1	40	of	285	14.0%	Skip Question 31 (Still Answer 30)
N/A (Already Separated or Retired)		19	of	285	6.7%	Answer All Questions (Include 31)
N/A (I'm Active Duty but already Retirement Eligible)		0	of	285	0.0%	Skip Question 31 (Still Answer 30)
	Average	3.44				
	Total -N/A	266				
	Total +N/A	285				
	# Skipped Q	0				

See Inferred Data under Question 12

Question30

30. You previously answered a question like this, but it was about your peers. Now, please indicate YOUR level of satisfaction with each of the following:

		Satisfied		Somewhat Satisfied		Neither Satisfied nor Dissatisfied		Somewhat Dissatisfied		Dissatisfied		Average	Respo-nses
		%	1	%	2	%	3	%	4	%	5		
Job Satisfaction	Q30a	16.8%	48	26.7%	76	14.0%	40	20.7%	59	21.8%	62	3.04	285
Pay and Allowances	Q30b	30.9%	88	36.5%	104	11.9%	34	15.8%	45	4.9%	14	2.27	285
Educational Opportunities (Advanced Degrees)	Q30c	31.9%	91	35.8%	102	14.0%	40	10.9%	31	7.4%	21	2.26	285
Promotion System	Q30d	15.8%	45	34.0%	97	22.5%	64	16.5%	47	11.2%	32	2.73	285
Reward System and Recognition	Q30e	11.9%	34	21.1%	60	25.3%	72	24.6%	70	17.2%	49	3.14	285
Officer Performance Report (Evaluation System)	Q30f	8.8%	25	25.6%	73	18.9%	54	29.1%	83	17.5%	50	3.21	285
Leadership Opportunities	Q30g	13.0%	37	26.7%	76	22.1%	63	24.2%	69	14.0%	40	3.00	285
Retirement System	Q30h	33.3%	95	31.6%	90	22.8%	65	8.1%	23	4.2%	12	2.18	285
Operational Opportunities or Deployments	Q30i	9.8%	28	18.6%	53	28.8%	82	20.7%	59	22.1%	63	3.27	285
Travel/TDY Opportunities	Q30j	33.7%	96	36.8%	105	15.8%	45	9.5%	27	4.2%	12	2.14	285
Assignment System	Q30k	7.0%	20	24.2%	69	21.1%	60	23.5%	67	24.2%	69	3.34	285
												Total	285
												# That Skipped This Q	0

Inferred Data from Averaging Question 10 with Question 30

		Satisfied		Somewhat Satisfied		Neither Satisfied nor Dissatisfied		Somewhat Dissatisfied		Dissatisfied		Average	Respo-nses
	1030Ave	%	1	%	2	%	3	%	4	%	5		
Job Satisfaction	(a)	15.4%	44	27.0%	77	14.0%	40	22.5%	64	21.1%	60	3.07	285
Pay and Allowances	(b)	35.4%	101	36.8%	105	9.8%	28	14.4%	41	3.5%	10	2.14	285
Educational Opportunities (Advanced Degrees)	(c)	39.6%	113	34.4%	98	11.2%	32	9.1%	26	5.6%	16	2.07	285
Promotion System	(d)	19.6%	56	39.3%	112	15.4%	44	16.8%	48	8.8%	25	2.56	285
Reward System and Recognition	(e)	12.6%	36	26.7%	76	19.6%	56	25.3%	72	15.8%	45	3.05	285
Officer Performance Report (Evaluation System)	(f)	11.2%	32	30.5%	87	14.0%	40	27.4%	78	16.8%	48	3.08	285
Leadership Opportunities	(g)	13.7%	39	24.6%	70	16.5%	47	26.7%	76	18.6%	53	3.12	285
Retirement System	(h)	42.5%	121	31.6%	90	16.8%	48	7.4%	21	1.8%	5	1.94	285
Operational Opportunities or Deployments	(i)	10.9%	31	16.8%	48	18.6%	53	28.8%	82	24.9%	71	3.40	285
Travel/TDY Opportunities	(j)	41.1%	117	36.8%	105	9.8%	28	9.1%	26	3.2%	9	1.96	285
Assignment System	(k)	8.1%	23	27.0%	77	17.9%	51	23.9%	68	23.2%	66	3.27	285
												Total	285

Question 31 Appears Only for some answers from Question 29

Question31

31. Please rank the following. The most important reasons I am considering separating (or have separated or retired) from the AF are:

		Most Important								Least Important		Average	Respo-nses -N/A	Respo-nses +N/A
		%	1	%	2	%	3	%	4	%	5			
Pay & Allowances	Q31a	16.7%	35	20.0%	42	22.4%	47	18.1%	38	22.9%	48	3.10	210	218
Promotion System	Q31b	4.3%	9	15.2%	32	24.6%	52	27.5%	58	28.4%	60	3.61	211	218
Job Satisfaction	Q31c	54.5%	116	18.3%	39	9.9%	21	7.5%	16	9.9%	21	2.00	213	218
Availability of Comparable Civilian Jobs	Q31d	6.9%	14	17.2%	35	25.0%	51	22.5%	46	28.4%	58	3.49	204	218
Assignment System	Q31e	17.7%	37	30.6%	64	18.2%	38	23.9%	50	9.6%	20	2.77	209	218
												Total	204	218
												# That Skipped This Q		67

End Selectively Available Question 31 Branch

Question32

32. OPTIONAL: If you would like to add additional comments, please do so below.

Total	224
# Skipped Q	538

Appendix H Methodology for Determining Suspect Data

The following was the process to determine what data records would be declared "suspect" and therefore not used in analysis. This process uses a comparison of Q12 and Q29 on separation or career intent. Q12 was an 8-point non-neutral question, and Q29 was a 5-point question with the middle being neutral. Q29 was intentionally reversed to insure people had to read it before answering. The questions, verbatim, appeared in the survey as follows (the Likert Scale number shown in parentheses did NOT appear in the administered survey):

Q12: What are your current intentions toward remaining (active duty) in the Air Force for at least 20 years?

Definitely will remain in the Air Force	(1)
Probably will remain in the Air Force	(2)
Possibly will remain in the Air Force	(3)
Leaning towards remaining in the Air Force	(4)
Leaning towards NOT remaining in the Air Force	(5)
Possibly will NOT remain in the Air Force	(6)
Probably will NOT remain in the Air Force	(7)
Definitely will NOT remain in the Air Force	(8)
N/A (Already Separated or Retired)	
N/A (I'm Active Duty but already Retirement Eligible)	

Q29: Do you expect to SEPARATE (before retirement) from the Air Force?

Probably	(5)
Possibly	(4)
Undecided	(3)
Possibly NOT	(2)
Probably NOT	(1)
N/A (Already Separated or Retired)	
N/A (I'm Active Duty but already Retirement Eligible)	

Note the intentional reverse logic on Q29 and the resulting reverse of the scale.

In the original data, a new variable called "Suspect Data" was added.

Records received a "0" for the Suspect Data variable if not suspect.

Records received a "2" for the Suspect Data variable if they didn't finish the survey to at least Q29, thereby preventing the suspect test (as explained below) from being conducted on the data. (Of the respondents that did not finish the survey, all of them had stopped before Q29. Therefore, every respondent that didn't finish received a "2" in the Suspect Data column.) This was true of 40 datasets.

Otherwise, records received a "1" (for "True") for the Suspect Data variable if any of the following filters indicated their dataset. (In essence, these checks insure that both questions have similar answers, though it is not required to have identical answers.)

1. All Data with an N/A response were checked to confirm they answered the same N/A type for both Q12 and Q29. (9 Datasets were labeled suspect)
2. Any responses that said they were retirement eligible for either Q12 or Q29 but did not list a Total Time on Active Duty of 20+ years were checked. (0 Datasets were labeled suspect)
3. Answered anything leaning towards staying in the AF for Q12 (1, 2, 3, or 4), but answered 5 on Q29. (3 Datasets were labeled suspect)
4. Answered anything leaning towards NOT staying in the AF for Q12 (5, 6, 7, or 8), but answered 1 on Q29. (2 Datasets were labeled suspect)
5. Answered "Leaning" (4 or 5) on Q12, but answered an extreme (1 or 5) on Q29. (31 Datasets were labeled suspect)
6. Answered "Undecided" (3) on Q29, but answered an extreme (1, 2, 7 or 8) on Q12. (34 Datasets were labeled suspect)
7. Answered extreme of (1) on Q12, but not a (1 or 2) on Q29, or the reverse, answered extreme of (8) on Q12, but not a (4 or 5) on Q29. (1 Datasets were labeled suspect)
8. Answered extreme (1) on Q29, but not a (1 or 2 or 3) on Q12, or the reverse, answered extreme (5) on Q29, but not a (6 or 7 or 8) on Q12. (0 Datasets were labeled suspect)
9. Answered (1 or 2) on Q12, but (3 or greater) on Q29. (16 Datasets were labeled suspect)
10. Answered (7 or 8) on Q12, but (3 or less) on Q29. (0 Datasets were labeled suspect)
11. Answered (4 or 5) on Q29, but (4 or less) on Q12. (34 Datasets were labeled suspect)
12. Answered (1 or 2) on Q29, but (5 or greater) on Q12. (0 Datasets were labeled suspect)
13. Answered (3 or 4) on Q12, but (4 or 5) on Q29. (0 Datasets were labeled suspect)
14. Answered (5 or 6) on Q12, but (1 or 2) on Q29. (0 Datasets were labeled suspect)
15. Answered (3 or 4) on Q12, but (1) on Q29. (0 Datasets were labeled suspect)
16. Answered (5 or 6) on Q12, but (5) on Q29. (0 Datasets were labeled suspect)
17. Confirmed that Total Active Duty Service Time and Age made sense (0 Datasets were labeled suspect)

Summary:
Not Suspect: (Suspect Data = 0) 592 Records
Suspect: (Suspect Data = 1) 130 Records
Incomplete Records: (Suspect Data = 2) 40 Records

Appendix I Methodology for Determining CSRB Suspect Data

The Continuing Skills Retention Bonus, or "Engineering Bonus", hereinafter referred to as the CSRB, was available from 6 Feb 2003 to 30 Sept 2003. To accept this bonus, the applicant must have been fully qualified at some point within this window. The details of the qualification are listed elsewhere[86], but the most important requirements are:

- Completed 4 years but less than 14 years of total active federal commissioned service[87]
- Core AFSC (Air Force Specialty code) is 32E, 33S, 61S, 62E, or 63A
- Have fulfilled initial commissioning ADSC (4 years ROTC/OTS, 5 years USAFA)

Given these dates, the requirements for the CSRB that are listed herein, and the dates my survey were open, from 23 July 2004 to 30 Sept 2004, it is fairly simple to calculate what the YOS range is now of those that could have been qualified for the CSRB, down to the month. The older qualified group of respondents would have had an YOS of 15 years, 5 months, and 17 days to 15 years, 7 months, and 24 days, and regardless of where in this range they were, the would have responded to Q7 with "15-16 years". The younger qualified group of respondents would have had an YOS of 4 years, 10 months, and 13 days to 5 years, 0 months, and 0 days (exactly), and regardless of where in this range they were, the would have responded to Q7 with "4-5 years". Thus, the range of minimum YOS is, at the time of the survey, 4-16 years, to have been qualified for the CSRB.

The following is the method used to determine what data records were valid for CSRB analysis and what records were not.[88] Records considered suspect were labeled as such in a special variable in the data set. Those that were suspect in regards to CSRB were still used in all analysis described in this thesis, save that analysis specific to the CSRB.

In the original data, a new variable called "CSRB Suspect" was added.

[86] http://www.afpc.randolph.af.mil/csrb/csrb/faq.htm

[87] With other qualifications, see the AFPC for details.

[88] minADT and maxADT are minimum and maximum Active Duty Time, derived from the respondent's answer to Q7, which were ranges of ADT (YOS), each of 1 year of span. For example, if the respondent selected "4-5 years" for Q7, then minADT = 4 yrs and maxADT = 5 yrs.

Of the non-suspect data (that is, of the 592 records that survived from the tests described in Appendix H)[89]:

If the record responded as "CSRB - Yes, qualified but did not accept"
Then all records are required to meet these criteria:
NOT minADT≥4 and NOT maxADT≤16)
3 records came out to be too young; CSRB Suspect code = 1
0 records came out to be too old
20 records valid
For the invalids: could have thought they qualified but were wrong

If the record responded as "CSRB - Yes, qualified and accepted"
Then all records are required to meet these criteria:
NOT minADT≥4 and NOT maxADT≤16
13 records came out to be too old; CSRB Suspect code = 2
0 records came out to be too young
119 records valid
For the invalids: may have accepted previously offered CSRB's...may be a source of error for senior respondents still not in the too old category

(CSRB Suspect code 3 not used)

If the record responded as "CSRB - No, didn't qualify due to too much time"
Then all records are required to meet these criteria:
maxADT>16
4 records came out to be too young; CSRB Suspect code = 4
(3 of which have now reported they have separated/retired; these 4 in fact likely qualified)
0 records came out to be too young
46 records valid
For the invalids: could have misunderstood CSRB, but are potential suspect data risks. However, since no other data points tested suggest problems, their records are still used outside of CSRB analysis.

If the record responded as "CSRB - No, didn't qualify due to not enough time"
Then all records are required to meet these criteria:
minADT>4
62 records came out to be too old; CSRB Suspect code = 5
(10 of which should have marked "CSRB - No, didn't qualify due to too much time", otherwise the other 52 likely qualified based on time and AFSC, though for some their AFSC may have changed since the end of the CSRB offer)
N/A records came out to be too young
203 records valid

[89] For those records that were declared a "1" or "2" in the Suspect Data variable according to the rules described in Appendix H, they received a CSRB Suspect code = 99.

For the record responded as “CSRB - No, didn't qualify due to my AFSC”
7 records are retirement eligible, and therefore were too old for CSRB, CSRB Suspect code = 6
Of the remaining (not counting the 7 above),
2 are 62’s, but started in another field and had a different AFSC (1 of which is too young anyways and is CSRB Suspect code = 7)
30 are 63’s, and may have qualified, but 15 are too young (CSRB Suspect code = 8), 1 is too old (CSRB Suspect code = 9), and 4 others may be valid and have had other AFSC’s based on their reporting having been in a different career field before acquisitions, otherwise, the other 10 may have qualified but didn't know it
22 are Other AFSC’s, 1 of which is too old anyhow, and 5 are too young, but since they have the wrong AFSC, it could've been coded either way and are not marked suspect. All 22 appear valid therefore.
The grand total then is 39 likely valid records (24 were suspect)

For the record responded as “Don't Know”
59 records, 13 of which likely qualified based on YOS and AFSC (though 6 of these may have just earned the necessary AFSC)

Of the remaining that appeared to be qualified, 4 reported they were retired (CSRB Suspect code = 10)

This leaves 482 records that likely answered the CSRB questions correctly (CSRB Suspect code = 0).

Appendix J Methodology for Averaging

Q12 and Q29 each asked the survey respondent their career intent. Q12 did so in a positive way: "What are your current intentions toward remaining (active duty) in the Air Force for at least 20 years?" There were then two N/A choices (one for those separated or retired, and one for those that were already retirement eligible because they had 20+ years of active duty service). Otherwise, the choices were on an 8-point Likert Scale (note this even-point scale doesn't allow for a neutral response):

1	2	3	4	5	6	7	8
Definitely Will Remain	Probably Will Remain	Possibly Will Remain	Leaning towards Remaining	Leaning towards NOT Remaining	Possibly Will NOT Remain	Probably Will NOT Remain	Definitely Will NOT Remain

Q29 sought the same information but asked the question in a negative way[90]: "Do you expect to SEPARATE (before retirement) from the Air Force?" Q29 gave the same two N/A choices, but otherwise gave a typical 5-poin Likert Scale:

1	2	3	4	5
Probably	Possibly	Undecided	Possibly NOT	Probably NOT

For the purposes of this survey, Q12 and Q29 were first used to determine what might be bad data[91], and then was averaged into a new variable called "Career Intent Normalized to True 5pt Average", or referred to throughout the thesis as just "career intent".

The method to determine the averaged career intent in a true 5-point Likert Scale form is as follows. First, this averaging is used only after the suspect data check described in Appendix H has been completed. Starting with Q12, it was converted to a new Temp value by following this format:

If Q12 is 1 or 2 → Then Temp is 1
If Q12 is 3 → Then Temp is 2
If Q12 is 4 or 5 → Then Temp is 3
If Q12 is 6 → Then Temp is 4
If Q12 is 7 or 8 → Then Temp is 5

Then take this "Temp" value and average it with the value from Q29 to get the result in as a 9-point average. (It is 9-point because you can have the values of 1.5, 2.5, 3.5, and 4.5, in addition to 1-5.) This 9-point Temp value is then rounded: if it is under 3, round down (so 1.5

[90] If the respondent might be confused by the wording of this question, then hopefully they were forced to think carefully before answering. Those that did not understand this wording, or did not note that the polarity of the question was different, would give a response completely different than in Q12. Those that gave hugely varied responses were removed from the data set used for analysis, and the process to select those bad records is described in Appendix H.

[91] See Appendix H for the methodology on determining suspect data records.

becomes 1, 2.5 becomes 2), if it is 3 it stays 3, and if it is greater than 3 it is rounded up (so 3.5 becomes 4, 4.5 becomes 5). Any N/A responses of course stay the same.

The results of all key variables analyzed were check against Q12, Q29, and this "Career Intent Normalized to True 5pt Average", to insure in each case the Significance was the same or nearly so. (At the very least, in each case the Significance was well below 0.1, and often the difference in the Significance between each measure was non-existent to three significant figures.) Additionally, running cross tabulations of Q12 versus Q29 or the new career intent true 5pt average, or any permutation thereof, showed perfect correlation with Sig. = 0.000.

The second step of the method described above was also conducted on the averaging of Q10 and Q30. The logic in averaging these two[92] is that people tend to answer a bit more truthfully for their peers, as if they are projecting their own feelings to their peers, while the ratings they give for themselves are likely a bit biased to a more conservative number. Q10 asked the respondent to rate the satisfaction level of their peers on eleven different aspects of the AF. Q30 asked the same question, but of the respondent. In each case, the eleven elements were given in a random order. Simply averaging the two produced the Temp 9-point average. This 9-point Temp value is then rounded as above: if it is under 3, round down (so 1.5 becomes 1, 2.5 becomes 2), if it is 3 it stays 3, and if it is greater than 3 it is rounded up (so 3.5 becomes 4, 4.5 becomes 5). The result is referred to throughout the thesis as 1030Ave, followed by the reference to which of the eleven sub-questions: 1030Ave(a) for instance.

The way then to insure the averaging of 1030Ave is reasonable is to compare the resulting significance statistics of Q10 and Q30 to each other to insure correlation, and indeed the Significance for each cross tabulation was 0.000. Additionally, I compared the resulting significance statistics of Q10, Q30, and the 1030Ave to the career intent (5pt true average) independently, as well as to Q10 and Q30, thereby insuring that no bias or inaccuracies were created by either variables that were averaged, and indeed there was only one inconsistency.

This one case was where 1030Ave(e) on the recognition system did not seem to match the correlation found by looking at its constituents of Q10 and Q30. For 1030Ave(e) and Q30e, they both showed high correlation to career intent (Sig. = 0.017 and 0.000 respectively). However, Q10e did not show correlation to career intent (Sig. = 0.781), nor did it show correlation if compared to the constituents of career intent (Q12 or Q29). Since this was the only example found of inconsistency with using the averaging method employed, a further investigation was conducted. This investigation led me to conclude that there is a significant difference in the data for Q10e and Q30e, and that this variation, and not the averaging method, is to blame for this one inconsistency.

[92] In fact, it was always the intent, even in designing the survey, to average these two questions.

Appendix K Overview of the Entire Population (Supplement)

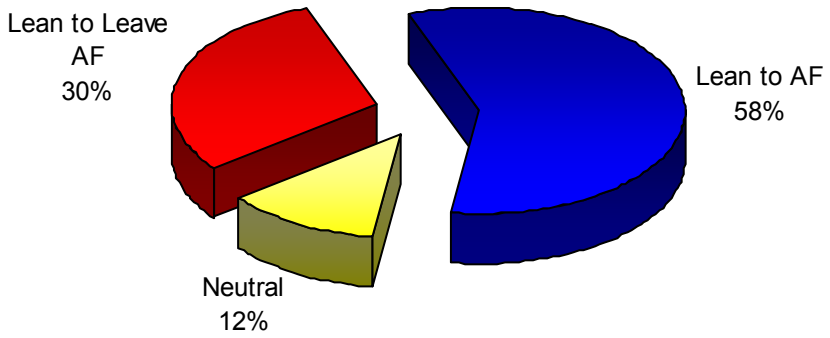

Figure 11 Career intention of all active duty respondents; N=522.

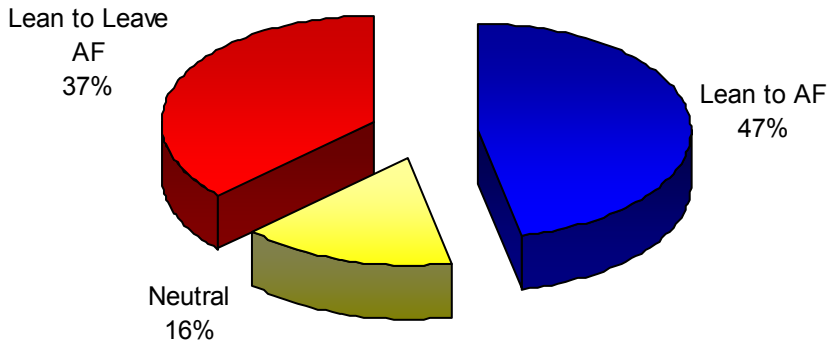

Figure 12 Career intentions for Lieutenants; N=279.

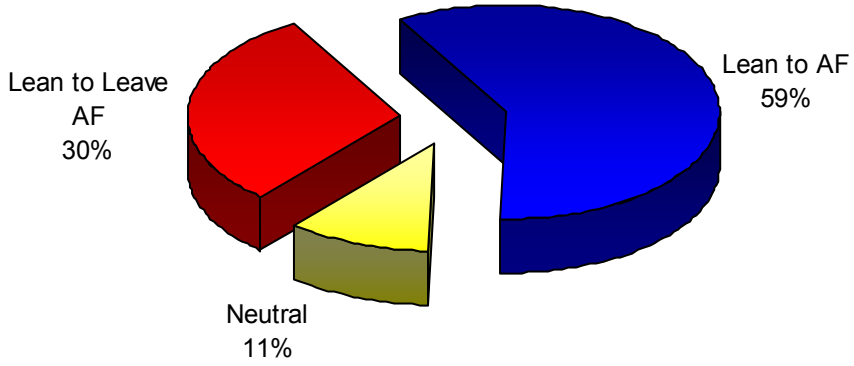

Figure 13 Career intentions for Captains; N=165.

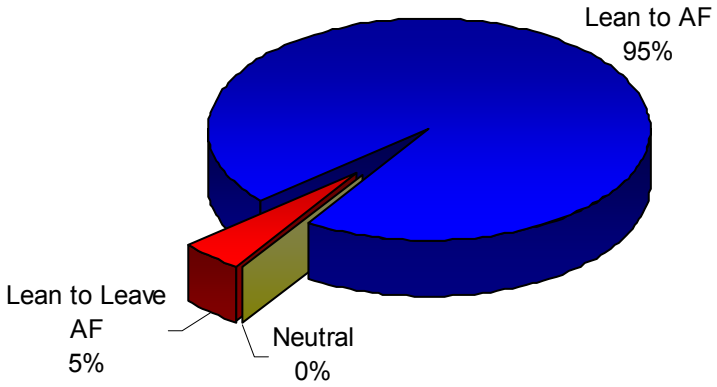

Figure 14 Career intentions for Majors; N=64.

Appendix L Why Officers Separate (Supplement)

The following figures shows the how respondents ranked the choices given in Q31, asked to those who either are leaning to leave the AF or have a neutral (undecided) career intent. In each case, 4 Lt Colonels and 1 Colonel were removed from the plot (though were part of the data and so the Significance number given reflects them). Note the breakout of actual numbers by rank is given in each diagram. The Significance shows a strong correlation of ranking choice by pay grade for all five components of Q31 except for Q31a, which has a Sig. of 0.651 (or a Confidence of 34.9%). However, correlated or not, the figures here are given more as a demographic. Any conclusions that may be inferred from them are discussed in the analysis section of this report. Note also that Q31 likely doesn't account for every possible (or even every major) influence to separate from the AF. It only offered, in a random order, five prescribed possible elements, and respondents ranked those five or selected N/A (N/A is why N varies for each figure). The survey software insured no two elements could be ranked the same.

In the figures, each axis of the radar plot is the order of the ranking of that element of Q31, while the height on a given axis is the percentage by rank. The area in each pentagon the represents 100% of respondents of that rank, and so the area of each of the three colored pentagons is always equal. For example, in Figure 15 below, Majors, represented by the red pentagon (line with triangles), seem to have been evenly split on ranking pay as either their 3rd most, 4th most, or 5th (last) most important influence to leave the AF. 30% of Majors ranked Q31a a 3, 30% a 4, 30% a 5, while none gave Q31a a 1, and 10% gave it a 2. However, and this is the reason the breakout of actual numbers by rank is given with each figure, for the case of Majors, this shape of the Major's red (line with triangles) pentagon is likely highly uncertain since it is the result of just 10 Majors. For the cases of Lieutenants and Captains, the shape is likely much more accurate.

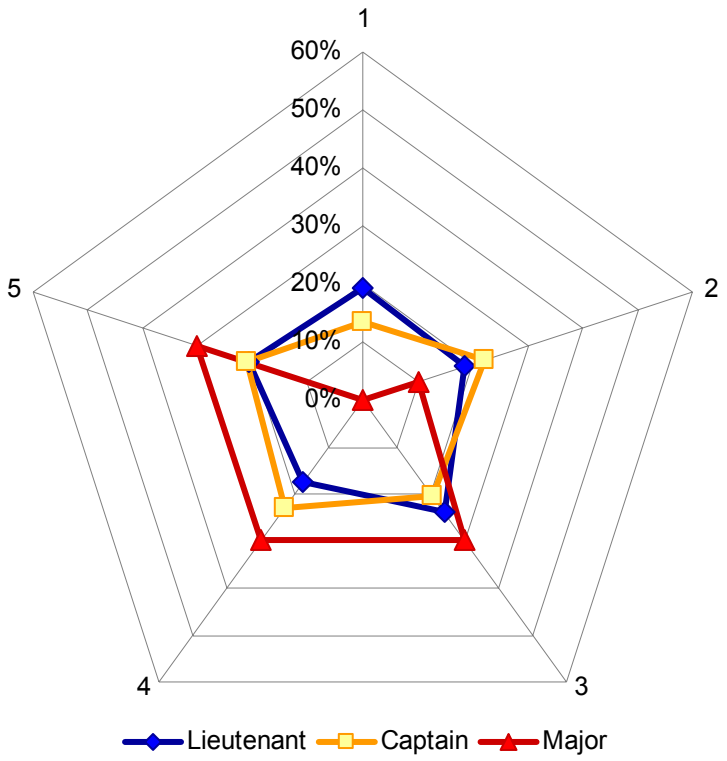

Figure 15 Ranking of Q31a on pay by rank.
N=274; Sig. = 0.651.(160 LT, 104 CPT, 10 MAJ)

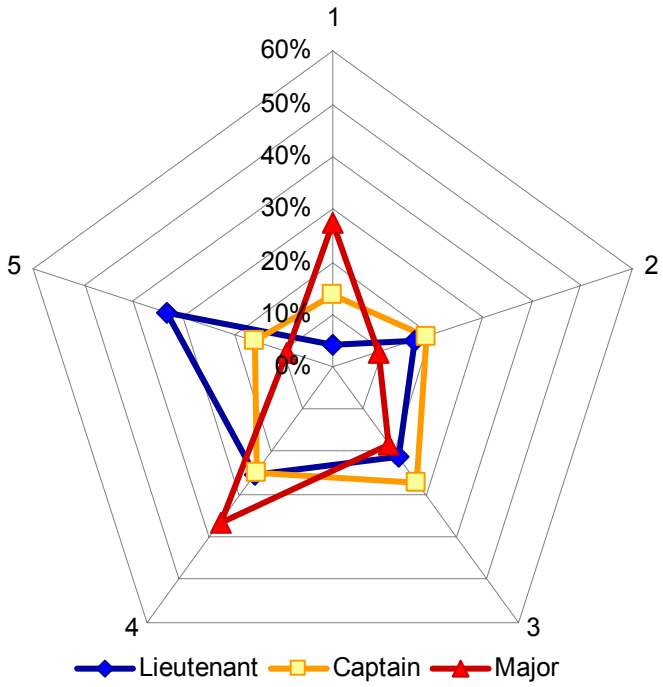

Figure 16 Ranking of Q31b on promotion system by rank.
N=274; Sig. = 0.044. (161 LT, 102 CPT, 11 MAJ)

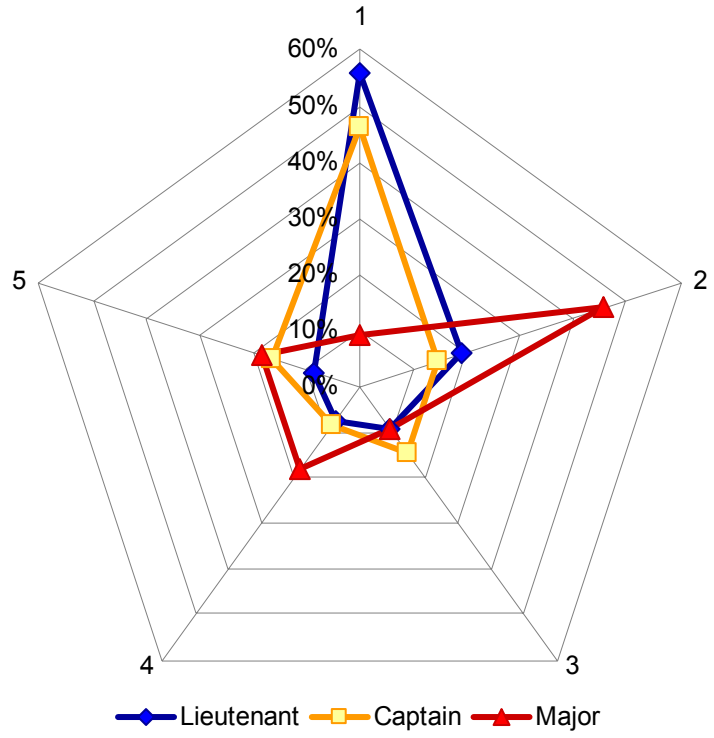

Figure 17 Ranking of Q31a on job satisfaction by rank.
N=278; Sig. = 0.005. (163 LT, 104 CPT, 11 MAJ)

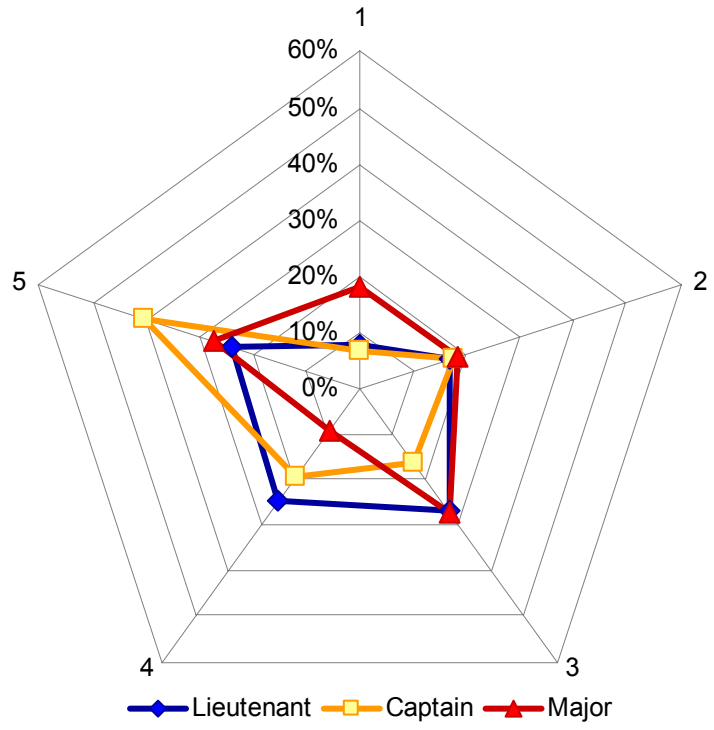

Figure 18 Ranking of Q31d on availability of civilian jobs by rank.
N=270; Sig. = 0.038. (155 LT, 104 CPT, 11 MAJ)

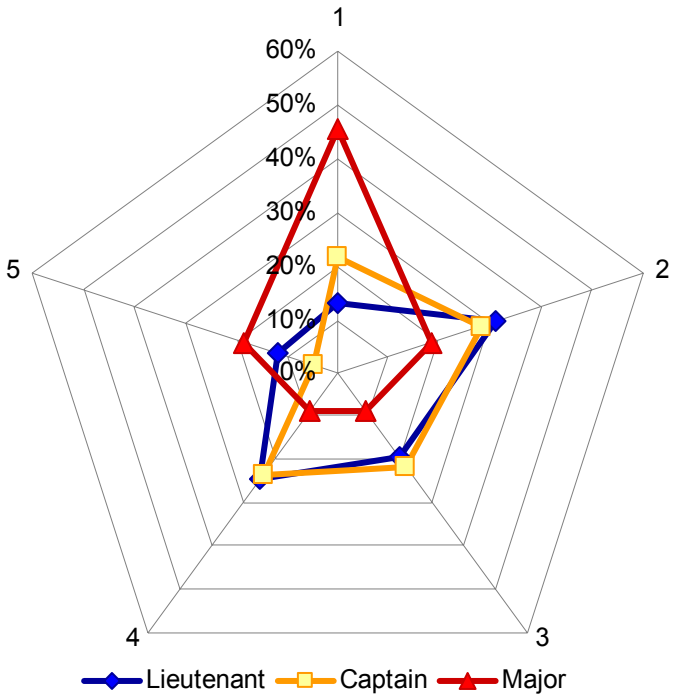

Figure 19 Ranking of Q31e on the assignment system by rank.
N=272; Sig. = 0.079 (159 LT, 102 CPT, 11 MAJ)

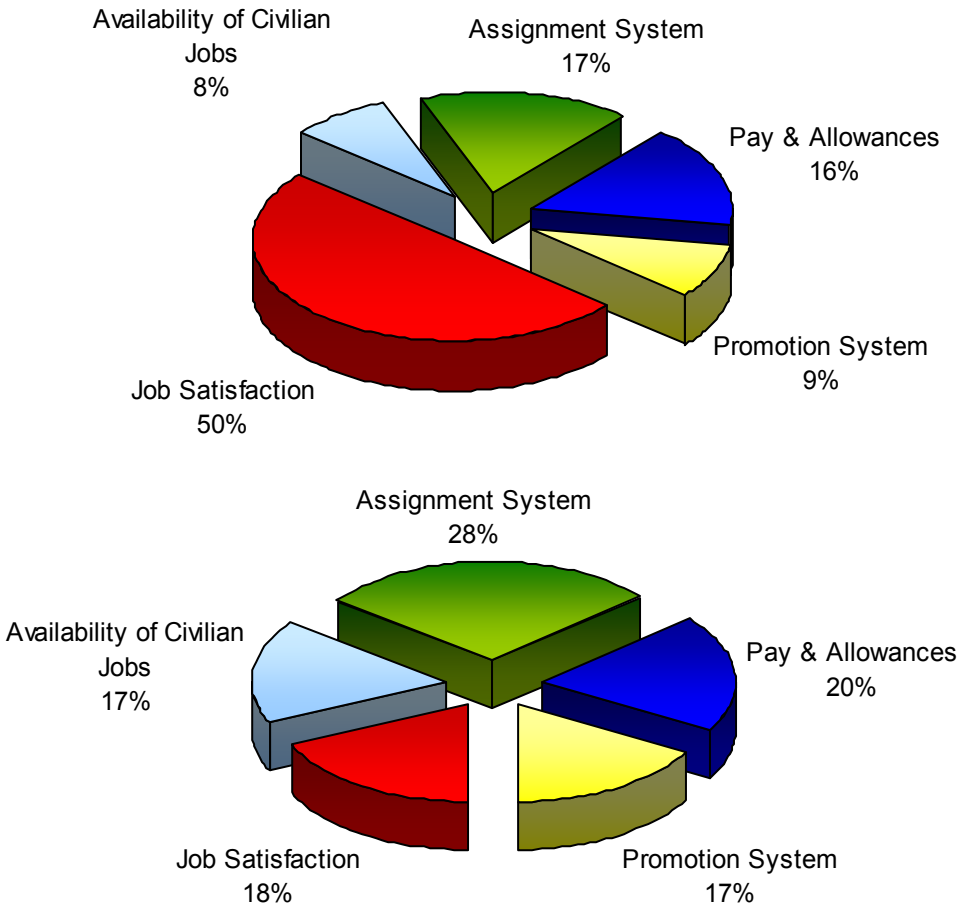

Figure 20 #1 (Top) and #2 (Bottom) reasons officers said they were separating.

Appendix M Overall Air Force Satisfaction (Supplement)

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30a: Job	1 Satisfied	16.5%	2.1%	2.3%	0.4%	1.3%	22.6%
	2	16.5%	2.1%	3.3%	4.0%	5.4%	31.2%
	3	3.8%	1.9%	1.9%	1.9%	2.5%	12.1%
	4	6.5%	2.5%	1.9%	2.5%	5.7%	19.2%
	5 Dissatisfied	5.0%	1.0%	2.9%	1.3%	4.8%	14.9%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	73.676	d.f. =	16	Sig. =	0.000	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	37.2%	64.2%	11.1%	37.2%	53.8%
Neutral	5.7%	9.9%	4.4%	14.7%	12.1%
Dissatisfied	14.9%	25.8%	14.4%	48.1%	34.1%
N=	302	302	156	156	522

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30b: Pay	1 Satisfied	23.8%	2.3%	3.8%	2.3%	7.3%	39.5%
	2	16.9%	5.4%	4.6%	4.6%	7.1%	38.5%
	3	3.4%	1.0%	1.5%	1.1%	2.1%	9.2%
	4	3.3%	1.0%	1.7%	1.1%	3.1%	10.2%
	5 Dissatisfied	1.0%	0.0%	0.6%	1.0%	0.2%	2.7%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	42.004	d.f. =	16	Sig. =	0.000	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	48.3%	83.4%	21.3%	71.2%	78.0%
Neutral	4.4%	7.6%	3.3%	10.9%	9.2%
Dissatisfied	5.2%	8.9%	5.4%	17.9%	12.8%
N=	302	302	156	156	522

(continued on next page)

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30c: Edu	1 Satisfied	27.8%	3.6%	4.4%	3.3%	7.7%	46.7%
	2	11.9%	3.6%	4.8%	3.3%	6.1%	29.7%
	3	3.4%	1.5%	1.3%	1.3%	2.1%	9.8%
	4	3.6%	0.8%	1.0%	1.3%	1.7%	8.4%
	5 Dissatisfied	1.5%	0.0%	0.8%	1.0%	2.1%	5.4%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	36.335	d.f. =	16	Sig. =	0.003	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	46.9%	81.1%	20.3%	67.9%	76.4%
Neutral	5.0%	8.6%	3.4%	11.5%	9.8%
Dissatisfied	5.9%	10.3%	6.1%	20.5%	13.8%
N=	302	302	156	156	522

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30d: Promotion Sys	1 Satisfied	15.5%	2.5%	1.5%	1.7%	2.7%	23.9%
	2	20.7%	4.0%	5.6%	3.8%	6.1%	40.2%
	3	4.6%	0.6%	1.9%	2.1%	3.6%	12.8%
	4	5.0%	2.1%	2.1%	1.5%	4.8%	15.5%
	5 Dissatisfied	2.5%	0.4%	1.1%	1.0%	2.5%	7.5%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	46.740	d.f. =	16	Sig. =	0.000	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	42.7%	73.8%	14.4%	48.1%	64.2%
Neutral	5.2%	8.9%	5.7%	19.2%	12.8%
Dissatisfied	10.0%	17.2%	9.8%	32.7%	23.0%
N=	302	302	156	156	522

(continued on next page)

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30e: Recognition	1 Satisfied	9.6%	1.3%	0.8%	0.8%	2.3%	14.8%
	2	14.6%	2.3%	3.3%	3.4%	3.6%	27.2%
	3	10.0%	2.3%	2.7%	1.5%	4.2%	20.7%
	4	10.0%	2.5%	3.8%	3.1%	5.2%	24.5%
	5 Dissatisfied	4.2%	1.1%	1.7%	1.3%	4.4%	12.8%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	30.295	d.f. =	16	Sig. =	0.017	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	27.8%	48.0%	10.2%	34.0%	42.0%
Neutral	12.3%	21.2%	5.7%	19.2%	20.7%
Dissatisfied	17.8%	30.8%	14.0%	46.8%	37.4%
N=	302	302	156	156	522

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30f: OPR's	1 Satisfied	11.3%	1.5%	1.0%	1.0%	0.8%	15.5%
	2	16.3%	2.7%	4.0%	3.1%	5.4%	31.4%
	3	6.3%	2.3%	1.7%	0.8%	3.1%	14.2%
	4	9.2%	1.5%	3.1%	3.6%	5.4%	22.8%
	5 Dissatisfied	5.2%	1.5%	2.5%	1.7%	5.2%	16.1%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	48.839	d.f. =	16	Sig. =	0.000	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	31.8%	55.0%	10.2%	34.0%	46.9%
Neutral	8.6%	14.9%	3.8%	12.8%	14.2%
Dissatisfied	17.4%	30.1%	15.9%	53.2%	38.9%
N=	302	302	156	156	522

(continued on next page)

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30g: Leadership Opportunities	1 Satisfied	12.1%	1.1%	1.1%	0.4%	2.7%	17.4%
	2	14.2%	2.5%	4.0%	4.2%	4.0%	28.9%
	3	5.4%	2.3%	1.7%	1.9%	2.9%	14.2%
	4	10.3%	2.3%	3.1%	2.5%	5.7%	23.9%
	5 Dissatisfied	6.3%	1.3%	2.3%	1.1%	4.4%	15.5%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	36.954	d.f. =	16	Sig. =	0.002	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	29.9%	51.7%	11.3%	37.8%	46.4%
Neutral	7.7%	13.2%	4.8%	16.0%	14.2%
Dissatisfied	20.3%	35.1%	13.8%	46.2%	39.5%
N=	302	302	156	156	522

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30h: Retirement	1 Satisfied	25.5%	3.8%	4.4%	4.4%	6.9%	45.0%
	2	16.9%	3.6%	4.0%	3.1%	5.4%	33.0%
	3	4.2%	1.5%	1.9%	1.9%	4.8%	14.4%
	4	1.5%	0.6%	1.5%	0.6%	2.1%	6.3%
	5 Dissatisfied	0.2%	0.0%	0.4%	0.2%	0.6%	1.3%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	39.365	d.f. =	16	Sig. =	0.001	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	49.8%	86.1%	19.7%	66.0%	78.0%
Neutral	5.7%	9.9%	6.7%	22.4%	14.4%
Dissatisfied	2.3%	4.0%	3.4%	11.5%	7.7%
N=	302	302	156	156	522

(continued on next page)

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30i: Deployments	1 Satisfied	8.2%	1.1%	1.0%	0.8%	1.3%	12.5%
	2	14.8%	3.3%	1.9%	1.7%	3.3%	24.9%
	3	5.9%	1.7%	2.5%	3.4%	5.2%	18.8%
	4	9.2%	1.3%	3.8%	2.1%	6.5%	23.0%
	5 Dissatisfied	10.2%	2.1%	3.1%	2.1%	3.4%	20.9%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	46.816	d.f. =	16	Sig. =	0.000	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	27.4%	47.4%	7.1%	23.7%	37.4%
Neutral	7.7%	13.2%	8.6%	28.8%	18.8%
Dissatisfied	22.8%	39.4%	14.2%	47.4%	43.9%
N=	302	302	156	156	522

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30k: Assignment Sys	1 Satisfied	8.8%	1.0%	0.8%	0.6%	1.3%	12.5%
	2	19.0%	3.3%	3.6%	2.7%	5.0%	33.5%
	3	6.3%	1.9%	2.1%	1.9%	2.7%	14.9%
	4	9.6%	2.1%	3.1%	2.7%	5.7%	23.2%
	5 Dissatisfied	4.6%	1.3%	2.7%	2.3%	5.0%	15.9%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	39.952	d.f. =	16	Sig. =	0.001	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	32.0%	55.3%	9.6%	32.1%	46.0%
Neutral	8.2%	14.2%	4.6%	15.4%	14.9%
Dissatisfied	17.6%	30.5%	15.7%	52.6%	39.1%
N=	302	302	156	156	522

Table 8 Cross tabulations of (1030Ave) satisfaction of aspects of the AF vs. career intent.
1030Ave(j) is not shown because it was not significant (Sig. = 0.795). Red (dark gray) cells are with percentages greater than 6%, orange (gray) is for ranges between 4% and up to and including 6%, light yellow (light gray) cells are for ranges between 2% and 4% (inclusive), and white cells are less than 2%. Percentages are percent of the whole group N. The summarized portion at the bottom lumps satisfaction of 1 and 2 as "Satisfied", 3 remains "Neutral", and 4 and 5 as "Dissatisfied", and categorizes by those leaning to an AF career (career intent of 1 or 2) or leaning to leaving the AF (career intent of 4 or 5).

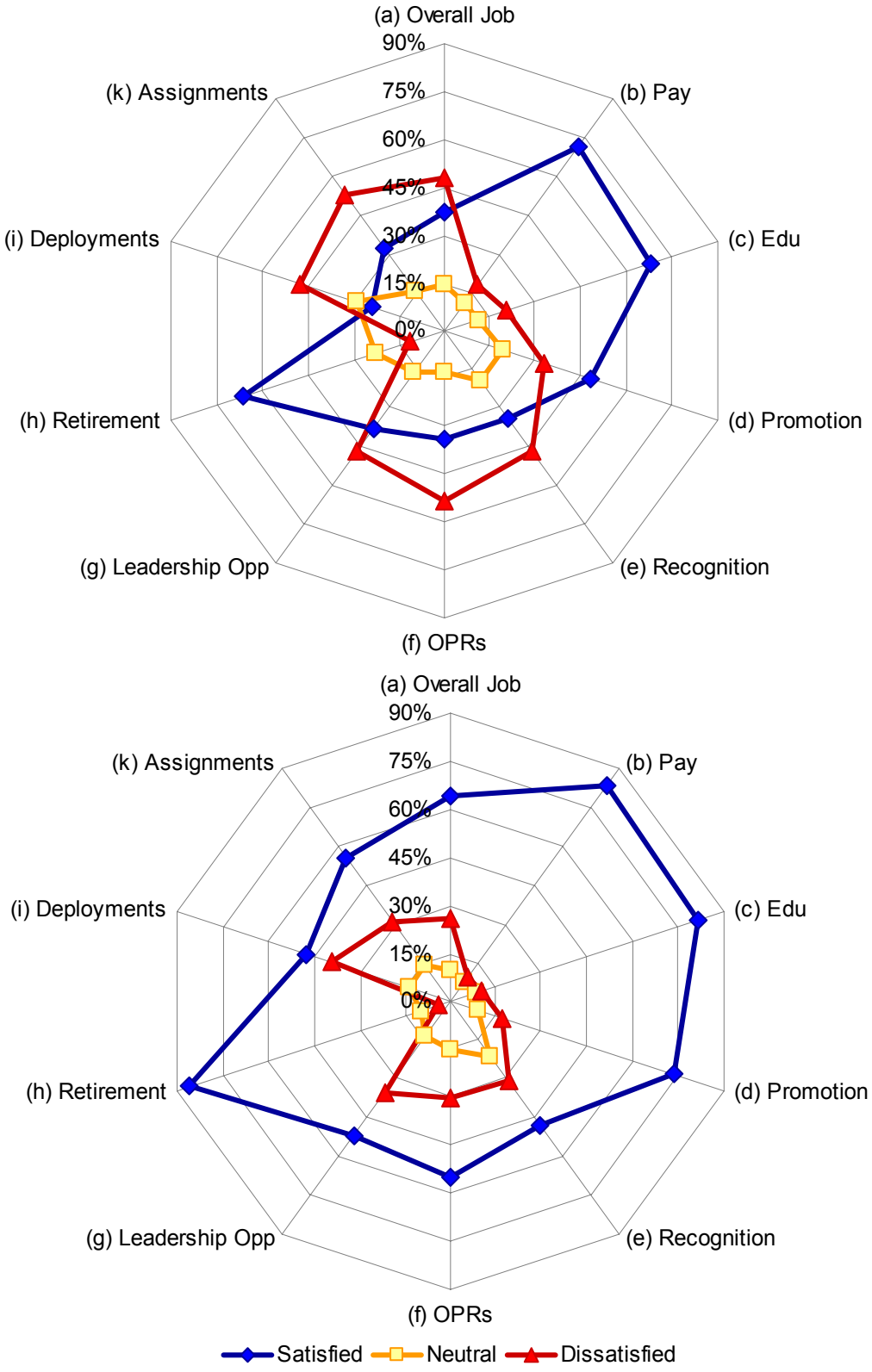

Figure 21 Satisfaction in ten Air Force factors (1030Ave), divided by career intent.
(Top) is for those leaning to leave the AF (N=156), (Bottom) depicts those leaning to a career in the AF (N=302).

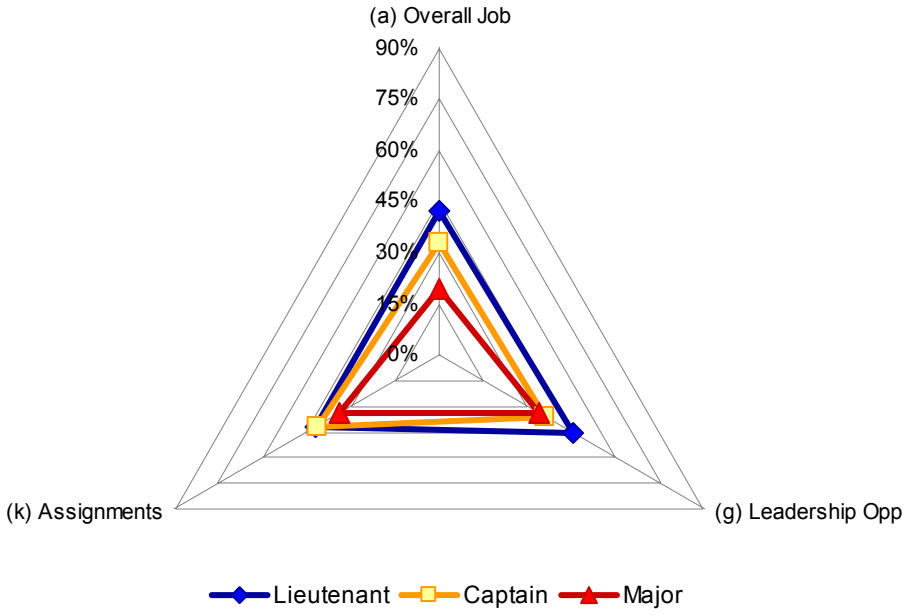

Figure 22 1030Ave AF satisfaction factors: dissatisfaction by rank (Major and below).[93]

[93] N varies by sub-question for this plot. Missing sub-questions are due to high Sig. (low Confidence) and so present no correlation.

	% by AFSC	AFSC Class				
	N=592	61S Scientist	62E Engineer	63A Program Manager	Other	Total
Ave 10&30a: Job	1 Satisfied	30.0%	22.0%	21.3%	46.2%	23.6%
	2	36.7%	32.2%	28.6%	30.8%	30.6%
	3	6.7%	11.0%	13.6%	2.6%	11.5%
	4	16.7%	18.2%	22.6%	10.3%	19.8%
	5 Dissatisfied	10.0%	16.5%	13.9%	10.3%	14.5%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
	N=	30	236	287	39	592
	Chi-Sq. =	20.278	d.f. =	12	Sig. =	0.062
	Satisf.	54.2%	Neutral	11.5%	Dissatisf.	34.3%

	% by AFSC	AFSC Class				
	N=592	61S Scientist	62E Engineer	63A Program Manager	Other	Total
Ave 10&30b: Pay	1 Satisfied	43.3%	31.4%	42.2%	46.2%	38.2%
	2	40.0%	36.0%	39.4%	35.9%	37.8%
	3	3.3%	11.4%	10.1%	7.7%	10.1%
	4	10.0%	16.9%	6.3%	5.1%	10.6%
	5 Dissatisfied	3.3%	4.2%	2.1%	5.1%	3.2%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
	N=	30	236	287	39	592
	Chi-Sq. =	24.829	d.f. =	12	Sig. =	0.016
	Satisf.	76.0%	Neutral	10.1%	Dissatisf.	13.9%

	% by AFSC	AFSC Class				
	N=592	61S Scientist	62E Engineer	63A Program Manager	Other	Total
Ave 10&30g: Leadership Opportunities	1 Satisfied	6.7%	16.9%	18.1%	33.3%	18.1%
	2	33.3%	25.0%	30.3%	43.6%	29.2%
	3	23.3%	11.9%	14.3%	7.7%	13.3%
	4	33.3%	27.1%	22.3%	12.8%	24.2%
	5 Dissatisfied	3.3%	19.1%	15.0%	2.6%	15.2%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
	N=	30	236	287	39	592
	Chi-Sq. =	29.183	d.f. =	12	Sig. =	0.004
	Satisf.	47.3%	Neutral	13.3%	Dissatisf.	39.4%

(continued on next page)

	% by AFSC	AFSC Class				
	N=592	61S Scientist	62E Engineer	63A Program Manager	Other	Total
Ave 10&30h: Retirement	1 Satisfied	16.7%	40.7%	49.8%	56.4%	44.9%
	2	60.0%	32.6%	30.7%	20.5%	32.3%
	3	16.7%	17.4%	12.5%	5.1%	14.2%
	4	6.7%	8.1%	5.2%	15.4%	7.1%
	5 Dissatisfied	0.0%	1.3%	1.7%	2.6%	1.5%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
	N=	30	236	287	39	592
	Chi-Sq. =	29.065	d.f. =	12	Sig. =	0.004
	Satisf.	77.2%	Neutral	14.2%	Dissatisf.	8.6%

	% by AFSC	AFSC Class				
	N=592	61S Scientist	62E Engineer	63A Program Manager	Other	Total
Ave 10&30i: Deployments	1 Satisfied	10.0%	9.7%	11.1%	35.9%	12.2%
	2	23.3%	27.5%	22.3%	33.3%	25.2%
	3	30.0%	19.1%	18.5%	20.5%	19.4%
	4	13.3%	23.7%	25.8%	7.7%	23.1%
	5 Dissatisfied	23.3%	19.9%	22.3%	2.6%	20.1%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
	N=	30	236	287	39	592
	Chi-Sq. =	36.985	d.f. =	12	Sig. =	0.000
	Satisf.	37.3%	Neutral	19.4%	Dissatisf.	43.2%

	% by AFSC	AFSC Class				
	N=592	61S Scientist	62E Engineer	63A Program Manager	Other	Total
Ave 10&30k: Assignment Sys	1 Satisfied	16.7%	10.2%	12.2%	33.3%	13.0%
	2	23.3%	30.9%	32.8%	38.5%	31.9%
	3	16.7%	14.8%	15.7%	15.4%	15.4%
	4	20.0%	25.4%	24.7%	2.6%	23.3%
	5 Dissatisfied	23.3%	18.6%	14.6%	10.3%	16.4%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
	N=	30	236	287	39	592
	Chi-Sq. =	26.844	d.f. =	12	Sig. =	0.008
	Satisf.	44.9%	Neutral	15.4%	Dissatisf.	39.7%

Table 9 Cross tabulations of AFSC vs. 1030Ave.[94]

[94] No correlation exists for (c), (d), (e), (f), or (j), and so their cross tabulations are not presented here.

For all tables on this page, red (dark gray) cells are with percentages greater than 6%, orange (gray) is for ranges between 3.5% and 6%, light yellow (light gray) cells are for ranges between 1 and 3.5%, and white cells are less than 1%. Percentages are percent of the whole group N.

	N=283	18a Job: Meaningful to Unit					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Job Satisfaction as Reason to Separate	1	5.3%	14.5%	8.1%	12.0%	9.9%	49.8%
	2	3.2%	7.4%	3.2%	2.5%	1.8%	18.0%
	3	2.8%	2.8%	3.5%	1.4%	0.7%	11.3%
	4	2.1%	4.2%	1.1%	0.4%	0.4%	8.1%
	5	7.4%	4.2%	0.7%	0.4%	0.0%	12.7%
	Total	20.8%	33.2%	16.6%	16.6%	12.7%	100.0%
	Chi-Sq. =	68.445	d.f. =	16	Sig. =	0.000	

	N=283	18b Job: Challenge					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Job Satisfaction as Reason to Separate	1	8.8%	13.8%	5.7%	11.3%	10.2%	49.8%
	2	3.9%	7.4%	1.8%	2.8%	2.1%	18.0%
	3	4.6%	3.5%	1.4%	0.4%	1.4%	11.3%
	4	2.8%	2.8%	1.1%	1.1%	0.4%	8.1%
	5	7.4%	4.6%	0.7%	0.0%	0.0%	12.7%
	Total	27.6%	32.2%	10.6%	15.5%	14.1%	100.0%
	Chi-Sq. =	48.549	d.f. =	16	Sig. =	0.000	

	N=283	18c Job: Use Degree					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Job Satisfaction as Reason to Separate	1	3.9%	9.2%	4.6%	12.4%	19.8%	49.8%
	2	2.5%	5.7%	2.5%	4.9%	2.5%	18.0%
	3	2.5%	3.2%	1.4%	2.5%	1.8%	11.3%
	4	2.5%	2.1%	1.8%	1.4%	0.4%	8.1%
	5	4.2%	5.3%	1.8%	1.1%	0.4%	12.7%
	Total	15.5%	25.4%	12.0%	22.3%	24.7%	100.0%
	Chi-Sq. =	58.848	d.f. =	16	Sig. =	0.000	

	N=283	18d Job: Feel Valued					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Job Satisfaction as Reason to Separate	1	6.0%	14.1%	5.7%	15.5%	8.5%	49.8%
	2	3.5%	7.8%	2.8%	1.8%	2.1%	18.0%
	3	2.8%	3.2%	2.8%	2.1%	0.4%	11.3%
	4	2.8%	2.8%	1.4%	1.1%	0.0%	8.1%
	5	6.4%	4.2%	0.7%	1.1%	0.4%	12.7%
	Total	21.6%	32.2%	13.4%	21.6%	11.3%	100.0%
	Chi-Sq. =	54.148	d.f. =	16	Sig. =	0.000	

(continued on next page)

For all tables on this page, red (dark gray) cells are with percentages greater than 6%, orange (gray) is for ranges between 3.5% and 6%, light yellow (light gray) cells are for ranges between 1 and 3.5%, and white cells are less than 1%. Percentages are percent of the whole group N.

	N=283	18e Job: Add'l Duties					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Job Satisfaction as Reason to Separate	1	7.8%	9.2%	13.4%	10.6%	8.8%	49.8%
	2	2.1%	4.9%	3.2%	3.9%	3.9%	18.0%
	3	2.5%	3.2%	3.5%	0.7%	1.4%	11.3%
	4	1.8%	3.5%	1.4%	1.1%	0.4%	8.1%
	5	4.6%	2.5%	2.5%	2.5%	0.7%	12.7%
	Total	18.7%	23.3%	24.0%	18.7%	15.2%	100.0%
	Chi-Sq. =	27.182	d.f. =	16	Sig. =	0.040	

Table 10 Cross tabulations of ranking of job satisfaction (Q31c) to Q18.
For those who are undecided or have intent to leave the AF. Percentages are as a percent of the whole group of N=283 that answered both Q18 and were at least neutral on career intent, thereby going to the branch of the survey that revealed Q31, which required the respondent to rank, among other factors, job satisfaction, as to how influential it is for their career intent.

	N=283	Ave 10&30a: Job					
	RANK	1 Satisfied	2	3	4	5 Dissatisfied	Total
Job Satisfaction as Reason to Separate	1	1.8%	8.5%	6.4%	18.4%	14.8%	49.8%
	2	2.1%	7.1%	2.1%	3.9%	2.8%	18.0%
	3	1.4%	3.9%	3.2%	1.1%	1.8%	11.3%
	4	1.4%	4.2%	1.4%	1.1%	0.0%	8.1%
	5	5.3%	4.9%	1.4%	1.1%	0.0%	12.7%
	Total	12.0%	28.6%	14.5%	25.4%	19.4%	100.0%
	Chi-Sq. =	91.361	d.f. =	16	Sig. =	0.000	

Table 11 Cross tabulation of ranking of job satisfaction (Q31c) to 1030Ave(a) overall job satisfaction.
For those who are undecided or have intent to leave the AF.

	N=278	11c Base Leadership					
	RANK	1 Satisfied	2	3	4	5 Dissatisfied	Total
Job Satisfaction as Reason to Separate	1	9.4%	14.7%	18.7%	5.0%	1.8%	49.6%
	2	4.7%	5.8%	5.8%	1.4%	0.7%	18.3%
	3	2.9%	2.2%	4.7%	1.1%	0.7%	11.5%
	4	1.4%	5.0%	1.8%	0.0%	0.0%	8.3%
	5	5.0%	1.4%	4.3%	0.7%	0.7%	12.2%
	Total	23.4%	29.1%	35.3%	8.3%	4.0%	100.0%
	Chi-Sq. =	25.441	d.f. =	16	Sig. =	0.062	

Table 12 Cross tabulation for ranking of job satisfaction (Q31c) to base leadership.
For those who are undecided or have intent to leave the AF.

For all tables on this page, red (dark gray) cells are with percentages greater than 6%, orange (gray) is for ranges between 3.5% and 6%, light yellow (light gray) cells are for ranges between 1 and 3.5%, and white cells are less than 1%. Percentages are percent of the whole group N.

	N=144	14c NOT Satisfied with Opportunity of Using Degree					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Job Satisfaction as Reason to Separate	1	20.8%	16.7%	6.9%	3.5%	2.1%	50.0%
	2	2.1%	7.6%	1.4%	1.4%	3.5%	16.0%
	3	2.8%	2.8%	3.5%	2.8%	0.0%	11.8%
	4	0.7%	4.2%	2.1%	2.1%	0.0%	9.0%
	5	2.1%	4.2%	0.7%	5.6%	0.7%	13.2%
	Total	28.5%	35.4%	14.6%	15.3%	6.3%	100.0%
	Chi-Sq. =	42.078	d.f. =	16	Sig. =	0.000	

	N=143	14d NOT Satisfied with Opportunity of Using Tech Skills					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Job Satisfaction as Reason to Separate	1	21.7%	16.1%	4.9%	4.9%	2.8%	50.3%
	2	2.1%	7.7%	2.1%	0.7%	2.8%	15.4%
	3	2.1%	2.8%	4.2%	2.8%	0.0%	11.9%
	4	0.7%	3.5%	2.1%	2.8%	0.0%	9.1%
	5	2.1%	3.5%	2.1%	4.9%	0.7%	13.3%
	Total	28.7%	33.6%	15.4%	16.1%	6.3%	100.0%
	Chi-Sq. =	37.874	d.f. =	16	Sig. =	0.002	

Table 13 Cross tabulations for ranking of job satisfaction (Q31c) to use of skills and degree (Q14c & Q14d). For those who are undecided or have intent to leave the AF. These questions were part of a branch in the survey that were only revealed to respondents who identified themselves as being a 61 Scientist or 62 Engineer, hence the smaller N.

	N=145	18c Job: Use Degree					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Job Satisfaction as Reason to Separate	1	6.2%	7.6%	4.1%	12.4%	19.3%	49.7%
	2	4.1%	4.1%	1.4%	3.4%	2.8%	15.9%
	3	2.1%	3.4%	1.4%	3.4%	2.1%	12.4%
	4	2.1%	2.1%	2.8%	1.4%	0.7%	9.0%
	5	1.4%	5.5%	3.4%	2.1%	0.7%	13.1%
	Total	15.9%	22.8%	13.1%	22.8%	25.5%	100.0%
	Chi-Sq. =	27.235	d.f. =	16	Sig. =	0.039	

Table 14 Cross tabulation of ranking of job satisfaction (Q31c) to use of skills and degree (Q18c). For those who are undecided or have intent to leave the AF, limited to only 61S and 62E respondent. This is useful to compare to the two tables above (Table 12 and Table 13), as it shows an error in the understanding or interpretation of one or more of these three questions.

<5yrs		Career Intent Normalized to True 5pt Average					
	N=266	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30a: Job	1 Satisfied	7.1%	1.1%	3.8%	0.8%	2.3%	15.0%
	2	6.0%	3.4%	3.8%	5.3%	8.6%	27.1%
	3	2.6%	2.3%	2.3%	3.4%	4.5%	15.0%
	4	1.9%	3.4%	2.6%	3.8%	10.5%	22.2%
	5 Dissatisfied	3.8%	1.5%	4.1%	2.3%	9.0%	20.7%
	Total	21.4%	11.7%	16.5%	15.4%	35.0%	100.0%
	Chi-Sq. =	38.280	d.f. =	16	Sig. =	0.001	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	17.7%	53.4%	16.9%	33.6%	42.1%
Neutral	4.9%	14.8%	7.9%	15.7%	15.0%
Dissatisfied	10.5%	31.8%	25.6%	50.7%	42.9%
N=	88	88	134	134	266

<5yrs		Career Intent Normalized to True 5pt Average					
	N=266	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30b: Pay	1 Satisfied	11.7%	2.3%	6.8%	4.1%	12.4%	37.2%
	2	6.0%	6.8%	4.9%	7.1%	12.8%	37.6%
	3	1.1%	0.8%	2.6%	0.8%	3.4%	8.6%
	4	2.3%	1.9%	1.9%	2.3%	6.0%	14.3%
	5 Dissatisfied	0.4%	0.0%	0.4%	1.1%	0.4%	2.3%
	Total	21.4%	11.7%	16.5%	15.4%	35.0%	100.0%
	Chi-Sq. =	26.898	d.f. =	16	Sig. =	0.043	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	26.7%	80.7%	36.5%	72.4%	74.8%
Neutral	1.9%	5.7%	4.1%	8.2%	8.6%
Dissatisfied	4.5%	13.6%	9.8%	19.4%	16.5%
N=	88	88	134	134	266

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<5yrs		Career Intent Normalized to True 5pt Average					
	N=266	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30d: Promotion Sys	1 Satisfied	7.5%	3.4%	2.6%	3.4%	4.1%	21.1%
	2	9.8%	4.5%	8.6%	5.6%	12.0%	40.6%
	3	0.8%	0.8%	2.6%	3.0%	6.8%	13.9%
	4	2.6%	2.3%	1.5%	2.3%	7.5%	16.2%
	5 Dissatisfied	0.8%	0.8%	1.1%	1.1%	4.5%	8.3%
	Total	21.4%	11.7%	16.5%	15.4%	35.0%	100.0%
	Chi-Sq. =	30.250	d.f. =	16	Sig. =	0.017	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	25.2%	76.1%	25.2%	50.0%	61.7%
Neutral	1.5%	4.5%	9.8%	19.4%	13.9%
Dissatisfied	6.4%	19.3%	15.4%	30.6%	24.4%
N=	88	88	134	134	266

<5yrs		Career Intent Normalized to True 5pt Average					
	N=266	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30f: OPR's	1 Satisfied	4.9%	1.5%	1.9%	1.9%	1.5%	11.7%
	2	7.9%	4.1%	5.6%	4.5%	9.4%	31.6%
	3	1.9%	2.3%	2.3%	1.5%	5.3%	13.2%
	4	4.9%	1.9%	4.5%	5.6%	10.2%	27.1%
	5 Dissatisfied	1.9%	1.9%	2.3%	1.9%	8.6%	16.5%
	Total	21.4%	11.7%	16.5%	15.4%	35.0%	100.0%
	Chi-Sq. =	24.075	d.f. =	16	Sig. =	0.088	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	18.4%	55.7%	17.3%	34.3%	43.2%
Neutral	4.1%	12.5%	6.8%	13.4%	13.2%
Dissatisfied	10.5%	31.8%	26.3%	52.2%	43.6%
N=	88	88	134	134	266

(continued on next page)

<5yrs		Career Intent Normalized to True 5pt Average					
	N=266	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30g: Leadership Opportunities	1 Satisfied	5.6%	1.1%	1.5%	0.4%	4.5%	13.2%
	2	6.0%	2.3%	4.5%	5.3%	6.8%	24.8%
	3	2.3%	3.8%	1.9%	3.4%	5.6%	16.9%
	4	3.8%	2.6%	5.3%	4.1%	10.5%	26.3%
	5 Dissatisfied	3.8%	1.9%	3.4%	2.3%	7.5%	18.8%
	Total	21.4%	11.7%	16.5%	15.4%	35.0%	100.0%
	Chi-Sq. =	26.161	d.f. =	16	Sig. =	0.052	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	15.0%	45.5%	16.9%	33.6%	38.0%
Neutral	6.0%	18.2%	9.0%	17.9%	16.9%
Dissatisfied	12.0%	36.4%	24.4%	48.5%	45.1%
N=	88	88	134	134	266

<5yrs		Career Intent Normalized to True 5pt Average					
	N=266	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30i: Deployments	1 Satisfied	3.8%	1.1%	1.9%	1.5%	2.6%	10.9%
	2	4.1%	2.3%	1.5%	2.6%	5.3%	15.8%
	3	0.8%	2.3%	2.6%	4.5%	9.0%	19.2%
	4	4.9%	2.6%	6.0%	3.8%	11.7%	28.9%
	5 Dissatisfied	7.9%	3.4%	4.5%	3.0%	6.4%	25.2%
	Total	21.4%	11.7%	16.5%	15.4%	35.0%	100.0%
	Chi-Sq. =	25.794	d.f. =	16	Sig. =	0.057	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	11.3%	34.1%	12.0%	23.9%	26.7%
Neutral	3.0%	9.1%	13.5%	26.9%	19.2%
Dissatisfied	18.8%	56.8%	24.8%	49.3%	54.1%
N=	88	88	134	134	266

Table 15 Cross tabulations of (1030Ave) satisfaction of aspects of the AF vs. career intent, <5yrs.
Limited to respondents with less than 5 YOS. 1030Ave(c), (e), (h), (j), and (k) are not shown because they were not significant. Red (dark gray) cells are with percentages greater than 11%, orange (gray) is for ranges between 7% and up to and including 11%, light yellow (light gray) cells are for ranges between 3% and 7% (inclusive), and white cells are less than 3%. Percentages are percent of the whole group N. The summarized portion at the bottom lumps satisfaction of 1 and 2 as "Satisfied", 3 remains "Neutral", and 4 and 5 as "Dissatisfied", and categorizes by those leaning to an AF career (career intent of 1 or 2) or leaning to leaving the AF (career intent of 4 or 5).

≥5yrs		Career Intent Normalized to True 5pt Average					
	N=256	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30a: Job	1 Satisfied	26.2%	3.1%	0.8%	0.0%	0.4%	30.5%
	2	27.3%	0.8%	2.7%	2.7%	2.0%	35.5%
	3	5.1%	1.6%	1.6%	0.4%	0.4%	9.0%
	4	11.3%	1.6%	1.2%	1.2%	0.8%	16.0%
	5 Dissatisfied	6.3%	0.4%	1.6%	0.4%	0.4%	9.0%
	Total	76.2%	7.4%	7.8%	4.7%	3.9%	100.0%
	Chi-Sq. =	26.574	d.f. =	16	Sig. =	0.046	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	57.4%	68.7%	5.1%	59.1%	66.0%
Neutral	6.6%	7.9%	0.8%	9.1%	9.0%
Dissatisfied	19.5%	23.4%	2.7%	31.8%	25.0%
N=	214	214	22	22	256

≥5yrs		Career Intent Normalized to True 5pt Average					
	N=256	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30b: Pay	1 Satisfied	36.3%	2.3%	0.8%	0.4%	2.0%	41.8%
	2	28.1%	3.9%	4.3%	2.0%	1.2%	39.5%
	3	5.9%	1.2%	0.4%	1.6%	0.8%	9.8%
	4	4.3%	0.0%	1.6%	0.0%	0.0%	5.9%
	5 Dissatisfied	1.6%	0.0%	0.8%	0.8%	0.0%	3.1%
	Total	76.2%	7.4%	7.8%	4.7%	3.9%	100.0%
	Chi-Sq. =	43.792	d.f. =	16	Sig. =	0.000	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	70.7%	84.6%	5.5%	63.6%	81.3%
Neutral	7.0%	8.4%	2.3%	27.3%	9.8%
Dissatisfied	5.9%	7.0%	0.8%	9.1%	9.0%
N=	214	214	22	22	256

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≥5yrs		Career Intent Normalized to True 5pt Average					
	N=256	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30c: Edu	1 Satisfied	45.3%	2.0%	3.1%	1.2%	2.0%	53.5%
	2	18.4%	2.7%	1.6%	1.2%	0.4%	24.2%
	3	4.7%	1.6%	1.2%	1.2%	0.0%	8.6%
	4	5.5%	1.2%	1.2%	0.8%	0.4%	9.0%
	5 Dissatisfied	2.3%	0.0%	0.8%	0.4%	1.2%	4.7%
	Total	76.2%	7.4%	7.8%	4.7%	3.9%	100.0%
	Chi-Sq. =	39.521	d.f. =	16	Sig. =	0.001	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	68.4%	81.8%	4.7%	54.5%	77.7%
Neutral	6.3%	7.5%	1.2%	13.6%	8.6%
Dissatisfied	9.0%	10.7%	2.7%	31.8%	13.7%
N=	214	214	22	22	256

≥5yrs		Career Intent Normalized to True 5pt Average					
	N=256	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30d: Promotion Sys	1 Satisfied	23.8%	1.6%	0.4%	0.0%	1.2%	27.0%
	2	32.0%	3.5%	2.3%	2.0%	0.0%	39.8%
	3	8.6%	0.4%	1.2%	1.2%	0.4%	11.7%
	4	7.4%	2.0%	2.7%	0.8%	2.0%	14.8%
	5 Dissatisfied	4.3%	0.0%	1.2%	0.8%	0.4%	6.6%
	Total	76.2%	7.4%	7.8%	4.7%	3.9%	100.0%
	Chi-Sq. =	40.733	d.f. =	16	Sig. =	0.001	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	60.9%	72.9%	3.1%	36.4%	66.8%
Neutral	9.0%	10.7%	1.6%	18.2%	11.7%
Dissatisfied	13.7%	16.4%	3.9%	45.5%	21.5%
N=	214	214	22	22	256

(continued on next page)

≥5yrs		Career Intent Normalized to True 5pt Average					
	N=256	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30f: OPRs	1 Satisfied	18.0%	1.6%	0.0%	0.0%	0.0%	19.5%
	2	25.0%	1.2%	2.3%	1.6%	1.2%	31.3%
	3	10.9%	2.3%	1.2%	0.0%	0.8%	15.2%
	4	13.7%	1.2%	1.6%	1.6%	0.4%	18.4%
	5 Dissatisfied	8.6%	1.2%	2.7%	1.6%	1.6%	15.6%
	Total	76.2%	7.4%	7.8%	4.7%	3.9%	100.0%
	Chi-Sq. =	32.249	d.f. =	16	Sig. =	0.009	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	45.7%	54.7%	2.7%	31.8%	50.8%
Neutral	13.3%	15.9%	0.8%	9.1%	15.2%
Dissatisfied	24.6%	29.4%	5.1%	59.1%	34.0%
N=	214	214	22	22	256

≥5yrs		Career Intent Normalized to True 5pt Average					
	N=256	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30h: Retirement	1 Satisfied	38.7%	3.9%	1.6%	1.6%	1.6%	47.3%
	2	27.3%	2.3%	3.1%	0.8%	0.4%	34.0%
	3	7.0%	0.8%	0.8%	2.0%	1.2%	11.7%
	4	2.7%	0.4%	2.0%	0.0%	0.8%	5.9%
	5 Dissatisfied	0.4%	0.0%	0.4%	0.4%	0.0%	1.2%
	Total	76.2%	7.4%	7.8%	4.7%	3.9%	100.0%
	Chi-Sq. =	47.881	d.f. =	16	Sig. =	0.000	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	72.3%	86.4%	4.3%	50.0%	81.3%
Neutral	7.8%	9.3%	3.1%	36.4%	11.7%
Dissatisfied	3.5%	4.2%	1.2%	13.6%	7.0%
N=	214	214	22	22	256

(continued on next page)

≥5yrs		Career Intent Normalized to True 5pt Average					
	N=256	1 Career in AF	2	3	4	5 Leave AF	Total
Ave 10&30i: Deployments	1 Satisfied	12.9%	1.2%	0.0%	0.0%	0.0%	14.1%
	2	25.8%	4.3%	2.3%	0.8%	1.2%	34.4%
	3	11.3%	1.2%	2.3%	2.3%	1.2%	18.4%
	4	13.7%	0.0%	1.6%	0.4%	1.2%	16.8%
	5 Dissatisfied	12.5%	0.8%	1.6%	1.2%	0.4%	16.4%
	Total	76.2%	7.4%	7.8%	4.7%	3.9%	100.0%
	Chi-Sq. =	27.900	d.f. =	16	Sig. =	0.033	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	44.1%	52.8%	2.0%	22.7%	48.4%
Neutral	12.5%	15.0%	3.5%	40.9%	18.4%
Dissatisfied	27.0%	32.2%	3.1%	36.4%	33.2%
N=	214	214	22	22	256

Table 16 Cross tabulations of (1030Ave) satisfaction of aspects of the AF vs. career intent, ≥5yrs.
Limited to respondents with 5 or more and less than 10 YOS. 1030Ave (e), (g), (j), and (k) are not shown because they were not significant. Red (dark gray) cells are with percentages greater than 11%, orange (gray) is for ranges between 7% and up to and including 11%, light yellow (light gray) cells are for ranges between 3% and 7% (inclusive), and white cells are less than 3%. Percentages are percent of the whole group N. The summarized portion at the bottom lumps satisfaction of 1 and 2 as "Satisfied", 3 remains "Neutral", and 4 and 5 as "Dissatisfied", and categorizes by those leaning to an AF career (career intent of 1 or 2) or leaning to leaving the AF (career intent of 4 or 5).

Appendix N Regression Analysis on Job Satisfaction

Regression Analysis for All Respondents with <5 YOS

Notes

Output Created		11-DEC-2004 02:38:13
Comments		
Input	Data	C:\DOCUME~1\DEREKB~1\MYDOCU~1\Thesis\SURVEY~1\SURVEY~1.SAV
	Filter	Min_ADT_Range<5 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	285
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT CareerIntentNormalizedto-True5ptAverage /METHOD=STEPWISE Ave1030aJob Ave1030bPay Ave1030cEdu Ave1030dPromotionSys Ave1030eRecognition Ave1030fOPRs Ave1030gLeadershipOpp Ave1030hRetirement Ave1030iDeployments Ave1030jTDY Ave1030kAssignmentSys Min_ADT_Range .
Resources	Elapsed Time	0:00:00.11
	Memory Required	9684 bytes
	Additional Memory Required for Residual Plots	0 bytes

Variables Entered/Removed(a)

Model	Variables Entered	Variables Removed	Method
1	Ave 10&30d: Promotion Sys	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Ave 10&30a: Job	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	Ave 10&30h: Retirement	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	Ave 10&30i: Deploy-ments	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: Career Intent Normalized to True 5pt Average

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.257(a)	.066	.062	1.513
2	.304(b)	.092	.086	1.494
3	.336(c)	.113	.103	1.480
4	.360(d)	.129	.116	1.469

a Predictors: (Constant), Ave 10&30d: Promotion Sys
b Predictors: (Constant), Ave 10&30d: Promotion Sys, Ave 10&30a: Job
c Predictors: (Constant), Ave 10&30d: Promotion Sys, Ave 10&30a: Job, Ave 10&30h: Retirement
d Predictors: (Constant), Ave 10&30d: Promotion Sys, Ave 10&30a: Job, Ave 10&30h: Retirement, Ave 10&30i: Deployments

ANOVA(e)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regres-sion	42.623	1	42.623	18.627	.000(a)
	Residual	604.099	264	2.288		
	Total	646.722	265			
2	Regres-sion	59.796	2	29.898	13.397	.000(b)
	Residual	586.926	263	2.232		
	Total	646.722	265			
3	Regres-sion	73.202	3	24.401	11.147	.000(c)
	Residual	573.520	262	2.189		
	Total	646.722	265			
4	Regres-sion	83.636	4	20.909	9.692	.000(d)
	Residual	563.086	261	2.157		
	Total	646.722	265			

a Predictors: (Constant), Ave 10&30d: Promotion Sys
b Predictors: (Constant), Ave 10&30d: Promotion Sys, Ave 10&30a: Job
c Predictors: (Constant), Ave 10&30d: Promotion Sys, Ave 10&30a: Job, Ave 10&30h: Retirement
d Predictors: (Constant), Ave 10&30d: Promotion Sys, Ave 10&30a: Job, Ave 10&30h: Retirement, Ave 10&30i: Deployments
e Dependent Variable: Career Intent Normalized to True 5pt Average

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.489	.211		11.774	.000
	Ave 10&30d: Promotion Sys	.328	.076	.257	4.316	.000
2	(Constant)	2.074	.257		8.079	.000
	Ave 10&30d: Promotion Sys	.256	.079	.200	3.218	.001
	Ave 10&30a: Job	.194	.070	.172	2.774	.006
3	(Constant)	1.763	.284		6.216	.000
	Ave 10&30d: Promotion Sys	.195	.082	.152	2.359	.019
	Ave 10&30a: Job	.197	.069	.175	2.846	.005
	Ave 10&30h: Retirement	.236	.096	.151	2.475	.014
4	(Constant)	2.129	.327		6.508	.000
	Ave 10&30d: Promotion Sys	.206	.082	.161	2.510	.013
	Ave 10&30a: Job	.252	.073	.224	3.444	.001
	Ave 10&30h: Retirement	.234	.095	.150	2.469	.014
	Ave 10&30i: Deployments	-.163	.074	-.137	-2.199	.029

a Dependent Variable: Career Intent Normalized to True 5pt Average

Excluded Variables(e)

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Ave 10&30a: Job	.172(a)	2.774	.006	.169	.892
	Ave 10&30b: Pay	.043(a)	.691	.490	.043	.935
	Ave 10&30c: Edu	.064(a)	1.028	.305	.063	.926
	Ave 10&30e: Recognition	.089(a)	1.280	.202	.079	.730
	Ave 10&30f: OPRs	.145(a)	2.083	.038	.127	.717
	Ave 10&30g: Leadership Opp	.064(a)	1.031	.304	.063	.907
	Ave 10&30h: Retirement	.148(a)	2.391	.018	.146	.904
	Ave 10&30i: Deployments	-.066(a)	-1.100	.272	-.068	.969
	Ave 10&30j: TDY	-.026(a)	-.423	.672	-.026	.970
	Ave 10&30k: Assignment Sys	.052(a)	.785	.433	.048	.817
	Min ADT Range	.098(a)	1.634	.103	.100	.977
2	Ave 10&30b: Pay	.036(b)	.599	.550	.037	.933
	Ave 10&30c: Edu	.032(b)	.512	.609	.032	.892
	Ave 10&30e: Recognition	.020(b)	.262	.793	.016	.625
	Ave 10&30f: OPRs	.104(b)	1.454	.147	.089	.673
	Ave 10&30g: Leadership Opp	-.040(b)	-.543	.587	-.034	.641
	Ave 10&30h: Retirement	.151(b)	2.475	.014	.151	.904
	Ave 10&30i: Deployments	-.139(b)	-2.205	.028	-.135	.856
	Ave 10&30j: TDY	-.075(b)	-1.214	.226	-.075	.901
	Ave 10&30k: Assignment Sys	-.026(b)	-.368	.713	-.023	.681
	Min ADT Range	.093(b)	1.574	.117	.097	.976

3	Ave 10&30b: Pay	.005(c)	.083	.934	.005	.892
	Ave 10&30c: Edu	.009(c)	.147	.883	.009	.871
	Ave 10&30e: Recognition	-.007(c)	-.092	.927	-.006	.612
	Ave 10&30f: OPRs	.083(c)	1.164	.246	.072	.662
	Ave 10&30g: Leadership Opp	-.053(c)	-.729	.467	-.045	.638
	Ave 10&30i: Deployments	-.137(c)	-2.199	.029	-.135	.856
	Ave 10&30j: TDY	-.096(c)	-1.551	.122	-.096	.887
	Ave 10&30k: Assignment Sys	-.040(c)	-.570	.569	-.035	.677
	Min ADT Range	.093(c)	1.586	.114	.098	.976
4	Ave 10&30b: Pay	-.002(d)	-.032	.974	-.002	.889
	Ave 10&30c: Edu	.013(d)	.208	.836	.013	.871
	Ave 10&30e: Recognition	.030(d)	.399	.690	.025	.583
	Ave 10&30f: OPRs	.099(d)	1.394	.164	.086	.656
	Ave 10&30g: Leadership Opp	.009(d)	.112	.911	.007	.545
	Ave 10&30j: TDY	-.077(d)	-1.238	.217	-.077	.866
	Ave 10&30k: Assignment Sys	-.021(d)	-.303	.762	-.019	.666
	Min ADT Range	.083(d)	1.414	.159	.087	.969

a Predictors in the Model: (Constant), Ave 10&30d: Promotion Sys
b Predictors in the Model: (Constant), Ave 10&30d: Promotion Sys, Ave 10&30a: Job
c Predictors in the Model: (Constant), Ave 10&30d: Promotion Sys, Ave 10&30a: Job, Ave 10&30h: Retirement
d Predictors in the Model: (Constant), Ave 10&30d: Promotion Sys, Ave 10&30a: Job, Ave 10&30h: Retirement, Ave 10&30i: Deployments
e Dependent Variable: Career Intent Normalized to True 5pt Average

Regression Analysis for All Respondents with ≥5 YOS

Notes

Output Created		11-DEC-2004 02:37:06
Comments		
Input	Data	C:\DOCUME~1\DEREKB~1\MYDOCU~1\Thesis\SURVEY~1\SURVEY~1.SAV
	Filter	Min_ADT_Range>=5 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	307
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT CareerIntentNormalizedto-True5ptAverage /METHOD=STEPWISE Ave1030aJob Ave1030bPay Ave1030cEdu Ave1030dPromotionSys Ave1030eRecognition Ave1030fOPRs Ave1030gLeadershipOpp Ave1030hRetirement Ave1030iDeployments Ave1030jTDY Ave1030kAssignmentSys Min_ADT_Range .
Resources	Elapsed Time	0:00:00.08
	Memory Required	9684 bytes
	Additional Memory Required for Residual Plots	0 bytes

Variables Entered/Removed(a)

Model	Variables Entered	Variables Removed	Method
1	Min ADT Range	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Ave 10&30d: Promotion Sys	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	Ave 10&30c: Edu	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	Ave 10&30g: Leadership Opp	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

5	Ave 10&30h: Retirement	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: Career Intent Normalized to True 5pt Average

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.333(a)	.111	.107	1.018
2	.434(b)	.188	.182	.974
3	.457(c)	.209	.200	.964
4	.482(d)	.233	.221	.951
5	.495(e)	.245	.229	.945

a Predictors: (Constant), Min ADT Range
b Predictors: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys
c Predictors: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys, Ave 10&30c: Edu
d Predictors: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys, Ave 10&30c: Edu, Ave 10&30g: Leadership Opp
e Predictors: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys, Ave 10&30c: Edu, Ave 10&30g: Leadership Opp, Ave 10&30h: Retirement

ANOVA(f)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regres-sion	32.819	1	32.819	31.697	.000(a)
	Residual	262.989	254	1.035		
	Total	295.809	255			
2	Regres-sion	55.668	2	27.834	29.325	.000(b)
	Residual	240.140	253	.949		
	Total	295.809	255			
3	Regres-sion	61.857	3	20.619	22.210	.000(c)
	Residual	233.952	252	.928		
	Total	295.809	255			
4	Regres-sion	68.860	4	17.215	19.039	.000(d)
	Residual	226.949	251	.904		
	Total	295.809	255			
5	Regres-sion	72.346	5	14.469	16.188	.000(e)
	Residual	223.462	250	.894		
	Total	295.809	255			

a Predictors: (Constant), Min ADT Range
b Predictors: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys
c Predictors: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys, Ave 10&30c: Edu
d Predictors: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys, Ave 10&30c: Edu, Ave 10&30g: Leadership Opp
e Predictors: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys, Ave 10&30c: Edu, Ave 10&30g: Leadership Opp, Ave 10&30h: Retirement
f Dependent Variable: Career Intent Normalized to True 5pt Average

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.431	.173		14.084	.000
	Min ADT Range	-.085	.015	-.333	-5.630	.000
2	(Constant)	1.843	.204		9.031	.000
	Min ADT Range	-.084	.014	-.330	-5.827	.000
	Ave 10&30d: Promotion Sys	.247	.050	.278	4.906	.000
3	(Constant)	1.635	.217		7.521	.000
	Min ADT Range	-.081	.014	-.315	-5.599	.000
	Ave 10&30d: Promotion Sys	.208	.052	.234	4.000	.000
	Ave 10&30c: Edu	.139	.054	.152	2.582	.010
4	(Constant)	1.853	.228		8.113	.000
	Min ADT Range	-.083	.014	-.325	-5.833	.000
	Ave 10&30d: Promotion Sys	.254	.054	.286	4.711	.000
	Ave 10&30c: Edu	.174	.055	.191	3.193	.002
	Ave 10&30g: Leadership Opp	-.137	.049	-.171	-2.783	.006
5	(Constant)	1.738	.235		7.408	.000
	Min ADT Range	-.082	.014	-.321	-5.793	.000
	Ave 10&30d: Promotion Sys	.222	.056	.249	3.952	.000
	Ave 10&30c: Edu	.142	.057	.155	2.503	.013
	Ave 10&30g: Leadership Opp	-.142	.049	-.177	-2.898	.004
	Ave 10&30h: Retirement	.142	.072	.125	1.975	.049

a Dependent Variable: Career Intent Normalized to True 5pt Average

Excluded Variables(f)

Model		Beta In	t	Sig.	Partial Cor-relation	Collinearity Statistics Tolerance
1	Ave 10&30a: Job	.140(a)	2.387	.018	.148	.999
	Ave 10&30b: Pay	.183(a)	3.144	.002	.194	1.000
	Ave 10&30c: Edu	.220(a)	3.797	.000	.232	.990
	Ave 10&30d: Promotion Sys	.278(a)	4.906	.000	.295	1.000
	Ave 10&30e: Recognition	.097(a)	1.628	.105	.102	.978
	Ave 10&30f: OPRs	.230(a)	3.974	.000	.242	.990
	Ave 10&30g: Leadership Opp	-.005(a)	-.085	.932	-.005	.993
	Ave 10&30h: Retirement	.239(a)	4.153	.000	.253	.996
	Ave 10&30i: Deployments	.086(a)	1.451	.148	.091	.995
	Ave 10&30j: TDY	.113(a)	1.922	.056	.120	.994
	Ave 10&30k: Assignment Sys	.196(a)	3.373	.001	.207	1.000
2	Ave 10&30a: Job	.054(b)	.893	.373	.056	.889
	Ave 10&30b: Pay	.079(b)	1.266	.207	.080	.819
	Ave 10&30c: Edu	.152(b)	2.582	.010	.161	.907
	Ave 10&30e: Recognition	-.069(b)	-1.025	.306	-.064	.710
	Ave 10&30f: OPRs	.078(b)	1.012	.312	.064	.547
	Ave 10&30g: Leadership Opp	-.125(b)	-2.059	.041	-.129	.858
	Ave 10&30h: Retirement	.153(b)	2.497	.013	.155	.841
	Ave 10&30i: Deployments	.022(b)	.380	.704	.024	.941
	Ave 10&30j: TDY	.025(b)	.409	.683	.026	.887
	Ave 10&30k: Assignment Sys	.099(b)	1.601	.111	.100	.834

3	Ave 10&30a: Job	.023(c)	.381	.704	.024	.851
	Ave 10&30b: Pay	.030(c)	.461	.645	.029	.732
	Ave 10&30e: Recognition	-.110(c)	-1.620	.107	-.102	.678
	Ave 10&30f: OPRs	.067(c)	.880	.380	.055	.545
	Ave 10&30g: Leadership Opp	-.171(c)	-2.783	.006	-.173	.811
	Ave 10&30h: Retirement	.115(c)	1.801	.073	.113	.762
	Ave 10&30i: Deployments	-.010(c)	-.175	.861	-.011	.897
	Ave 10&30j: TDY	-.039(c)	-.613	.541	-.039	.759
	Ave 10&30k: Assignment Sys	.059(c)	.916	.360	.058	.767
4	Ave 10&30a: Job	.113(d)	1.713	.088	.108	.703
	Ave 10&30b: Pay	.041(d)	.626	.532	.040	.730
	Ave 10&30e: Recognition	-.051(d)	-.717	.474	-.045	.597
	Ave 10&30f: OPRs	.086(d)	1.141	.255	.072	.541
	Ave 10&30h: Retirement	.125(d)	1.975	.049	.124	.759
	Ave 10&30i: Deployments	.070(d)	1.089	.277	.069	.740
	Ave 10&30j: TDY	.002(d)	.031	.976	.002	.717
	Ave 10&30k: Assignment Sys	.110(d)	1.690	.092	.106	.718

5	Ave 10&30a: Job	.108(e)	1.654	.099	.104	.702
	Ave 10&30b: Pay	-.004(e)	-.053	.958	-.003	.643
	Ave 10&30e: Recognition	-.072(e)	-1.000	.318	-.063	.586
	Ave 10&30f: OPRs	.090(e)	1.204	.230	.076	.540
	Ave 10&30i: Deployments	.071(e)	1.116	.266	.071	.740
	Ave 10&30j: TDY	.002(e)	.032	.975	.002	.717
	Ave 10&30k: Assignment Sys	.098(e)	1.500	.135	.095	.710

a Predictors in the Model: (Constant), Min ADT Range
b Predictors in the Model: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys
c Predictors in the Model: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys, Ave 10&30c: Edu
d Predictors in the Model: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys, Ave 10&30c: Edu, Ave 10&30g: Leadership Opp
e Predictors in the Model: (Constant), Min ADT Range, Ave 10&30d: Promotion Sys, Ave 10&30c: Edu, Ave 10&30g: Leadership Opp, Ave 10&30h: Retirement
f Dependent Variable: Career Intent Normalized to True 5pt Average

Appendix O Job Satisfaction Factors (Supplement)

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
18a Job: Meaningfulness to Unit	1 Satisfied	19.2%	2.3%	2.1%	1.3%	3.4%	28.4%
	2	13.6%	3.3%	4.8%	4.4%	5.9%	32.0%
	3	6.7%	2.1%	1.9%	1.3%	3.6%	15.7%
	4	5.4%	1.1%	1.5%	1.9%	3.8%	13.8%
	5 Dissatisfied	3.4%	0.8%	1.9%	1.1%	2.9%	10.2%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	41.387	d.f. =	16	Sig. =	0.000	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	38.3%	66.2%	15.1%	50.6%	60.3%
Neutral	8.8%	15.2%	5.0%	16.7%	15.7%
Dissatisfied	10.7%	18.5%	9.8%	32.7%	23.9%
N=	302	302	156	156	522

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
18b Job: Challenge	1 Satisfied	22.4%	3.1%	3.6%	2.7%	4.0%	35.8%
	2	13.6%	2.5%	3.6%	3.3%	7.9%	30.8%
	3	4.6%	2.1%	1.3%	1.0%	1.7%	10.7%
	4	4.0%	1.1%	1.5%	1.9%	3.4%	12.1%
	5 Dissatisfied	3.6%	0.8%	2.1%	1.3%	2.7%	10.5%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	41.235	d.f. =	16	Sig. =	0.001	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	41.6%	71.9%	17.8%	59.6%	66.7%
Neutral	6.7%	11.6%	2.7%	9.0%	10.7%
Dissatisfied	9.6%	16.6%	9.4%	31.4%	22.6%
N=	302	302	156	156	522

(continued on next page)

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
18c Job: Use Degree	1 Satisfied	12.1%	2.3%	1.7%	1.1%	2.3%	19.5%
	2	16.3%	2.3%	2.9%	3.4%	4.4%	29.3%
	3	5.9%	1.5%	1.9%	0.8%	2.1%	12.3%
	4	8.8%	1.3%	2.5%	2.3%	6.1%	21.1%
	5 Dissatisfied	5.2%	2.1%	3.3%	2.5%	4.8%	17.8%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	39.021	d.f. =	16	Sig. =	0.001	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	33.0%	57.0%	11.3%	37.8%	48.9%
Neutral	7.5%	12.9%	2.9%	9.6%	12.3%
Dissatisfied	17.4%	30.1%	15.7%	52.6%	38.9%
N=	302	302	156	156	522

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
18d Job: Feel Valued	1 Satisfied	17.2%	2.7%	2.9%	0.8%	4.4%	28.0%
	2	15.7%	2.9%	2.7%	4.0%	5.9%	31.2%
	3	4.4%	1.3%	2.7%	1.3%	2.5%	12.3%
	4	7.3%	1.7%	2.3%	2.7%	4.6%	18.6%
	5 Dissatisfied	3.6%	1.0%	1.7%	1.3%	2.3%	10.0%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	33.237	d.f. =	16	Sig. =	0.007	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	38.5%	66.6%	15.1%	50.6%	59.2%
Neutral	5.7%	9.9%	3.8%	12.8%	12.3%
Dissatisfied	13.6%	23.5%	10.9%	36.5%	28.5%
N=	302	302	156	156	522

(continued on next page)

		Career Intent Normalized to True 5pt Average					
	N=522	1 Career in AF	2	3	4	5 Leave AF	Total
18e Job: Add'l Duties	1 Satisfied	13.6%	2.5%	2.1%	1.3%	3.1%	22.6%
	2	13.4%	2.3%	2.7%	2.7%	5.0%	26.1%
	3	13.0%	2.5%	3.1%	3.1%	4.6%	26.2%
	4	5.7%	1.7%	2.9%	1.5%	3.6%	15.5%
	5 Dissatisfied	2.5%	0.6%	1.5%	1.5%	3.4%	9.6%
	Total	48.3%	9.6%	12.3%	10.2%	19.7%	100.0%
	Chi-Sq. =	30.713	d.f. =	16	Sig. =	0.015	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	31.8%	55.0%	12.1%	40.4%	48.7%
Neutral	15.5%	26.8%	7.7%	25.6%	26.2%
Dissatisfied	10.5%	18.2%	10.2%	34.0%	25.1%
N=	302	302	156	156	522

Table 17 Cross tabulations of Q18 on aspects of job satisfaction vs. career intent.
Red (dark gray) cells are with percentages greater than 6%, orange (gray) is for ranges between 4% and up to and including 6%, light yellow (light gray) cells are for ranges between 2% and 4% (inclusive), and white cells are less than 2%. Percentages are percent of the whole group N. The summarized portion at the bottom lumps satisfaction of 1 and 2 as "Satisfied", 3 remains "Neutral", and 4 and 5 as "Dissatisfied", and categorizes by those leaning to an AF career (career intent of 1 or 2) or leaning to leaving the AF (career intent of 4 or 5).

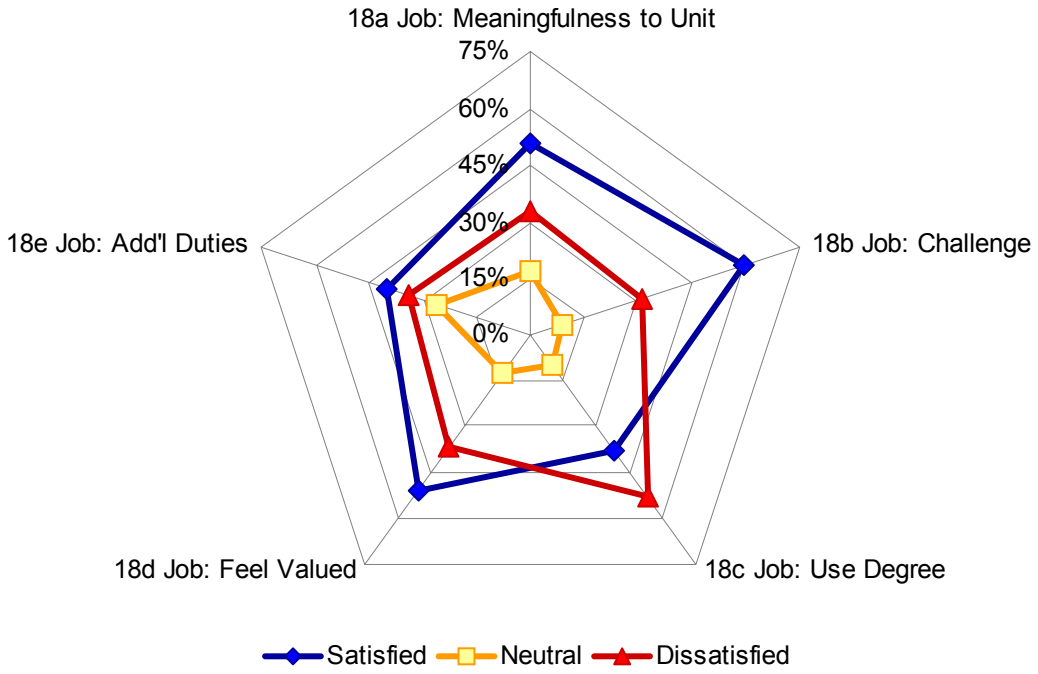

Figure 23 For those leaning to leave the AF (N=156), satisfaction as indicated in Q18.
The lowest confidence interval in this figure is 98.5%, and corresponds to 18e Number of Additional Duties.

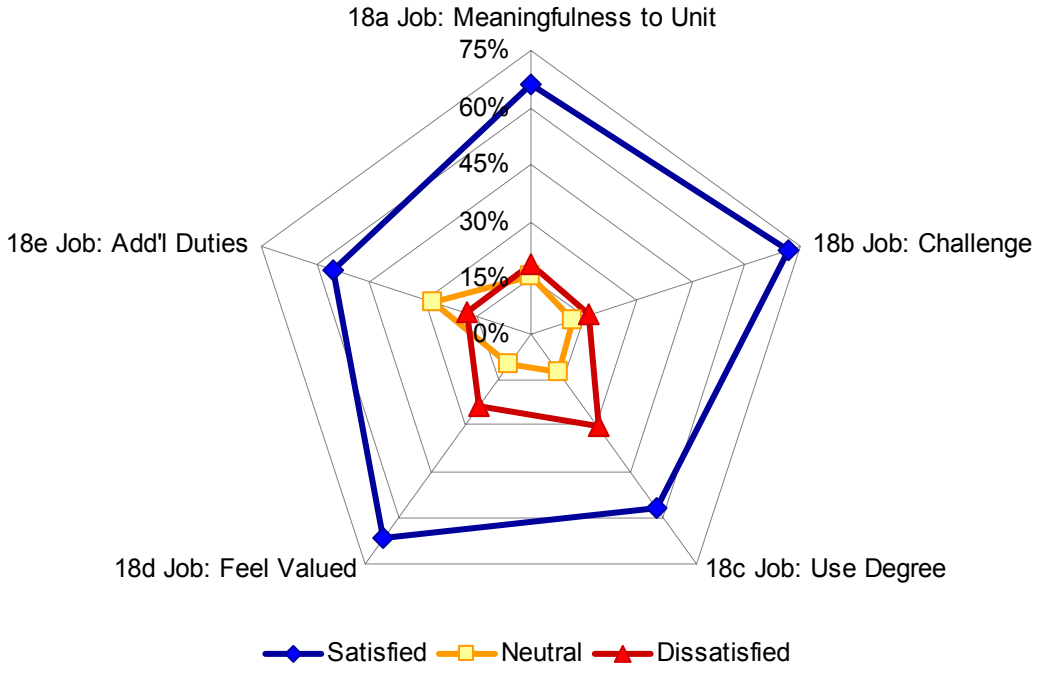

Figure 24 For those leaning to a career in the AF (N=302), satisfaction as indicated in Q18.

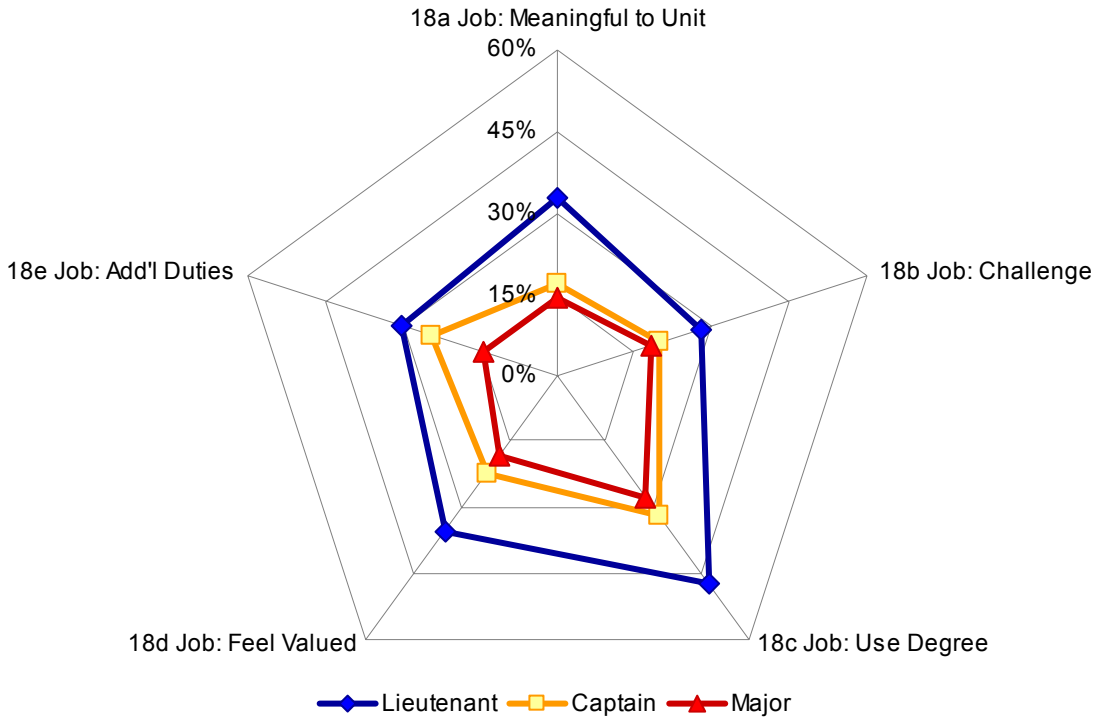

Figure 25 Q18 job satisfaction factors: dissatisfaction by rank (Major and below).[95]

[95] N varies by sub-question for this plot.

	% by AFSC	AFSC Class				
	N=592	61S Scientist	62E Engineer	63A Program Manager	Other	Total
18b Job: Challenge	1 Satisfied	40.0%	34.3%	34.5%	66.7%	36.8%
	2	43.3%	29.2%	31.7%	12.8%	30.1%
	3	0.0%	11.4%	10.8%	7.7%	10.3%
	4	10.0%	10.6%	13.6%	7.7%	11.8%
	5 Dissatisfied	6.7%	14.4%	9.4%	5.1%	11.0%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
	N=	30	236	287	39	592
	Chi-Sq. =	26.578	d.f. =	12	Sig. =	0.009
	Satisf.	66.9%	Neutral	10.3%	Dissatisf.	22.8%

	% by AFSC	AFSC Class				
	N=592	61S Scientist	62E Engineer	63A Program Manager	Other	Total
18c Job: Use Degree	1 Satisfied	23.3%	16.9%	20.6%	43.6%	20.8%
	2	43.3%	27.5%	31.0%	23.1%	29.7%
	3	3.3%	14.8%	11.8%	5.1%	12.2%
	4	16.7%	20.8%	19.5%	12.8%	19.4%
	5 Dissatisfied	13.3%	19.9%	17.1%	15.4%	17.9%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
	N=	30	236	287	39	592
	Chi-Sq. =	21.778	d.f. =	12	Sig. =	0.040
	Satisf.	50.5%	Neutral	12.2%	Dissatisf.	37.3%

	% by AFSC	AFSC Class				
	N=592	61S Scientist	62E Engineer	63A Program Manager	Other	Total
18d Job: Feel Valued	1 Satisfied	36.7%	28.8%	25.4%	53.8%	29.2%
	2	26.7%	31.4%	33.4%	25.6%	31.8%
	3	16.7%	11.4%	12.2%	2.6%	11.5%
	4	16.7%	16.5%	20.2%	10.3%	17.9%
	5 Dissatisfied	3.3%	11.9%	8.7%	7.7%	9.6%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
	N=	30	236	287	39	592
	Chi-Sq. =	19.852	d.f. =	12	Sig. =	0.070
	Satisf.	61.0%	Neutral	11.5%	Dissatisf.	27.5%

Table 18 Cross tabulations of AFSC vs. to Q18.[96]

[96] No correlation exists for Q18a or Q18e, and so their cross tabulations are not presented here.

<5yrs		Career Intent Normalized to True 5pt Average					
	N=266	1 Career in AF	2	3	4	5 Leave AF	Total
18e Job: Add'l Duties	1 Satisfied	6.4%	3.0%	3.0%	1.1%	3.8%	17.3%
	2	6.8%	2.3%	3.8%	4.1%	8.6%	25.6%
	3	4.9%	3.0%	4.1%	4.9%	9.0%	25.9%
	4	1.9%	3.0%	3.8%	2.3%	7.1%	18.0%
	5 Dissatisfied	1.5%	0.4%	1.9%	3.0%	6.4%	13.2%
	Total	21.4%	11.7%	16.5%	15.4%	35.0%	100.0%
	Chi-Sq. =	25.397	d.f. =	16	Sig. =	0.063	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	18.4%	55.7%	17.7%	35.1%	42.9%
Neutral	7.9%	23.9%	13.9%	27.6%	25.9%
Dissatisfied	6.8%	20.5%	18.8%	37.3%	31.2%
N=	88	88	134	134	266

Table 19 Cross tabulation of Q18 on aspects of job satisfaction vs. career intent, <5yrs.
Limited to respondents with less than 5 YOS. Q18a, b, c, and d are not shown because they were not significant. Red (dark gray) cells are with percentages greater than 11%, orange (gray) is for ranges between 7% and up to and including 11%, light yellow (light gray) cells are for ranges between 3% and 7% (inclusive), and white cells are less than 3%. Percentages are percent of the whole group N. The summarized portion at the bottom lumps satisfaction of 1 and 2 as "Satisfied", 3 remains "Neutral", and 4 and 5 as "Dissatisfied", and categorizes by those leaning to an AF career (career intent of 1 or 2) or leaning to leaving the AF (career intent of 4 or 5).

≥5yrs		Career Intent Normalized to True 5pt Average					
	N=256	1 Career in AF	2	3	4	5 Leave AF	Total
18a Job: Meaningful to Unit	1 Satisfied	31.6%	2.7%	2.0%	0.8%	0.8%	37.9%
	2	19.9%	2.0%	2.7%	1.6%	2.7%	28.9%
	3	11.3%	2.3%	1.2%	0.4%	0.0%	15.2%
	4	8.2%	0.4%	0.8%	0.8%	0.0%	10.2%
	5 Dissatisfied	5.1%	0.0%	1.2%	1.2%	0.4%	7.8%
	Total	76.2%	7.4%	7.8%	4.7%	3.9%	100.0%
	Chi-Sq. =	25.592	d.f. =	16	Sig. =	0.060	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	56.3%	67.3%	5.9%	68.2%	66.8%
Neutral	13.7%	16.4%	0.4%	4.5%	15.2%
Dissatisfied	13.7%	16.4%	2.3%	27.3%	18.0%
N=	214	214	22	22	256

≥5yrs		Career Intent Normalized to True 5pt Average					
	N=256	1 Career in AF	2	3	4	5 Leave AF	Total
18b Job: Challenge	1 Satisfied	37.9%	3.1%	3.1%	2.0%	0.8%	46.9%
	2	19.9%	2.0%	2.7%	1.6%	2.0%	28.1%
	3	7.4%	2.3%	0.8%	0.0%	0.4%	10.9%
	4	5.5%	0.0%	0.0%	0.0%	0.0%	5.5%
	5 Dissatisfied	5.5%	0.0%	1.2%	1.2%	0.8%	8.6%
	Total	76.2%	7.4%	7.8%	4.7%	3.9%	100.0%
	Chi-Sq. =	26.377	d.f. =	16	Sig. =	0.049	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	62.9%	75.2%	6.3%	72.7%	75.0%
Neutral	9.8%	11.7%	0.4%	4.5%	10.9%
Dissatisfied	10.9%	13.1%	2.0%	22.7%	14.1%
N=	214	214	22	22	256

(continued on next page)

≥5yrs		Career Intent Normalized to True 5pt Average					
	N=256	1 Career in AF	2	3	4	5 Leave AF	Total
18d Job: Feel Valued	1 Satisfied	28.9%	2.7%	2.0%	0.4%	1.2%	35.2%
	2	23.8%	1.2%	2.0%	1.6%	2.0%	30.5%
	3	7.0%	2.0%	2.0%	0.4%	0.0%	11.3%
	4	11.7%	0.8%	0.8%	1.2%	0.8%	15.2%
	5 Dissatisfied	4.7%	0.8%	1.2%	1.2%	0.0%	7.8%
	Total	76.2%	7.4%	7.8%	4.7%	3.9%	100.0%
	Chi-Sq. =	24.532	d.f. =	16	Sig. =	0.079	

	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	56.6%	67.8%	5.1%	59.1%	65.6%
Neutral	9.0%	10.7%	0.4%	4.5%	11.3%
Dissatisfied	18.0%	21.5%	3.1%	36.4%	23.0%
N=	214	214	22	22	256

Table 20 Cross tabulations of Q18 on aspects of job satisfaction vs. career intent, ≥5yrs.
Limited to respondents with 5 or more YOS. Q18c and e are not shown because they were not significant. Red (dark gray) cells are with percentages greater than 11%, orange (gray) is for ranges between 7% and up to and including 11%, light yellow (light gray) cells are for ranges between 3% and 7% (inclusive), and white cells are less than 3%. Percentages are percent of the whole group N. The summarized portion at the bottom lumps satisfaction of 1 and 2 as "Satisfied", 3 remains "Neutral", and 4 and 5 as "Dissatisfied", and categorizes by those leaning to an AF career (career intent of 1 or 2) or leaning to leaving the AF (career intent of 4 or 5).

Appendix P The Assignment System (Supplement)

For all cross tabulations presented in this appendix, red (dark gray) cells are with percentages greater than 6%, orange (gray) is for ranges between 3.5% and 6%, light yellow (light gray) cells are for ranges between 1 and 3.5%, and white cells are less than 1%. Percentages are percent of the whole group N.

	N=277	Ave 10&30k: Assignment Sys					
	RANK	1 Satisfied	2	3	4	5 Dissatisfied	Total
Assignment System as a Reason to Separate	1	1.1%	2.2%	1.4%	5.8%	6.9%	17.3%
	2	0.7%	4.7%	4.0%	11.2%	8.7%	29.2%
	3	0.4%	5.4%	5.1%	5.4%	3.6%	19.9%
	4	3.6%	8.7%	4.0%	4.0%	4.0%	24.2%
	5	1.4%	4.0%	1.4%	1.1%	1.4%	9.4%
	Total	7.2%	24.9%	15.9%	27.4%	24.5%	100.0%
	Chi-Sq. =	48.222	d.f. =	16	Sig. =	0.000	

Table 21 Cross tabulation of ranking of assignment system (Q31e) vs. 1030Ave(k) on assignment system.
For those who are undecided or have intent to leave the AF.

	N=277	20 Homestead Policy					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Assignment System as a Reason to Separate	1	8.7%	2.9%	2.2%	2.2%	1.4%	17.3%
	2	6.1%	7.2%	6.1%	6.1%	3.6%	29.2%
	3	4.7%	7.9%	2.9%	2.2%	2.2%	19.9%
	4	7.2%	5.1%	4.3%	4.7%	2.9%	24.2%
	5	0.4%	2.9%	1.1%	2.5%	2.5%	9.4%
	Total	27.1%	26.0%	16.6%	17.7%	12.6%	100.0%
	Chi-Sq. =	33.868	d.f. =	16	Sig. =	0.006	

Table 22 Cross tabulation of ranking of assignment system (Q31e) vs. Q20 an AF homestead policy.
For those who are undecided or have intent to leave the AF.

	N=273	26b More Ops Experience					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Assignment System as a Reason to Separate	1	4.4%	3.7%	1.5%	4.4%	2.9%	16.8%
	2	7.7%	7.0%	5.1%	6.2%	2.9%	28.9%
	3	3.3%	6.6%	7.7%	1.5%	1.1%	20.1%
	4	4.8%	6.6%	5.1%	5.5%	2.6%	24.5%
	5	1.5%	4.4%	1.1%	1.5%	1.1%	9.5%
	Total	21.6%	28.2%	20.5%	19.0%	10.6%	100.0%
	Chi-Sq. =	29.489	d.f. =	16	Sig. =	0.021	

Table 23 Cross tabulation of ranking of assignment system (Q31e) vs. Q26b more operational experience.
For those who are undecided or have intent to leave the AF.

	N=277	Ave 10&30a: Job					
	RANK	1 Satisfied	2	3	4	5 Dissatisfied	Total
Assignment System as a Reason to Separate	1	3.6%	6.1%	3.2%	2.5%	1.8%	17.3%
	2	1.4%	6.1%	2.9%	11.9%	6.9%	29.2%
	3	2.2%	6.9%	2.9%	3.2%	4.7%	19.9%
	4	4.7%	6.5%	4.0%	4.7%	4.3%	24.2%
	5	0.4%	2.9%	1.8%	2.9%	1.4%	9.4%
	Total	12.3%	28.5%	14.8%	25.3%	19.1%	100.0%
	Chi-Sq. =	32.614	d.f. =	16	Sig. =	0.008	

Table 24 Cross tabulation of ranking of assignment system (Q31e) vs. 1030Ave(a) on job satisfaction.
For those who are undecided or have intent to leave the AF.

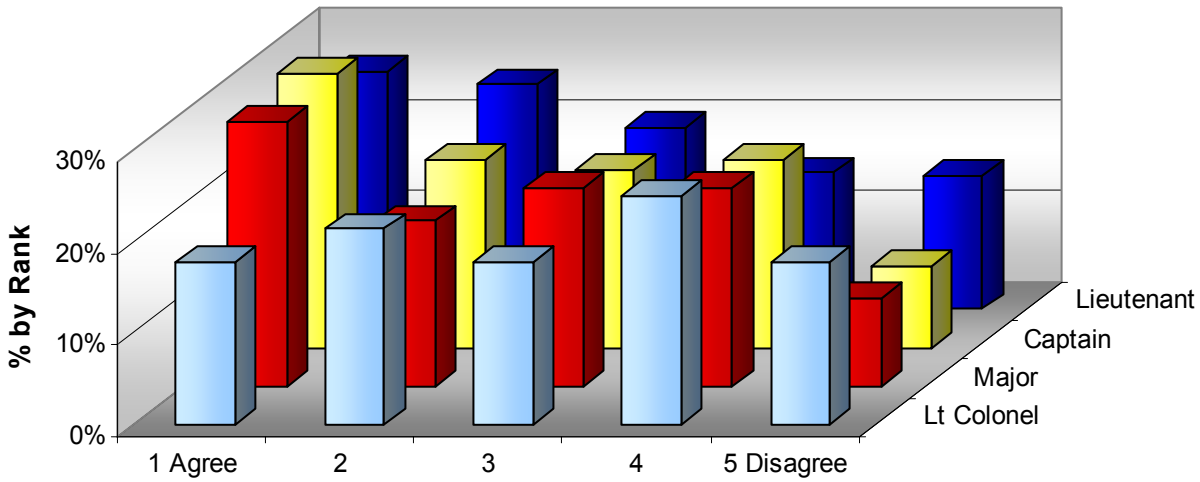

Figure 26 Homesteading Policy.
Are you more likely to remain in the AF with such a policy? N=582[97] The 582 consist of 281 Lieutenants, 190 Captains, 82 Majors, and 28 Lt Colonels.

[97] There is no correlation with this response and the respondent's career intent. Note there are 10 Colonels that have been removed from this chart, since the policy asked if you would agree such that you would be more inclined to remain in the AF if such a policy existed, but limited you to the rank of Lt Col.

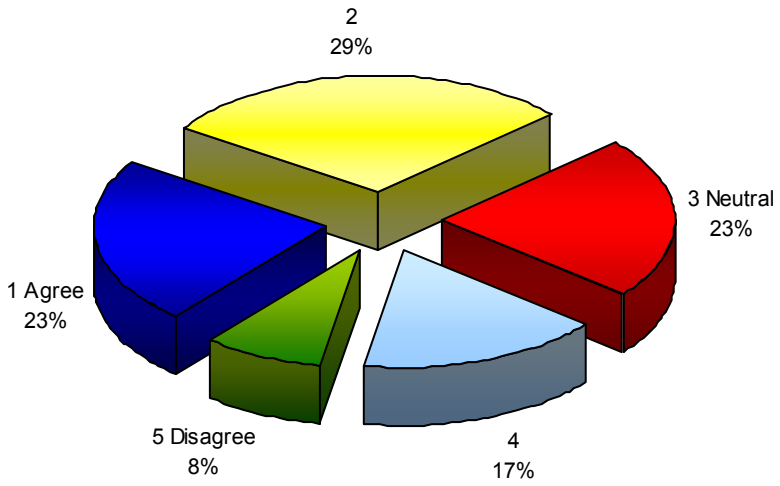

Figure 27 Q26b More Ops Experience for all respondents; N=576.

Appendix Q Pay (Supplement)

For all cross tabulations presented in this appendix, red (dark gray) cells are with percentages greater than 6%, orange (gray) is for ranges between 3.5% and 6%, light yellow (light gray) cells are for ranges between 1 and 3.5%, and white cells are less than 1%. Percentages are percent of the whole group N.

		Ave 10&30b: Pay					
	N=592	1 Satisfied	2	3	4	5 Dissatisfied	Total
21 Skills Vs. Pay	1 Satisfied	10.0%	2.4%	0.3%	0.0%	0.0%	12.7%
	2	21.6%	18.6%	1.2%	0.2%	0.0%	41.6%
	3	4.1%	9.1%	4.2%	2.9%	0.2%	20.4%
	4	2.5%	5.9%	3.4%	5.7%	1.0%	18.6%
	5 Dissatisfied	0.0%	1.9%	1.0%	1.9%	2.0%	6.8%
	Total	38.2%	37.8%	10.1%	10.6%	3.2%	100.0%
	Chi-Sq. =	330.382	d.f. =	16	Sig. =	0.000	

Table 25 Cross tabulation of satisfaction with pay from both Q21 and 1030Ave(b).
For entire population. Q21 asked if they agreed if they were paid well for their skills, seniority, and training. 1030Ave(b) is satisfaction with pay. This table confirms correlation of the two, as it should.

	N=279	21 Skills Vs. Pay					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Pay as a Reason to Separate	1	0.4%	3.9%	4.7%	4.3%	3.2%	16.5%
	2	1.4%	4.7%	4.3%	6.1%	3.2%	19.7%
	3	2.2%	7.5%	6.8%	4.7%	1.8%	22.9%
	4	1.8%	9.7%	2.5%	4.7%	1.1%	19.7%
	5	4.7%	8.6%	3.9%	3.2%	0.7%	21.1%
	Total	10.4%	34.4%	22.2%	22.9%	10.0%	100.0%
	Chi-Sq. =	37.644	d.f. =	16	Sig. =	0.002	

Table 26 Cross tabulation of ranking of pay (Q31a) vs. Q21.
Q21 asked if they agreed if they were paid well for their skills, seniority, and training. Q31 was only asked of those who are undecided or have intent to leave the AF.

	N=279	Ave 10&30b: Pay					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Pay as a Reason to Separate	1	2.9%	5.4%	1.8%	4.7%	1.8%	16.5%
	2	2.2%	6.8%	2.5%	5.7%	2.5%	19.7%
	3	4.7%	11.8%	3.6%	2.9%	0.0%	22.9%
	4	6.1%	9.0%	3.6%	0.7%	0.4%	19.7%
	5	11.1%	8.2%	1.4%	0.4%	0.0%	21.1%
	Total	26.9%	41.2%	12.9%	14.3%	4.7%	100.0%
	Chi-Sq. =	73.251	d.f. =	16	Sig. =	0.000	

Table 27 Cross tabulation of ranking of pay (Q31a) vs. 1030Ave(b) on satisfaction with pay.
For those who are undecided or have intent to leave the AF.

	N=142	14b Engineering Pay					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Pay as a Reason to Separate	1	12.7%	4.2%	0.7%	0.0%	0.7%	18.3%
	2	5.6%	9.9%	3.5%	1.4%	0.0%	20.4%
	3	4.9%	4.9%	7.7%	6.3%	1.4%	25.4%
	4	2.8%	7.0%	4.2%	3.5%	0.7%	18.3%
	5	1.4%	5.6%	4.2%	3.5%	2.8%	17.6%
	Total	27.5%	31.7%	20.4%	14.8%	5.6%	100.0%
	Chi-Sq. =	48.200	d.f. =	16	Sig. =	0.000	

Table 28 Cross tabulation of ranking of pay (Q31a) vs. Q14b.
Q14b asked desire for engineering specialty pay (asked only of 61's and 62's). Q31 was only asked of those who are undecided or have intent to leave the AF.

	N=140	16 More Pay for Tech Degree					
	RANK	1 Agree	2	3	4	5 Disagree	Total
Pay as a Reason to Separate	1	9.3%	7.1%	1.4%	0.0%	0.7%	18.6%
	2	8.6%	10.0%	2.1%	0.0%	0.0%	20.7%
	3	2.9%	11.4%	5.7%	5.7%	0.0%	25.7%
	4	0.7%	7.9%	5.0%	2.9%	0.7%	17.1%
	5	2.9%	5.0%	4.3%	2.9%	2.9%	17.9%
	Total	24.3%	41.4%	18.6%	11.4%	4.3%	100.0%
	Chi-Sq. =	46.122	d.f. =	16	Sig. =	0.000	

Table 29 Cross tabulation of ranking of pay (Q31a) vs. Q16.
Q16 asked if those with advanced technical degrees should be paid more (asked only of 61's and 62's). Q31 was only asked of those who are undecided or have intent to leave the AF.

	N=279	Ave 10&30a: Job					
	RANK	1 Satisfied	2	3	4	5 Dissatisfied	Total
Pay as a Reason to Separate	1	2.5%	7.5%	2.9%	2.2%	1.4%	16.5%
	2	2.2%	5.4%	4.7%	4.3%	3.2%	19.7%
	3	2.9%	7.5%	2.9%	6.8%	2.9%	22.9%
	4	2.9%	4.7%	2.5%	3.9%	5.7%	19.7%
	5	1.8%	3.6%	2.2%	7.5%	6.1%	21.1%
	Total	12.2%	28.7%	15.1%	24.7%	19.4%	100.0%
	Chi-Sq. =	30.579	d.f. =	16	Sig. =	0.015	

Table 30 Cross tabulation of ranking of pay in Q31a vs. 1030Ave(a) on overall job satisfaction.
For those with intent to separate (or undecided).

		Ave 10&30a: Job					
	N=592	1 Satisfied	2	3	4	5 Dissatisfied	Total
21 Skills Vs. Pay	1 Satisfied	5.1%	3.7%	0.5%	1.9%	1.5%	12.7%
	2	13.0%	12.0%	4.2%	7.1%	5.2%	41.6%
	3	2.5%	7.8%	3.0%	4.9%	2.2%	20.4%
	4	2.7%	5.4%	2.7%	4.2%	3.5%	18.6%
	5 Dissatisfied	0.3%	1.7%	1.0%	1.7%	2.0%	6.8%
	Total	23.6%	30.6%	11.5%	19.8%	14.5%	100.0%
	Chi-Sq. =	54.639	d.f. =	16	Sig. =	0.000	

Table 31 Cross tabulation of rating of adequate pay (Q21) vs. 1030Ave(a) on overall job satisfaction.
For entire population.

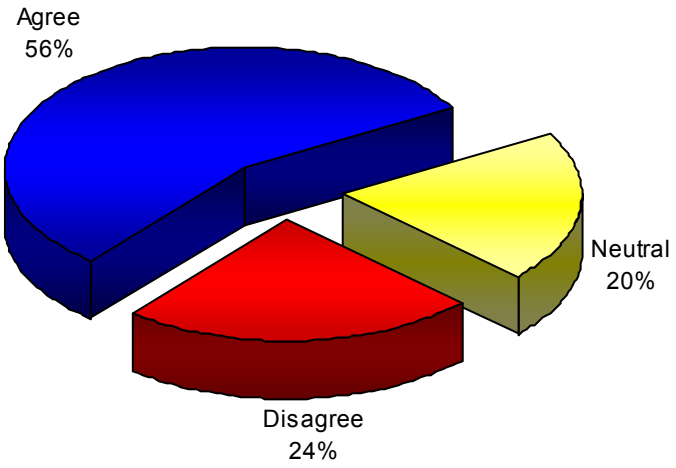

Figure 28 Satisfaction with pay (Q21); N=522.
Q21 on whether they agreed they were paid adequately for their work, skills, and experience.

Appendix R Bonuses (the CSRB, etc) (Supplement)

This section goes into detail on the CSRB analysis, and repeats some of the text and tables from the main analysis section.

Of the working data set of 592, 110 were filtered out for purposes of the CSRB analysis, leaving 482. Of these 482, 119 qualified and accepted the CSRB, 203 did not qualify due to not having enough time on active duty, and only 20 were qualified for the CSRB but rejected it.[98] Of these 20, 7 are no longer in the AF. Of the 13 still on active duty, only 3 of them are leaning towards a career in the AF (a 1 or 2, and consequently, these 3 are people that had nothing to lose and should have taken the CSRB), 1 is undecided (3), 3 possibly will separate (4), and 6 are definitely going to separate (5). Due to only having 13 respondents that did not accept, it is impossible to draw any conclusions other than the obvious: most did not accept because they had already intended to separate, and extra pay was not an incentive enough to remain with the AF.

Of the 119 that were qualified and accepted the CSRB, 1 is now separated.[99] Of the remaining 118, 64% were Captains and the rest were Majors. Interestingly, two of the 42 Majors indicated a career intent leaning towards separating, while all the remaining 40 were definitely making a career in the AF. Only about 61% of the Captains were sure they would remain in the AF, while the remainder was spread across the 5-point scale measuring career intent, though with this spread being more inclined towards making the AF a career. What is interesting is that as a touted retention bonus, the CSRB likely had no retention impact on the Major class, considering all of them have more than 10+ years of active duty service and are more than half way to retirement.[100] Table 32 attempts to grade the effectiveness of the CSRB by comparing career intent to the respondent's own assessment on whether or not the CSRB made a difference in their career intent (Q23). Q23 stated verbatim "Being offered the CSRB bonus increased how long I was planning to stay in the AF". This question was carefully worded to test if the CSRB extended the respondent's stay in the military, versus posing the question in a way that might only give a 1 or 2 if the CSRB led the respondent to a career intention. In other words, the question does not report whether the respondent was swayed to make the AF a career because of the CSRB. This is important because it makes the analysis shown in Table 32 more valid for all respondents, not just ones intending to make the AF a career. It is only in the cross tabulation of Q23 with career intent then that we see the true affect of the CSRB for this group.

Let us look at Table 32 to infer long-term effectiveness of the CSRB. The table shows three highlighted areas. I colored the orange (gray) area as it is because, on the right side, if they are intending to leave the AF (a 4 or a 5), then clearly the CSRB was not effective at swaying a career decision, hence the higher right side of the orange (gray) section. Additionally, if they re-

[98] The remaining 140 either did not know if they qualified, had too much active duty time, or did not qualify due to having the wrong AFSC. See Appendix I for details about those that may have qualified but did not realize it.

[99] This was likely a special case or circumstance to be separated now, after only YOS = 7 years, reportedly now in the reserves. More likely is this is a bad data point.

[100] The idea of a "point of no return" at 8-10 years is widely considered the last logical chance to voluntarily leave active military duty. Otherwise, the huge benefits of the military retirement system become more and more a major factor in your career intent. This can be graphically seen in Figure 5 where nearly all doubt on career intent is gone by YOS = 10.

ported neutral or no effect of the CSRB on their tenure in the military, then this area also became orange (gray) (a 3, 4, or 5 on Q23). This orange (gray) area then is the area of respondents that the CSRB likely had no (at least long-term) effect on, and is a majority of those that accepted the CSRB (64%). (In fact, if we only sum the columns for Q23 that were a 3, 4, or 5, then this group, 54%, likely had no effect, short or long-term, due to the CSRB.) The blue (black) outlined area is then those that reported a 1 or 2 on Q23, suggesting the CSRB swayed them for at least the short-term to stay in the AF, and is nearly 46%. However, only 11% of the 118 indicate a strong effect due to the CSRB and gave a strong indication of staying in the AF. If we were to be a bit more generous and add those with 2 for Q23 and a 1 or 2 for career intent, we could say the CSRB was likely effective with about 31% of those that accepted it.

Therefore, from a standpoint of long-term effect, the CSRB seems to have been widely unsuccessful. It is of course unclear if the intent of the CSRB was to fix a short-term problem. However, if this were the case, then it seems less likely that they would have offered it to Majors, or that the AF would have cancelled the CSRB after less than one year of being offered. In fact, had the CSRB not been offered to Majors, it is possible that the excess funding could have been stretched for use for a second year.

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 the target group a bonus opportunity does not really address the root cause(s) for the problem in the first place (and hence this thesis).

I now turn an analysis of those 203 respondents who missed the brief window for the CSRB because they did not yet have enough time on active duty. Of the 203, 1 is now separated, leaving 202 for the analysis components involving career intent. Of the 202, only 34 were Captains at the time of taking the survey, while the rest were still Lieutenants.

		Career Intent Normalized to True 5pt Average					
	N=118	1 Career in AF	2	3 Neutral	4	5 Leave AF	Total
23 CSRB Vs. Retention	1 Strongly Agree	9.3%	1.7%	0.0%	3.4%	0.8%	15.3%
	2	14.4%	5.1%	5.9%	3.4%	1.7%	30.5%
	3 Neutral	9.3%	0.8%	0.0%	0.0%	0.0%	10.2%
	4	26.3%	2.5%	0.8%	0.0%	0.0%	29.7%
	5 Strongly Disagree	13.6%	0.0%	0.0%	0.8%	0.0%	14.4%
	Total	72.9%	10.2%	6.8%	7.6%	2.5%	100.0%
	Chi-Sq. =	35.082	d.f. =	16	Sig. =	0.004	

63.6%	45.8%	11.0%
no long-term effect with CSRB	some effect of CSRB (long or short-term)	definite long-term effect of CSRB

Table 32 Cross tabulation of whether the CSRB had an effect (Q23) vs. career intent. (Duplicate)
Q23, which rates the respondent's feelings of how much of an effect the CSRB had on how long they planned to stay in the AF versus their indicated career intent. Duplicate of Table 3.

		Career Intent Normalized to True 5pt Average					
	N=202	1 Career in AF	2	3 Neutral	4	5 Leave AF	Total
24 CSRB Not Available Vs. Retention	1 Strongly Agree	2.5%	1.0%	5.0%	3.0%	4.0%	15.3%
	2	4.5%	3.0%	5.0%	6.9%	5.9%	25.2%
	3 Neutral	9.4%	5.4%	3.5%	2.0%	7.9%	28.2%
	4	4.0%	1.5%	1.5%	1.5%	11.9%	20.3%
	5 Strongly Disagree	2.5%	0.5%	1.0%	3.0%	4.0%	10.9%
	Total	22.8%	11.4%	15.8%	16.3%	33.7%	100.0%
	Chi-Sq. =	39.125	d.f. =	16	Sig. =	0.001	

43.1%	possible effect of discontinuation of CSRB
19.8%	probable effect of discontinuation of CSRB
9.9%	definite effect of discontinuation of CSRB

Table 33 Cross tabulation of effect of cancellation of the CSRB (Q24) vs. career intent. (Duplicate)
Q24, which rates the respondent's feelings of how much of an effect the CSRB's cancellation had on their AF career decision versus their indicated career intent. Duplicate of Table 4.

Table 33 shows a cross tabulation of career intent for the 202 versus whether cancellation of the CSRB had an effect (Q24). Q24 stated verbatim "The CSRB Bonus has been discontinued indefinitely. This has had a significant impact on my AF career decision". Those respondents with at least neutral (undecided) career intent, onwards towards leaning to separate from the AF (a career intent of 3, 4, or 5), and those respondents that indicated a 1, 2, or 3 on Q24, make up the orange (gray) section, and are the respondents which might possibly have been affected by the discontinuation of the CSRB. The orange (gray) cells therefore are added such that the top nine squares give the value of 43% as shown in the table. Likewise, the yellow (light gray) section, which are the top four squares, represent those who are definitely leaning towards leaving the AF (a 4 or 5) and gave a 1 or 2 to Q24 as to their being at least somewhat affected by the discontinuation of the CSRB. This yellow (light gray) section then adds the top four cells and shows that almost 20% of the respondents likely were significantly affected by the discontinuation. The top-right most two cells are red (dark gray) and indicate almost certain affect of the discontinuation, comprising nearly 10% of the 202 that missed the CSRB.

The point of Table 33, in combination with the discussion above, is to highlight that the CSRB may have done more damage than good. With only 11% definitely positively swayed to a long-term tenure with the AF due to the CSRB, 64% likely not at all swayed to stay in the AF for a career, the success of the CSRB is likely very limited. This tied with the fact that the discontinuation of the CSRB likely had a negative impact on at least 20% (the yellow (light gray) section) and perhaps as high as 43% (the orange (gray) section) cast serious doubts on the CSRB as a useful mechanism for retention.

Of course, even those 43% of the 202 respondents that said their career decision was significantly affected by the discontinuation of the CSRB might not know what is really driving their feelings to leave the AF. Figure 29 shows that of the 202 that missed the CSRB, their career in-

tent profile mimics almost exactly the profile for the entire respondent pool that were of similar years of active service. Even for the whole group up to just less than 7 years of service[101], their profile, which includes 120 more respondents, is very similar to the profile of those that missed the CSRB. This suggests that in reality, the effect might not be as big, but there clearly still is an effect. It is hard to know the real effect because all of the lines in Figure 29 are still heavily weighted by the 202, and this is unavoidable. Therefore, the scientific usefulness of this figure is limited, but it does raise the question on whether those that think the might have been affected by the discontinuation of the CSRB indeed really were, or did they just project other frustrations they would have otherwise had to the very tangible CSRB.

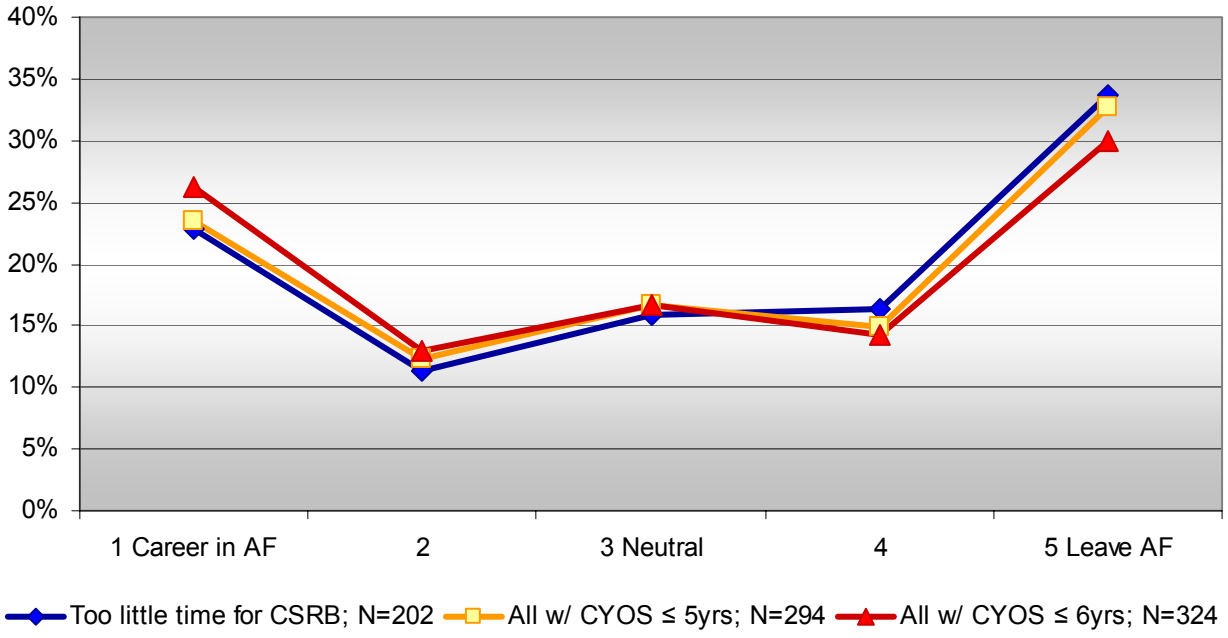

Figure 29 Comparison of the career intent profiles for different categories of respondents.

[101] The fidelity of the survey on time on active duty is 1 year. Therefore, those that said they were between 6-7 years of active service would be included in the line that shows CYOS ≤ 6yrs.

Appendix S Availability of Civilian Jobs (Supplement)

For all cross tabulations presented here, red (dark gray) cells are with percentages greater than 6%, orange (gray) is for ranges between 3.5% and 6%, light yellow (light gray) cells are for ranges between 1 and 3.5%, and white cells are less than 1%. Percentages are percent of the whole group N.

	N=275	Ave 10&30a: Job					
	RANK	1 Satisfied	2	3	4	5 Dissatisfied	Total
Availability of Civilian Jobs as a Reason to Separate	1	1.8%	4.4%	1.1%	1.1%	0.0%	8.4%
	2	3.6%	6.2%	2.2%	2.5%	2.9%	17.5%
	3	3.3%	5.1%	2.9%	6.2%	5.1%	22.5%
	4	1.1%	5.1%	2.2%	6.9%	6.2%	21.5%
	5	2.5%	8.7%	7.3%	7.3%	4.4%	30.2%
	Total	12.4%	29.5%	15.6%	24.0%	18.5%	100.0%
	Chi-Sq. =	33.995	d.f. =	16	Sig. =	0.005	

Table 34 Cross tabulation of ranking of the availability of civilian jobs (Q31d) vs. 1030Ave(a) job satisfaction.
For those who are undecided or have intent to leave the AF.

		Ave 10&30a: Job					
	N=569	1 Satisfied	2	3	4	5 Dissatisfied	Total
19 AF Job Vs. Civilian	1 Better	9.7%	4.9%	1.6%	1.8%	1.1%	19.0%
	2	6.9%	9.8%	3.2%	4.6%	2.3%	26.7%
	3 Same	5.6%	9.1%	4.7%	5.6%	4.2%	29.3%
	4	1.2%	5.6%	1.4%	5.3%	3.9%	17.4%
	5 Worse	0.5%	1.4%	0.5%	1.9%	3.2%	7.6%
	Total	23.9%	30.9%	11.4%	19.2%	14.6%	100.0%
	Chi-Sq. =	111.276	d.f. =	16	Sig. =	0.000	

Table 35 Cross tabulation of Q19 vs. 1030Ave(a) on job satisfaction.
Q19 asked how respondents compared their AF job to the civilian equivalent job

Appendix T Leadership Factors (Supplement)

One other interesting observation of leadership is that there is a strong correlation (97.3% confidence) of command leadership to the respondent's AFSC. In particular, program mangers are more satisfied with their Command Leadership than any other group, with 33.0% indicating very satisfied, and less than 10% indicating a 4 or 5 for somewhat to very dissatisfied. Slightly more engineers indicated dissatisfaction (a combined 16% for the 4 and 5 choices), and only 24% indicated being very satisfied. Scientists were the most apathetic, with 45% indicating a 3 for neutral. (See Table 36.) This may suggest more technical officers may have career dissatisfaction that they attribute to their command (likely AFMC or AFSPC), perhaps specifically on how the command is addressing either technical talent, or perhaps other factors (such as command support for technical considerations involved in their acquisitions program).

	% by Column	AFSC Class				
	N=585	61S Scientist	62E Engineer	63A Program Manager	Other	Total
11d Command Leadership	1 Satisfied	20.7%	24.1%	33.0%	33.3%	28.9%
	2	34.5%	29.3%	30.5%	25.6%	29.9%
	3 Neutral	44.8%	30.2%	26.7%	25.6%	28.9%
	4	0.0%	6.9%	6.3%	12.8%	6.7%
	5 Dissatisfied	0.0%	9.5%	3.5%	2.6%	5.6%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%
	N=	29	232	285	39	585
	Chi. Sq. = 23.101		d.f. = 12		Sig. = 0.027	

Table 36 Cross tabulation of satisfaction with command leadership vs. AFSC.

Chi-Sq. = 29.346	d.f. = 16		Sig. = 0.022		
Satisfaction with Command Leadership	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	40.1%	69.0%	13.6%	45.8%	60.5%
Neutral	13.8%	23.7%	11.4%	38.6%	29.1%
Dissatisfied	4.3%	7.3%	4.7%	15.7%	10.5%
N=	300	300	153	153	516

Table 37 Summary of career intent vs. satisfaction of command leadership[102]

[102] Those with undecided career intent are not explicitly shown in the table, but are included in the "All" column. Also, note that the statistics given correspond to the 5-point raw data, while this table presentation summarizes that data and is not the original cross tabulation.

Chi-Sq. = 44.443	d.f. = 16		Sig. = 0.000		
Satisfaction with HQ Leadership	Lean to AF Career		Lean to Leave AF		All
	% of Total	% of Group	% of Total	% of Group	Total
Satisfied	41.3%	70.8%	13.7%	46.4%	60.5%
Neutral	12.3%	21.1%	12.1%	41.1%	30.1%
Dissatisfied	4.7%	8.1%	3.7%	12.6%	9.4%
N=	298	298	151	151	511

Table 38 Summary of career intent vs. satisfaction of AF HQ leadership[103]

[103] See footnote for Table 37.

Appendix U Key Open-Ended Comments

Q32, which was optional, was open to all respondents and was simply a forum for open-ended comments on the survey. There were 224 respondents that left some sort of comment, and this is of the entire population that took the survey (N = 762)—the comments have not been limited to the non-suspect data set used for analysis above (N = 592).

Job satisfaction appeared in several forms in the comments, and most centered around being undervalued and underutilized. As an example, one respondent was denied being able to pursue educational opportunities, yet in reality spent their days trying to find work to do: "Today I tried to talk to my supervisor about getting (an advanced degree)…but they would not let me have time off to take class because I am too critical to the mission. (That) afternoon I went out to get phonebooks and put together a table." Many suggested they had been fooled by joining the Air Force as a technical officer while not realizing what acquisitions work really was or how they would be utilized, reinforcing the survey's findings that many did not understand acquisitions before joining. Other related frustrations were that the Air Force treats all officers, regardless of skills and experience, as interchangeable. Many comments expressed frustration with the lack of merit-based incentives: "…whether I work 40 hrs a week or 60 hours a week, I will get promoted the same and make the same pay. I love the Air Force and I love my job, but there is no incentive to better myself personally." 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. These comments all serve to highlight that job satisfaction is indeed a serious issue, even for many who have expressed intent to remain in the AF.

The largest numbers of comments were on the assignment system. Some highlighted the rigidity of the system, and the apparent lack of support from the Air Force Personnel Center (AFPC). Several referenced how the system failed by assigning them to jobs they were not educated to do (a chemical engineer being assigned to a mechanical engineering job, for example). Many other comments gave frustrations with being trapped in their AFSC's, and that because they were a 61, 62, or 63, these career fields, because they are traditionally undermanned, prohibited cross-flowing to other AFSC's. Others were frustrated with a lack of control in their life, in a career field that did not seem necessary to have such rigidity or demand to, say, relocate every three years. The idea of homesteading, or remaining at one base for either a career or at least longer than 3-4 years, was also a common comment in which respondents expressed a desire for such a policy for various reasons, but most often for family stability. Family was another issue some expressed—they wanted the option to raise their newborn children for a time, the return to the AF a year or two later. (The Air Force rarely lets anyone return once they have left.) This wide array of frustrations with the assignment system further exemplifies that the assignment system is indeed a serious problem and needs to be addressed. However, my survey did not fully address many of the nuances of the assignment system as expressed in these comments.

There were several comments expressing frustration with the lack of leadership opportunities. The Officer Performance Report evaluation system, its over-inflation and its subjectivity, were also key comments, as well as frustrations with the promotion system's one opportunity for promotion and its dependence on OPR's. Several expressed frustrations with the lack of operational or deployment opportunities, or that when acquisitions officer do get deployments, they are meaningless staff jobs. Such resentment only furthers feeling underutilized and undervalued.

Pay was only the source of one or two comments. However, there were a several comments highlighting the military practice of pay discrimination: "Why do personnel with dependents get paid more than those without? The limited pool of resources for benefits seems to be strongly biased towards those with dependents." Some also complained that while pay is not an issue, the fact that pilots get a "flight pay" bonus even despite airlines not hiring pilots, while the Air Force has cancelled the "engineering bonus" (CSRB), proves that the Air Force is biased towards pilots.

Some senior respondents recognized the problems with the Air Force and attributed their own satisfaction with lucky circumstances, while a few others touted the benefits of the Air Force.

This remainder of this section will attempt to highlight key themes from the comments by noting a few key or indicative comments for the various issues raised. The essence of the theme is highlighted in that sections of quotes' header, and are presented without commentary.

Feedback on the Survey

"I am happy that someone finally has the courage and sense to do a study like this and get it into the hands of senior leadership…I have known many officers who would gladly risk their own lives, but I have never met an officer yet who would risk his own career. Where are the Billy Mitchell's and the Jimmy Doolittle's in today's Air Force? I have never seen one…"

—Captain Ilyan Kei Lavanway of Los Angeles AFB [104]

"I think you are hitting the nails right on the heads."

Acquisitions Problems Need AF Leadership Recognition

"Best of luck…my only hope is that sooner or later someone in the AF will notice."

"Great survey…I hope this leads to some positive changes!"

"Thanks for studying this topic...hopefully you can make some recommendations that will help retain people like me who want to serve their country."

"What really irks me is that no one seems to care that we're frustrated"

Assignment System—The System Overall

"The unwillingness of the Air Force to try and work with a person to help them get into a job they would like, or get an assignment they would like is horrible. It is as if the Air Force could care less about you as an individual. They take the phrase 'needs of the Air Force come first' and pervert it into some sort of edict against any kind of cooperation with people. In reality, it is either the Air Force's way, or you have

[104] Capt. Lavanway specifically requested if I use their comment that I credit them explicitly.

to get out, no negotiations. As a result of this draconian approach to human resources, good people leave the Air Force and it suffers…"

"The main reason I would want to separate from the Air Force is the lack of control over my life...where I live, what job I do, what deployments/TDY's I go on, what medical procedures I have, etc. I would rather have fewer benefits and make less money if it meant I had a job that I had more control and could be with my family more."

Assignment System—Job Mismatches

"…the AF is more likely to have people making the AF a career if they would match people's educational background with a career field that is related. For example, I have a degree in Chemistry and I am a program manager (63) instead of a 61."

"Engineers ought to be assigned based upon specialty…In my branch I was given a new 2Lt with a degree in Chemical Engr to replace a departing Lt who was a Mechanical Engr working mechanical engr issues on a particular program."

Assignment System—AFSC Cross-Flowing

"I think it shouldn't be mandatory for us to remain in the career field if we are not happy with our jobs…I think that by making us be a 61-2 or 3 we feel we are stuck."

Assignment System—Number of Relocations (PCS's)

"I separated because 1) I didn't want to be forced to relocate every three years…"

"Moving every person every three years does not efficiently use our force. Some continuity would really help boost efficiency."

Assignment System—Homesteading

"I would stay in the AF if I were allowed to remain at one base for the remainder of my career (even knowing that it would impact my promotions). Family stability is very important to most AF members."

"…several bases provide the opportunity to do a lab, SPO, test, staff job at 3-4 years a piece and therefore, could still build depth and breadth at one location."

Family

"I will separate so I can stay home and raise my kids when I have them. The military would be wise to allow people to separate for a time for such reasons, and then make it easy for them to come back."

Leadership

"…We have people that were CGO's 20 years ago trying to relate to a body of CGO's w/ only 3-6 or so years."

Leadership Opportunities

"My biggest concern about the S&E career field is the lack of true leadership opportunities…I am…very disappointed of the leadership opportunities that I have even at a relatively senior rank."

– A Lieutenant Colonel

Officer Performance Reports

"For those officers that do not really deserve a strong OPR still came back too our office stating that there were many 'fatal flaws' because the bullets were not strong enough. To me a supervisor should not give someone more credit than what that particular officer performed at. Too many times I seen OPR's that painted a 'masterpiece' type of performance for an officer that was told immediately after a performance that they should have done a lot better."

"Everyone walks on water and does Herculean efforts to get the job done (all thanks to wordsmithing)."

"There should be a black and white scoring of performance and obvious rankings of peers within each career field, that is, not across career fields (apples to oranges). This way an officer knows from the very first OPR exactly where he/she stands in terms of performance and where they stand in relation to peers. Lower ratings make it clear that the officer needs to change or consider a new career. Today the first clear signal the AF system gives you is when you are passed over for Major. Too little, too late."

Promotion

"…(regarding) the promotion system, the biggest problem(s) I have is that it's a 'one-shot-only' system. If someone is unfortunate enough to have a bad job, bad boss or a supervisor who just doesn't understand the military promotion system (somewhat common in the highly civilianized Eng/Acq/R&D communities), one bad OPR or assignment can (and does) ruin a career."

"An acq officer doesn't have nearly the same opportunities, but will be judged by a promotion board and compared to those who did deploy!"

"…the promotion system is not good for 62/63s, as we have disproportionately worse odds of making O-6+ than pilot/ops officers."

"My biggest gripes for the air force is the OPR and Promotion system."

Pay Discrimination

"Why do personnel with dependents get paid more than those without? The limited pool of resources for benefits seems to be strongly biased towards those with dependents."

"Disparity of benefits between service members with dependants and those without needs to end. Off base housing allowances should be equalized for 'with' and 'without' dependant members. This is a major quality of life issue for non-married members."

Poor Expectations or Understanding of Acquisitions (Being Fooled)

"If I would have known that Engineer's in the AF don't get to do any real hands-on engineering, I would have never joined."

"Working in these career fields is unlike the operational Air Force. People who are attracted to the Air Force that is portrayed in ROTC will feel severely disappointed in this very different career field."

S&E Officers Not Required in Air Force

"The Air Force should consider eliminating the 61, 62 fields altogether since most work done by these fields is program management work anyway. This would prevent scientists and engineers from being duped into thinking they're going to have a major role in designing the newest jet or bomb."

"…only allow O-5 and above in the career field. This way the officer will have real world experience and know the value and importance of what they are doing. Acquisitions is a bad AFSC to a new officer into. If the Air Force is unwilling to only allow O-5 and above as Acq Officers, then they need to make it an all civilian career field and let officers be real leaders."

"The military should not have acquisition focused/career officers. There are perhaps 4-5 days in my 19 year career when my military affiliation and uniform made a difference. The other times a civilian could have done just as good a job."

"The AF may want to consider eliminating all military 62E's. They have to answer the question: Why does the AF need military engineers when they are not performing duties that are inherently operational?"

Job Satisfaction (Dissatisfaction)

"…although my love of the Air Force and serving my country is making the decision difficult, the lack of job satisfaction in acquisitions is allowing me to make the decision to most likely separate before retirement."

"All the talk of the CSRB and everything is nice, but being able to do something rewarding definitely outweighs an extra $10 grand."

Being Valued

"Too bad the AF paid all that money for my BS in Physics from MIT and never used it."

"Today I tried to talk to my supervisor about getting (an advanced degree)…but they would not let me have time off to take class because I am too critical to the mission. (That) afternoon I went out to get phonebooks and put together a table."

"…we are probably the most under-utilized for what we have to offer."

Officers Are Not Interchangeable—Flexibility Is Required

"Not everyone is in it for the long-haul; many are testing the USAF to see if it's right for them. Everyone has different reasons for joining, so the higher-ups should quit assuming they can do what they like with us."

Merit-Based Incentives (Promotion, Pay, Etc)

"I have seen a trend where the people who are more apt to take the initiative leave the service because there is nor real reward for demonstrating initiative. This is not only leaving the service with not enough Captains, but its increasing the number of Captains that are not the best performers."

"…whether I work 40 hrs a week or 60 hours a week, I will get promoted the same and make the same pay. I love the Air Force and I love my job, but there is no incentive to better myself personally."

"…my observations are the most talented officers are always the ones who leave first."

"…there are some who just don't 'get' their job and they should be moved to a new career field or escorted to the gate. Others excel and deserve to promote into leadership-type positions more quickly than the current time-in-grade requirements."

Operational Opportunities

"I know that not everyone is cut out for or can be assigned to an ops job out of school, but some type of operations exchange program that's short term could help alleviate this disconnect between the customer in the field and the acquisitions officer."

"I think it's a shame that new officer's are thrown into this career field without the opportunity of operational experience. I see many young LT's that have absolutely no knowledge of the operational force and consequently very discouraged with their military experience. The term 'remote' is typically used in reference to a duty location. I think of 'remote' now as a characterization of the Acq career field. It's so far removed from the operational force that it feels like a 'remote' AFSC."

Deployments

"One other problem I see with the 62E field is that we may only be deployed as (Executive Officers) or Protocol officers. Many of the scientists and engineers are stuck in 63 positions, but have other skills that would prove useful in a deployed situation."

"It's a shame when there are plenty of young ACQ officers volunteering to deploy, only to be denied."

"IF a 61, 62, or 63 deploys they have to take a job in a support area such as command staff etc."

It's a Pilot's Air Force

"I don't think it's about $; it's about value/respect. I don't need more money, but when pilots can't even get a job on the outside and they are still getting a bonus--all while HQ AF cancels the engineering bonus--it tells people that engineers are not as valuable as pilots."

"Industry is looking for engineers, not pilots right now, yet we have no incentive to stay. And it's not primarily about the money, it's knowing were not as important and valued as the pilots."

Some Were Just Lucky and Acknowledge It

"The Air Force structure is not what makes me enjoy my job—it's the unique circumstances which I hope lead to future opportunities!"

"I've been a 61, 62, and 63 and had a good breadth of experience (including an overseas tour). Although that is an 'a-typical' career path - it was EXTREMELY satisfactory and got me promoted (I think) to Lt Col when many very capable friends retired as Major's following a 'typical' career path."

It Isn't All Bad—The Benefits of Air Force

"While it has its frustrations, my industry counterparts work 80-90 hours a week to my 50 or so. We get so many holidays, family days, etc as well as 30 days (weekdays if you plan it right--6 weeks) of paid vacation. No one else on the planet has a deal this sweet."

"Having left the Air Force, I have since learned how good it was compared to equivalent civilian jobs, but I still would have left for the same reasons."

Appendix V Comparison of the Understanding of Acquisitions

Q17, asked only to non-61 and 62's, asked how well the respondent understood what acquisitions was before joining the acquisitions career field. Q17, shown by rank, is depicted in Figure 30. While the fact that more Lieutenants did not understand might lend you to believe this may be a driver for them separating, Q17 was compared to career intent and there was no correlation. The equivalent question, asked of 61's and 62's only, was, and specifically asked if the respondent understood how S&E's were utilized in the AF. Q14a versus rank is depicted in Figure 31 and shows a similar case for S&E's.

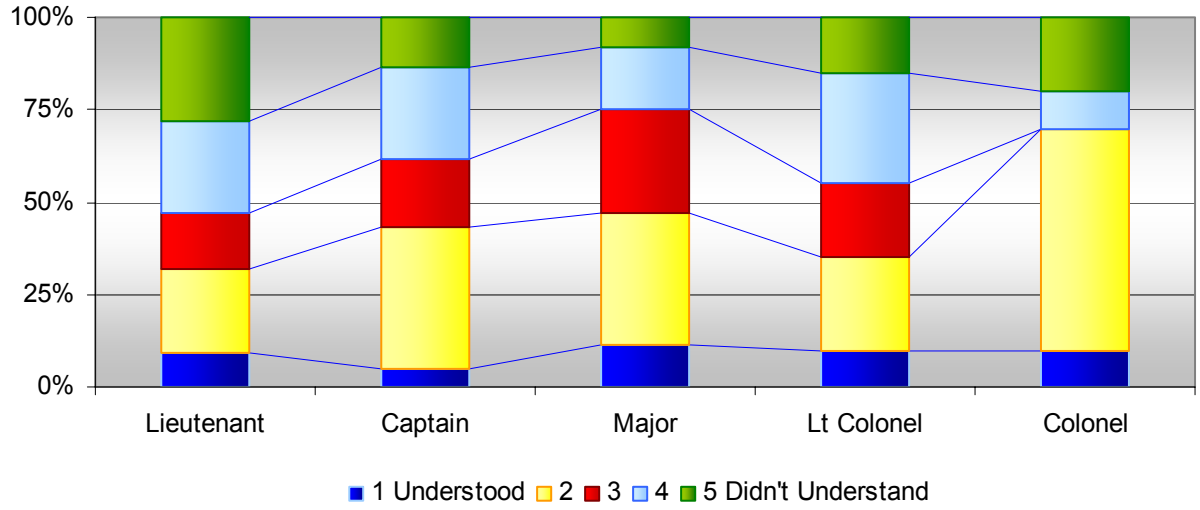

Figure 30 Q17 depicting understanding of acquisitions before joining the field vs. rank.
Q17 was only given to non-61's and non-62's. N=327.

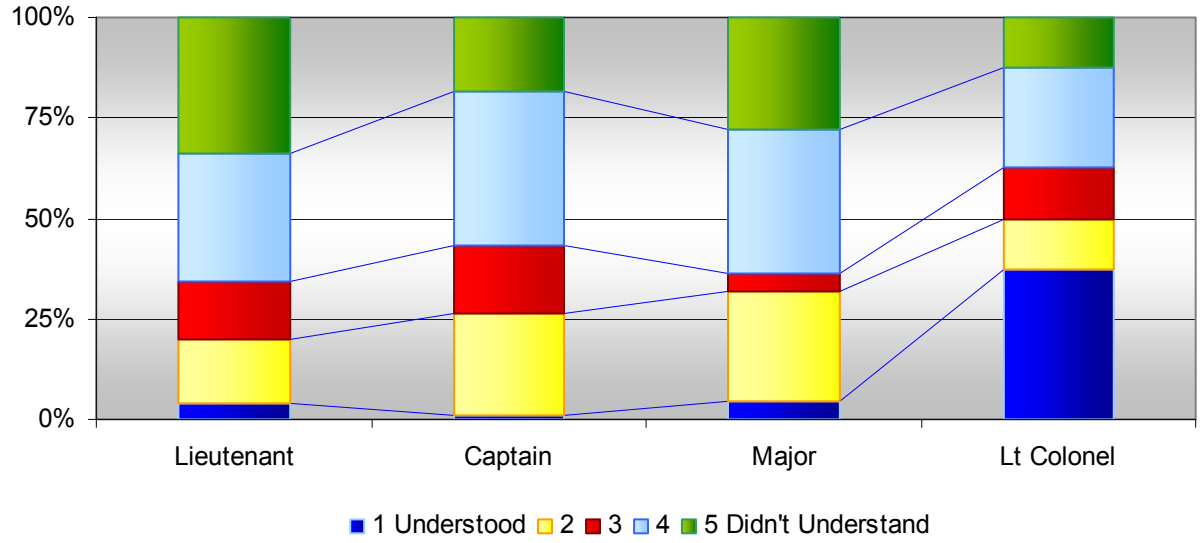

Figure 31 Q14a understanding of how S&E's are utilized vs. rank.
Q17 was only given to 61's and 62's. N=265.

The one key difference with Q14a versus Q17 is that in the case of the S&E's, Q14a does in fact correlate to their career intent, and is shown in Table 39. However, it is unclear what the correlation depicted in the cross tabulation is. Nevertheless, 61% of all S&E's did not understand their career field before joining it (giving a 4 or 5 for Q14a). At the very least this suggests the problem that the officer recruiting mechanisms aren't either themselves informed of how S&E's are utilized in the AF, or these mechanisms don't have enough S&E's or former S&E's involved in recruiting new S&E officers. For example, ROTC's, particularly at technology schools, should always have at least one S&E on staff.

		Career Intent Normalized to True 5pt Average					
	N=235	1 Career in AF	2	3	4	5 Leave AF	Total
14a Understood S&E's in AF	1 Understood	2.6%	0.0%	0.4%	0.4%	0.4%	3.8%
	2	9.8%	1.3%	1.7%	0.9%	6.0%	19.6%
	3	1.7%	2.6%	3.8%	3.4%	2.1%	13.6%
	4	14.5%	3.4%	4.7%	2.6%	9.4%	34.5%
	5 Not Understood	13.2%	3.0%	3.4%	2.6%	6.4%	28.5%
	Total	41.7%	10.2%	14.0%	9.8%	24.3%	100.0%
	Chi-Sq. =	30.763	d.f. =	16	Sig. =	0.014	

Table 39 Cross tabulation of Q14a depicting understanding of how S&E's are utilized vs. career intent.
Q14a was only given to 61's and 62's.

Appendix W 61S and 62E Specific Results

We now turn to further consideration of some specific questions asked only of 61's and 62's. The questions in this section were analyzed previously, but only of those respondents that had answered Q31, which meant they had neutral or intent to leave the AF. This section now looks at the whole population. However, the results herein do not suggest any new conclusions, but instead only reinforce previously stated observations, and hence this analysis has been relegated to an appendix.

The idea for engineering specialty pay, Q14b, was mentioned in the analysis section under pay, where it was compared to how people ranked pay in Q31 if they had intent to leave the AF. Here we take the analysis one step further to compare Q14b to career intent. Q14b, as a reminder, asks if the offering of engineering pay would make the respondent more likely to remain in the AF. While it is significant, as can be seen in Table 40, what is interesting is that primarily only those that intend to stay in for a career in the AF suggest they strongly agree such pay would keep them in. While this might have some sway for the fence sitters (career intent of 3), only a small percentage with a career intent leaning towards leaving indicate they would be influenced by such a pay. Note this specialty pay is like flight pay given to AF pilots, and is not like the CSRB, which was intended for retention purposes. Rather, this is a continuous pay intended for anyone doing technical work for the AF. Q16, which asked if those with advanced technical degrees were paid more, would the respondent be more likely to remain in the AF, gives almost identical results and is shown in Table 41.

The use of one's degree or technical skills, Q14c and Q14d, was considered in the analysis section on job satisfaction. Here we take the analysis one step further to compare Q14c and Q14d to career intent. As a reminder, both questions were asked in the negative form, Q14c stating verbatim "I am NOT satisfied with the opportunity to use my science/engineering degree(s)" and Q14d asking the same of technical skills. There was close correlation to career intent for all respondents, and the cross tabulations for Q14c and Q14d are shown in Table 42 and Table 43 respectively. Both give nearly identical results, and support the conclusions given previously that there is a strong relationship between intent to leave and the lack of opportunity to use one's degree or technical skills. What the previous analysis did not show however, that this one does reveal, is there are quite a few people that intend to make the AF a career and yet are quite dissatisfied with the opportunity to use their degrees. In other words, just because someone chooses to remain in the AF does not mean they are getting more opportunity to use their degree or skills. It simply means they do not prioritize this element of job satisfaction as high as other factors that influence their career intent.

		Career Intent Normalized to True 5pt Average					
	N=227	1 Career in AF	2	3	4	5 Leave AF	Total
14b Engineering Pay	1 Agree	19.8%	5.3%	7.0%	2.2%	4.0%	38.3%
	2	8.8%	3.1%	4.0%	4.4%	7.5%	27.8%
	3	6.6%	0.9%	2.2%	2.2%	5.7%	17.6%
	4	4.4%	0.9%	0.9%	0.9%	4.8%	11.9%
	5 Disagree	0.9%	0.4%	0.4%	0.4%	2.2%	4.4%
	Total	40.5%	10.6%	14.5%	10.1%	24.2%	100.0%
	Chi-Sq. =	27.645	d.f. =	16	Sig. =	0.035	

Table 40 Cross tabulation of Q14b engineering pay vs. career intent.
Q14b asked agreement on whether engineering pay would make the respondent more likely to remain in the AF, and was only given to 61's and 62's.

		Career Intent Normalized to True 5pt Average					
	N=227	1 Career in AF	2	3	4	5 Leave AF	Total
16 More Pay for Tech Degree	1 Agree	16.7%	4.0%	5.3%	1.3%	3.5%	30.8%
	2	12.3%	3.5%	6.2%	4.8%	9.7%	36.6%
	3	7.5%	1.8%	3.1%	1.8%	4.0%	18.1%
	4	2.6%	0.4%	0.0%	1.3%	4.4%	8.8%
	5 Disagree	2.2%	0.4%	0.0%	0.4%	2.6%	5.7%
	Total	41.4%	10.1%	14.5%	9.7%	24.2%	100.0%
	Chi-Sq. =	28.283	d.f. =	16	Sig. =	0.029	

Table 41 Cross tabulation of Q16 pay for technical degrees vs. career intent.
Q16 asked agreement on whether extra pay for advanced technical degrees would make the respondent more likely to remain in the AF, and was only given to 61's and 62's.

		Career Intent Normalized to True 5pt Average					
	N=234	1 Career in AF	2	3	4	5 Leave AF	Total
14c I'm NOT satisfied w/ opportunity to use degree	1 Agree	3.8%	2.6%	3.8%	4.3%	6.0%	20.5%
	2	10.3%	2.6%	5.1%	2.1%	11.1%	31.2%
	3	12.4%	1.7%	1.3%	2.1%	2.6%	20.1%
	4	12.4%	2.1%	2.6%	0.9%	3.8%	21.8%
	5 Disagree	2.6%	1.3%	1.3%	0.4%	0.9%	6.4%
	Total	41.5%	10.3%	14.1%	9.8%	24.4%	100.0%
	Chi-Sq. =	37.588	d.f. =	16	Sig. =	0.002	

Table 42 Cross tabulation of Q14c use of degree vs. career intent.
Q14c asked if the respondent was NOT satisfied with the opportunity to use their degree, and was only given to 61's and 62's.

		Career Intent Normalized to True 5pt Average					
	N=233	1 Career in AF	2	3	4	5 Leave AF	Total
14d I'm NOT satisfied w/ opportunity to use tech skills	1 Agree	4.3%	1.7%	4.3%	5.2%	4.7%	20.2%
	2	10.7%	3.0%	5.2%	0.9%	11.6%	31.3%
	3	11.2%	2.1%	0.9%	2.1%	3.0%	19.3%
	4	12.4%	2.6%	3.0%	1.3%	3.4%	22.7%
	5 Disagree	3.0%	0.9%	0.9%	0.4%	1.3%	6.4%
	Total	41.6%	10.3%	14.2%	9.9%	24.0%	100.0%
	Chi-Sq. =	41.040	d.f. =	16	Sig. =	0.001	

Table 43 Cross tabulation of Q14d use of technical skills vs. career intent.
Q14d asked if the respondent was NOT satisfied with the opportunity to use their technical skills, and was only given to 61's and 62's.

Appendix X Miscellaneous

This appendix seeks to include interesting supplemental observations that are not key to the main discussion of the thesis.

401K-Like Retirement System

Q27 asked all respondents if they supported a 401K-like retirement system. Such a system would allow personnel to transfer their accrued benefits in the military retirement system to a civilian 401K plan. The advantage of the system as it currently stands is that, when one can retire after 20years, people are incentivized to remain in the AF and then retire earlier than most civilians. The disadvantage of the system is that it also incentivizes people to leave early if they have any doubt on whether they would like to remain with the AF. If someone would like to remain in the AF for just 10-12 years, then start a different career path, they would, under the current system, have no retirement benefits saved up, unlike civilian counterparts who may be involved in a 401K program with their employee.[105] Thus, the system encourages people to get out early. There is no value in staying to 15 years under such a system. Q27 then asked respondents if they would be more likely to remain in the AF if the retirement system were transferable.

The responses, by rank, are shown in Figure 32. The spread varies, but the reasons are clear. For example, ignoring the Colonels, who are all retirement-eligible anyhow, Lt Colonels show a slightly stronger percentage on the disagree side because they are either retirement eligible as well, or very nearly so, and mostly they all intend to stay in the AF. Therefore, they likely mostly disagree that such a retirement system will keep them in longer because they are going to stay in for 20 years regardless. However, this can also mean that they disagree because if such an option were available today, they would leave immediately, taking advantage of the new retirement option to transfer to a civilian employee. This explanation is also true of the Majors. Captains are mostly neutral, though more over on the agree side, while Lieutenants are much more strongly on the agree side. The real point of this is that the question unfortunately gives ambiguous results since it is not clear what their intent is if they disagree with such a policy.

There are two final points on this retirement system proposal. First, just over 46% of all respondents (N=573) gave a 1 or 2 for their agreement in Q27 that such a policy would keep them in the AF longer. This is of course because Lieutenants heavily weight the total population characteristics. (Figure 32 shows percentages by rank, thus normalizing the data.) However, 46% of a population this large is very significant and so such a policy should be further considered. The second point is that 74% of all respondents (N = 578) gave a 1 or 2 for their agreement that such a retirement policy should exist in Q28, while another 16% were neither for or against such a policy.

[105] Additionally, the military retirement system (which may never yield any value depending on one's career intent) is considered a pension plan. This negates certain tax advantages afforded by the IRS, such as tax deductions on contributions to a Traditional IRA.

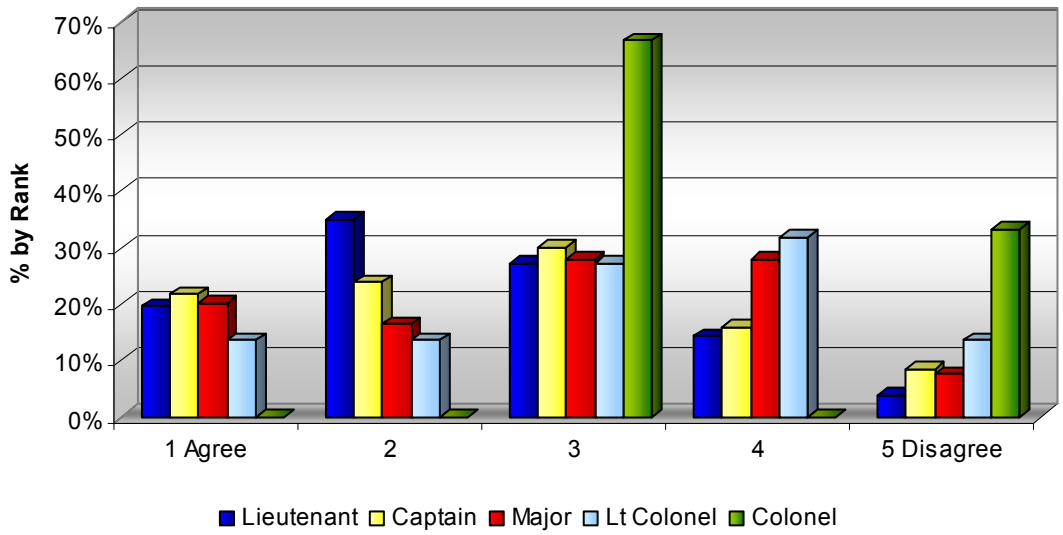

Figure 32 Q27 on a 401K-like retirement plan.
Q27 asked whether the respondent would be more likely to remain in the AF if their retirement plan was transferable. N=573.

Education Issues

It was originally planned to do an analysis of education issues and career intent. For example, those that may have advanced degrees may expect more pay, or may feel differently about their job satisfaction. Part of the reason for the need for such an analysis is that educational opportunities, particularly for advanced degrees that are difficult to accomplish part-time (technical advanced degrees for example), are limited. Additionally, the AF does not recognize advanced degrees for job assignments, for consideration of a new AFSC (unless actively pursued by the officer, and then perhaps not even), for pay, and for some promotion review boards. For part-time advanced degrees, the AF offers what they refer to as "100% tuition assistance" in exchange for an Active Duty Service Commitment (ADSC). However, this tuition assistance exists as a frustration to many since it really is not 100%, but 100% up to a cap[106], which is often only sufficient to cover the fees at smaller schools.

While there is a need for further analysis of these issues, as well as the problems with the programs currently available to give educational opportunities, I have chosen to exclude it from this thesis. The primary reason to exclude it was that educational opportunities did not appear to be a major source of dissatisfaction.[107] Additionally, while this subject is interesting and should be studied, it is not part of any of my hypotheses. Finally, the pertinent cross tabulations that are significant appear only to have minor patterns, and are likely only indicative of rank.[108]

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[106] According to http://www.military.com/Resources/ResourcesContent/0,13964,30843--1,00.html this cap is $250 per semester hour or $166 per credit hour, up to $4500 per fiscal year.

[107] See for example Figure 21.

[108] Those who are more likely to remain in the AF are higher ranking and are more likely to have an advanced degree, etc. Conversely, those that separate (mostly Lieutenants) do not tend to have an advanced degree. This does not indicate anything education related, but is just hiding the basic demographics.

Appendix Y Promotions and the OPR Evaluation System[109]

The problems with the promotion system, and the closely related issues of recognition and performance evaluation (which ultimately feed into the promotion system), are all centered on two basic principles: fairness and recognition of merit. For junior officers at a crossroads on a career decision, these issues appear to be minor. However, for many mid-level or senior (non-junior) officers, they were quite important. Yet, while these become sources of frustration with higher ranks, it is these higher ranks that are also closer to retirement, and so are unlikely to leave the Air Force regardless of their dissatisfaction. It is then either a twist of fate or a well-designed plan that the problems with the promotion system do not become apparent until an officer is at about CYOS = 10 years—a point where they are already half way to retirement, and thereby reluctant to leave the Air Force. Since it is then true that this does not drive people to leave the Air Force, likely because the issues are apparent once it is too late economically to do so, I have relegated this discussion to this appendix.

The evaluation system, embodied in form of a document known as the Officer Performance Report, is a curious thing. As the primary tool for evaluation, it is assumed this is the means of providing feedback to an officer. However, with over-exaggeration mandatory on all OPR's (the first supervisor not to over-exaggerate will ruin their subordinate's career), the evaluation system is broken. The concern for most is that one supervisor, who is either a poor boss or simply a poor poet (and it is poetry that is required), can derail an entire career with one "bad" OPR. Unfortunately, the first time an officer might realize that one of their past OPR's is not quite up to par, it may be after a long commitment of 10 years to the Air Force, when they are now being considered for Major. The feedback the OPR is meant to provide may not come until years later.

It is for this reason that there is a lack of trust in the evaluation system, and therefore, the promotion system.[110] Some open-ended comments stated they feel it is risky to remain in the Air Force under the current system. The real problem is not trying to convince the Air Force that the OPR system is over-inflated and does not work right—this is widely accepted. The problem is either finding a better solution, or having the courage to change the system.

The promotion system, while it may consider OPR's for higher ranking promotions, is largely time-based. Second Lieutenants are promoted to First Lieutenant after 2 year, and then after another 2 years to Captain. It is often said that you must try not to be promoted for these first ranks, for otherwise they are assured. Once an officer becomes eligible for the Major promotion, at about CYOS = 9 to 10 years, performance becomes a slight factor. OPR's are used in the Major promotion board, but gleaning the real performance out of a document known to be over-exaggerated is lucky at best. In the end, the OPR, and therefore the Major's performance, has only a small influence. For Majors on schedule to be promoted ("In the Primary Zone"), the promotion rate was 92%[111] in a recent review board. No opportunity exists that would allow one

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[109] Source for all promotion rate data: http://www.afpc.randolph.af.mil/offprom/default.htm and direct from AFPC

[110] According to Lin (Lin 54), many perceive it difficult to be promoted to Colonel or above because these ranks are filled mostly by pilots and other officers with operations experience.

[111] The in the primary zone promotion rate to Major from the 1 Nov 03 promotion board was about 92% for non-rated mission support officers (which includes 61, 62, 63's).

to be promoted to Major sooner than this zone and just one chance exists ("Above the Primary Zone") to be promoted after, in case not selected previously when "In the Zone".

Accelerated promotions are not available until the rank of Lt Colonel (CYOS ≈ 15 years), where a "Below the Primary Zone" ("Below the Zone" for short) promotion is available, propelling over-achievers as much as two years ahead of their contemporaries. Even so, this accelerated promotion is unlikely.[112] In just a year or two, those mediocre candidates are still likely[113] to catch up, thereby erasing the short-term performance advantage.

[112] The below the primary zone promotion rate to Lt Colonel from the 1 Mar 04 promotion board was about 3.2% for non-rated mission support officers (which includes 61, 62, 63's).

[113] The in the primary zone promotion rate to Lt Colonel from the 1 Mar 04 promotion board was about 79% for non-rated mission support officers (which includes 61, 62, 63's).

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 Keesey, 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