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THESIS

BEYOND MILITARY SERVICE: AN ANALYSIS OF UNITED STATES NAVAL ACADEMY GRADUATES' CIVILIAN CAREER EXPERIENCES

by

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September 2005

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This thesis explores the civilian career experiences of United States Naval Academy (USNA) graduates who have left military service. The data comes from a 2004 survey of USNA graduates from the classes of 1986 through 1996. This thesis analyzes the effect of human capital accumulated via the USNA education, via follow-on military experiences, and via career preparation on civilian salary and satisfaction. Both the first salary after leaving the military service and the current salary are analyzed. Both salary models find that varsity athletes, honors graduates, submariners, and those who achieved higher military ranks earn more than their classmates. Military tenure increases civilian salary, but the effect diminishes after a certain point. Selective Reservists consistently earn lower civilian salaries. The write-in responses reveal that leadership, academics, time management and other personal skills provide the most influential USNA experiences on current civilian jobs. While 84 percent describe themselves as satisfied, a satisfaction model is estimated to examine for trade-offs between salary and satisfaction. Satisfaction is further examined by evaluating the effect of civilian accomplishments. The estimates find that Marines, Naval Aviators, and Trident Scholars are more likely to be dissatisfied than satisfied. Military tenure yields a tradeoff between wages and satisfaction.

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BEYOND MILITARY SERVICE: AN ANALYSIS OF UNITED STATES NAVAL ACADEMY GRADUATES' CIVILIAN CAREER EXPERIENCES

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This thesis explores the civilian career experiences of United States Naval Academy (USNA) graduates who have left military service. The data comes from a 2004 survey of USNA graduates from the classes of 1986 through 1996. This thesis analyzes the effect of human capital accumulated via the USNA education, via follow-on military experiences, and via career preparation on civilian salary and satisfaction. Both the first salary after leaving the military service and the current salary are analyzed. Both salary models find that varsity athletes, honors graduates, submariners, and those who achieved higher military ranks earn more than their classmates. Military tenure increases civilian salary, but the effect diminishes after a certain point. Selective Reservists consistently earn lower civilian salaries. The write-in responses reveal that leadership, academics, time management and other personal skills provide the most influential USNA experiences on current civilian jobs. While 84 percent describe themselves as satisfied, a satisfaction model is estimated to examine for trade-offs between salary and satisfaction. Satisfaction is further examined by evaluating the effect of civilian accomplishments. The estimates find that Marines, Naval Aviators, and Trident Scholars are more likely to be dissatisfied than satisfied. Military tenure yields a tradeoff between wages and satisfaction.

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TABLE OF CONTENTS

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LIST OF FIGURES

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LIST OF TABLES

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I. INTRODUCTION

A. BACKGROUND

The United States All Volunteer Force entices some of the nation's brightest students into military service through its military academies and generous scholarships to other colleges and universities. Many factors create a sorting that separates some of these academy graduates and other scholarship recipients away from the military before they retire. Studying the leavers provides information about the civilian career options available to military officers and about the general value of military skills, training, and experiences.

The United States (U.S.) government invests considerable capital into commissioning its military officers. The highest per capita investment goes to those commissioned from the military academies. Incoming students invest considerable time and effort into their combined academic studies and military training. By understanding career experiences beyond military service for the members who volunteer and compete for military academy slots, the government can adjust its offerings so that it continually entices the brightest students in the nation and keep them in the military.

In 2004, a "Career Experiences" survey was administered to graduates of the United States Naval Academy (USNA). Their responses provide insight into the civilian experiences of Academy graduates who leave the military before retirement. Both salary and satisfaction are components of the return on investment of human capital invested in post-secondary education. Studying the academic experiences at the USNA along with the reported responses provides additional insights into how the initial investment into Naval Academy midshipmen rewards them beyond military service. The survey targeted graduates from the mid-1980s to the mid-1990s.

The exploration of the salaries of post-military (and pre-retirement) officers would help further describe the economic opportunity costs of retaining military officers. Some military officers may invest in their future civilian career during their military services, so this study explores the possible returns to that investment. Others may feel

that their educational background and military career experiences would serve them well, so this study evaluates whether they realize returns on military service and postgraduate education.

The gender wage gap exists in both the U.S. and other countries; this survey revisits the issue. Even though the percentage of active duty women continues to increase, men still make up the vast majority of the military—86 percent. Women veterans, who have worked in the predominantly male military environment and who received the same salary as their peers, may realize a greater salary once they enter the civilian market than non-veteran women. The oft-debated gender pay gap can be tested again for this group of survey respondents.

Since salary alone cannot capture the return on individual human capital investment, this study also explores the satisfaction reported by respondents. For example, people may trade their salaries for more satisfying careers and lifestyles, thus this study explores whether the effects of explanatory variables indicate a trade-off between reported salary and current satisfaction. Satisfaction depends on situations other than one's career; therefore, other experiences that affect overall satisfaction for the survey respondents need to be explored. This study investigates the respondents' self-reported accomplishments for indications of factors that affect satisfaction.

Studying the career experiences of USNA graduates after they leave the service can also create a better understanding of the human capital contributions of the Academy. The USNA experience contributes to all graduates, not just those who choose a full military career. Analyzing graduates who leave the service provides insight into the human capital gained at the academy, beyond military retention and promotion, via civilian salary. Potential applicants, usually teenagers, may be uncertain of the exact career path they will pursue 10 to 20 years in the future. The civilian career experiences of Academy graduates can give the applicant more information about the feasibility of a military academy as a school choice.

Policy makers may be uncertain of the impact of military education and training in the civilian labor market and what civilian opportunities exists for military officers

who may be making stay-leave decisions. Retention policies that incorporate the effect of the civilian labor market should create less economic rent for the military by addressing the competing forces that aid pre-retirement officer separation. The USNA experiences and human capital accumulation and the subsequent rewards should be well captured by the quantitative and qualitative analysis of the selected group of USNA graduates, salary, satisfaction, and the civilian accomplishments.

B. PURPOSE

This research thesis intends to examine the civilian career experiences of naval officers who have recently left the military before retiring. Since the research comes from survey data, the results only apply to the year groups that participated in the survey. Yet, the survey trends imply patterns that may exist for all naval officers. Understanding of the economic opportunity costs, i.e. civilian career experiences, of officers allow military leadership to better design retention policies. Secondly, a thorough depiction of all USNA graduates—career military and non-retired veterans—enables potential applicants to create a complete picture of the benefits the school provides. This thesis analyzes graduates' experiences via qualitative and quantitative assessments of the survey responses.

C. RESEARCH QUESTIONS

This study addresses exploratory questions about the career experiences of military officers after leaving military service. Narrowing the sample group further, this study addresses the experiences of USNA graduates from 1985 through 1996. The primary research questions compose the basis of this thesis, while the secondary questions explore some special interest items.

Primary Questions:

1. What salaries do the USNA graduates earn when they leave the military? What indicators of the USNA experience predict higher salaries?
2. How satisfied are the USNA graduates who left the military and what indicators correlate with satisfaction? Do the USNA graduates trade off salary for satisfaction with their current civilian situation?
3. What human capital aspects of the USNA were most influential and impacting on their current civilian careers?

4. What do the reports of the most significant civilian accomplishments explain about current satisfaction?

Secondary Questions:

5. Do USNA women graduates experience the same salaries as their male counterparts?

6. Does career preparation conducted during active duty correlate to higher initial salaries? If so, which preparation activities have the greatest impact?

D. SCOPE AND METHODOLOGY

This thesis assesses the graduate's self reported civilian salaries, satisfaction, and write-in responses on career accomplishments and influential USNA experiences. The group has been narrowed to recent USNA graduates who separated from the military prior to retirement. Data taken from an original survey designed by a USNA midshipman and professor are used to analyze all of the research questions.

Two quantitative models explore the primary and secondary research questions. One model evaluates the first salary received when the survey takers first left active duty and the second model analyzes the survey takers' salaries at the time of the survey (2004). Another quantitative model with similar explanatory variables as the current salary model tests the tradeoff between earnings and satisfaction posed in research question two.

Questions three and four utilize the responses to the open-ended questions to ascertain more information for questions one and two. The answers corresponding to question three are analyzed as a whole, while the answers to uncover satisfaction evaluate those who answered at the extreme ends of satisfaction—either very dissatisfied or very satisfied. The qualitative analysis should uncover outlooks that could not have been obtained from the quantitative models.

E. ORGANIZATION OF STUDY

Chapter II provides a background of the USNA to frame the development of human capital of the future naval officers who attend the school. This study expects the USNA academic performance indicators to predict future civilian earnings beyond military service. Due to the unique nature of the Academy, some of the usual predictors

may not carry the same weight as they would from a civilian institution so this background describes the school's environment and its mission.

Chapter III provides the literature review that gathers recent studies that provide the theoretical underpinnings of the subject. Labor economics serves as the fundamental basis, thus an overview of the applicable economic theories is conducted. Human capital strategy provides a theoretical background for creating the quantitative models and analyzing additional information via open ended questions. A brief description of relevant literature regarding incentives and the gender gap in U.S. wages fleshes out additional themes in this thesis study.

Chapter IV describes the data gathered via survey to study USNA graduates career experiences after military service. All of the variables for the quantitative models and the specific means of testing the models are discussed. Hypotheses about the variables are present in this chapter.

Chapter V details the results from estimates of the quantitative models. Data analysis comes from three models. The first model explores the first salary received after leaving the military. The second model investigates the current salary of the survey respondents. The final model seeks to uncover possible trade-offs between salary and satisfaction of the USNA graduates who replied to the survey.

Chapter VI embellishes the quantitative analysis by providing the self-reported perspectives of the survey takers. The cited USNA influences upon current jobs provide additional insight to the salary models. The exploration of the extremes of satisfaction levels provide additional explanation to why satisfaction levels vary.

Chapter VII lays out the conclusions drawn from the findings of the quantitative and qualitative analyses of this survey. Theoretical principles help explain the discoveries. Recommendations for those desiring further study on this topic can be found in this chapter.

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II. OVERVIEW OF THE UNITED STATES NAVAL ACADEMY

A. HISTORY OF THE SCHOOL

The fiasco surrounding the attempted mutiny aboard the *American Brig Somers* demonstrated that sending teenagers aboard a school ship may not be the best approach to develop naval officers. The Captain of the experimental school ship, Commander Alexander Slidell Mackenzie, tried Midshipman Phillip Spencer and two accomplices at sea and found all three guilty of attempted mutiny. The men hung from the yardarm of the *Somers* on December 01, 1842 on the open ocean (Sweetman, 1979, 3). Secretary of the Navy, George Bancroft, established the Naval School on October 10, 1845, just three years after the debacle on the high seas. Without congressional funding, the school was built on an old Army fort, the former Fort Severn, near Annapolis, Maryland (Sweetman, 1979, 17).

The original five year program prescribed lessons in the classroom during the first and last year, while the other instruction would be at sea during the middle three years. In 1850, the Naval School officially became the United States Naval Academy (USNA). That same year the program of study changed to the format similar to the present—four academic years in the classrooms and summers at sea. The school opened with fifty midshipman and seven professors. The student body has grown to a brigade of over 4,000 midshipmen and 555 professors. Each year approximately 1,200 candidates enter as Plebes (USNA Website, 2005).

B. ADMISSIONS

Admission to military academies differs greatly from civilian colleges and universities. The process requires stricter standards than other higher learning institutions since all graduates are commissioned as military officers upon graduation. US News (2005) ranks the Naval Academy's student selectivity as "more selective." All candidates need to be physical and medically fit, academically prepared and nominated.

1. Prerequisites

Beyond the necessity of achieving good high school grades, participating in extracurricular activities, and scoring well on career interest tests, applicants to the Naval Academy have constraints on many lifestyle conditions, too. In order to be eligible for the USNA, applicants need to meet the following basic requirements:

- U.S. Citizen;
- Good moral character;
- At least 17 and not past their 23rd birthday on July 1, during the year of academy entrance;
- Unmarried;
- Not pregnant; and
- Without any dependent.

If the aforementioned conditions have been met, the applicants then take either of the accepted standardized test, Scholastic Assessment Test (SAT) or American College Test (ACT). Candidates also need to pass the Department of Defense Medical Examination Review Board (DODMERB) physical. However, the nomination process truly separates military academy candidates from regular college applicants. Five sources and two conditions can provide a nomination to the United States Naval Academy:

- The President of the U.S. all bullets are at .5 inch from left text margin
- The Vice President of the U.S.
- U.S. Senators, Representatives, and Delegates
- Secretary of the Navy
- Reserve Officer Training Corps Units

- Children of deceased or disabled veterans, and prisoners of war, or servicemen missing in action
- Children of Medal of Honor Awardees

General applicants can apply for a nomination from a U.S. Representative, Delegate, Senator, or the Vice President. Competition for a nomination can be quite intense, especially competing nationally for a nomination from the Vice President.[1] An unlimited number of Presidential nominations can be granted to children of current

[1] The Vice President "may have a maximum number of five nominees in attendance at each authorized academy at any one time. Normally, he has one or two vacancies each year." (Online Instruction on the Vice-President Nomination Process found at http://www.whitehouse.gov/vicepresident/vicepresidential_nominationpacket.pdf on August 2005).

career[2] active duty members, career reserve members, or retired service-members. Candidates that have parents who have been killed in action (KIA), missing in action (MIA), certified as disabled by the Department of Veterans Affairs, or prisoners of war (POW) qualify to compete for any of the 65 nomination slots. Children of Medal of Honor Awardees automatically receive appointments (admission).

The Reserve Officer Training Corps Units can nominate 20 students from their military training programs and schools annually. One hundred and seventy enlisted naval personnel[3] can be nominated from the Secretary of the Navy every year. This category appears to funnel many people from the enlisted ranks through the Naval Academy; however, most of the appointees from this category get channeled through the Naval Academy Preparatory School (NAPS). While some NAPS students come from the enlisted ranks, most students at NAPS come straight from high school and never served in either the fleet or the fleet marine force. Of the midshipmen who enter the USNA directly from the enlisted ranks, historically most hail from the Navy's Nuclear Power Program.

2. Selection Process

Each year the United States Naval Academy can expect approximately 10,000 applicants. "Approximately 2,000 candidates are found fully qualified (scholastic, medical, CFA,[4] and have obtained a nomination) each year. Of that number, about 1,500 will receive appointments and approximately 1,200 become midshipmen." (USNA Admission Webpage, 2005) The process of whittling down the applicants carries more significance than for civilian education institutions since the Admissions Board effectively grants full scholarships with follow-on employment for five years after graduation.

The finalists need to meet the requirements for the schooling and for military service. Thus, the leadership potential and "whole person" weigh on the acceptance

[2] Career signifies at least eight years of active duty service for both current active duty and reserve members.

[3] This group includes regular and reserve personnel from both the Navy and the Marine Corps.

[4] Candidate Fitness Assessment.

process more than other higher education institutions. The current chair of the Admission's Board, Colonel Kenneth Inman, pointedly quips about the school's graduates, "They're not all going to be Hemingways when they leave here. What they are going to be is combat leaders." (Ewers, 2005, page 63)

Quantitative and qualitative measures combine to form the USNA "whole person multiple." A formulaic procedure, which includes each candidate's past academic and other performance indicators, creates an algorithm called the Candidate Multiple (CM).[5] When the Admissions Board perceives that the CM might not capture all of the candidate's potential due to something in the package not eliciting a score indicative of the candidate's exceptional potential in areas like determination, character, and experience, they can award additional points, officially called Recommendations of the Admissions Board (RAB). (Pecenco, 2005, pages 14 – 15) Thus the RAB becomes a method for allowing exceptions in a standardized quantitative application process.

After sitting on the Admissions Board at the USNA, English Professor Bruce Fleming described the process of the whole person multiple:

> Before students reach our board, the computer generates a number (called the "whole-person multiple") based on complex algorithms that take into account their grades, their rank in class, their test scores and their athletic and extra-curricular activities. Being a child of an alumnus adds a bit to this score, but only as much as, say, an especially good essay: 500 points, where a total of 68,000 is considered a good solid admitting score and 75,000 is stellar. (Fleming, 2003)

Professor Fleming criticizes the process and declares that some groups could still get admitted with "as much as 15 percent lower" scores than their counterparts (Fleming, 2003). Clearly, he does not endorse the entire process used by the USNA admissions boards. He seems to favor the quantitative formula and infers that strict adherence to gpa and test scores would be the best admission procedure. He criticizes more than just the low scores of some groups (e.g. minorities and athletes); he also censures the less than

[5] The breakout for the CM where the percentages indicate the weight of that aspect upon the overall multiple: Rank in HS class (21 percent); highest standardized SAT or ACT score for Math (31 percent); highest standardized SAT or ACT score for Verbal (15 percent); Combined (Math and English) Recommendation of School Official (8 percent); Strong Interest Inventory Technical Interest Score (12 percent); and Strong Interest Inventory Career Interest Score(3 percent). (Pecenco, 2005, 14-15).

competitive nomination sources. Unfortunately, he never explains the full story behind these groups to his audience. Some enter via the fleet, while others have remarkable parents that fall into the aforementioned nomination categories—like the Medal of Honor Awardees. The USNA is more than an institution of higher learning; it educates and trains its midshipmen to be military officers.

3. Demographics

Even with criticism of the selection process, a quick statistical overview of the incoming freshman (Plebes) demonstrates the very high selectivity of the USNA and the quality of its students. The profiles of midshipmen currently enrolled at the USNA, are displayed in Table 1. The data demonstrate the high caliber of incoming students. The standardized testing scores were quite high—approximately three quarters of the group scored at or above 600 for both the Math and Verbal Sections of the SAT and at or above 26 for the ACT. Usually about 80 percent of the incoming candidates graduated in the top fifth of their high school class. Almost 90 percent competed as varsity athletes in high school. Almost every year saw candidates from every state, as well as Washington D.C. and other U.S. territories.[6] Each year, some international students joined the USNA as well.[7] Ethnic minorities composed about a quarter of the current classes, while the women range around 16 – 20 percent.

[6] The Class of 2006 only had representatives from 49 states. The territories include Guam, Puerto Rico, Northern Mariana Islands, and the Virgin Islands.

[7] Seven to thirty-four new students of each class are international students, yet 60 could be appointed each year. (USNA Catalog Chapter 2, 2005) They hailed from Belize, Cameroon, Croatia, Egypt, Guyana, Honduras, Ireland, Lithuania, Malaysia, Maldives, Mauritius, Pakistan, Peru, Philippines, Romania, Singapore, Suriname, Taiwan, Thailand, Turkey, and Tunisia.

Table 1. Demographic Breakdown of the Currently Enrolled Classes' Incoming Plebe Profiles

Class Profiles	2006	2007	2008	2009
Applicants (includes nominees)	12,333	14,101	14,425	11,259
Admitted	1,214	1,228	1,227	1,220
SAT (ACT) scores				
>700 (31-36) Verbal	18%	24%	28%	28%
>700 (31-36) Math	31%	35%	37%	34%
600-699 (26-30) Verbal	56%	51%	50%	45%
600-699 (26-30) Math	55%	51%	51%	53%
<600 (<26) Verbal	26%	25%	22%	27%
<600 (<26) Math	14%	14%	12%	13%
High School Performance				
Top Fifth of Graduating Class	78%	80%	81%	82%
Varsity Athletics	86%	89%	89%	91%
Minorities	25%	25%	22%	22%
Women	16%`	17%	20%	19%

C. ACADEMICS

In 1933, the Academy started awarding a Bachelors of Science degree. All students (midshipmen) study a prescribed core program to ensure a broad based education. Midshipmen graduate with a Bachelors of Science due to the strong science and engineering background. Currently, the USNA offers 19 majors. The United States Naval Academy presently employs a greater percentage of civilian professors than its counterparts at the other military academies—59 percent compared to 21 and 25 percent at the United States Military Academy and the United States Air Force Academy, respectively (GAO-03-1001, 2003, page 7).

1. Courses of Study

The USNA has four major divisions: Engineering; Mathematics and Sciences; Humanities and Social Sciences; and Professional Development. Majors stem from the first three divisions. Every year, two to five professional development courses are required for a total of thirteen courses. Even when students can validate courses, a minimum of 15 hours per semester and four years of residence must be completed to graduate from the Naval Academy.

The nineteen available majors are as follows: Aerospace Engineering; Chemistry; Computer Science; Electrical Engineering; English; Economics; General Engineering;

General Science; History; Information Technology; Mathematics; Mechanical Engineering; Naval Architecture; Ocean Engineering; Oceanography; Physics; Political Science; Quantitative Economics; and System Engineering. These majors can easily be grouped into three categories: engineering; mathematics and science; and humanities and social sciences. Only six majors have been selected for honors programs.[8] Exceptional students prepare and orally defend a thesis before a panel in order to graduate with honors. Students wishing to engage in independent study and research can apply for the Trident Scholar Program. (USNA Online Catalog Academic, 2005, page 5-6) Both programs are exceptionally competitive.

The USNA strives to maintain small classes—less than 18, but definitely no larger than 22 students. The school does not allow graduate students to teach courses like some large, state schools. Rather than employing an overwhelming majority of military officers, the Naval Academy stands apart from its peers with a nearly equal mix of civilian and military faculty members.

> The academy's civilian faculty members give continuity to the educational program and form a core of professional scholarship and teaching experience. The Naval Academy's philosophy of education stresses attention to individual students by highly qualified faculty members who are strongly committed to teaching. (USNA Academic Webpage, 2005)

2. Other Requirements

A description of the other duties and requirements required of a midshipman provide more complete understanding the academic environment. In addition to academic course work, students continually study professional knowledge both inside and outside of their professional development courses. Every semester midshipmen participate in drill, physical education, military duties and watches, extra-curricular activities (ECAs), and athletics (USNA Catalog, 2005, Chapter 4). Their dormitory rooms have to remain inspection-ready and they increasing take on leadership billets as they progress through the school. Midshipmen can not allow their grade point average (GPA) to slip below a C average (2.0 on a 4.0 scale). Even with the demanding schedule,

[8] The selected majors are history, English, political science, mathematics, oceanography and economics. (USNA Online Catalog Academic, 2005, page 6)

some midshipmen excel enough to start graduate education before ever leaving the academy through a program called Volunteer Graduate Education Program (VGEP) (USNA Catalog, 2005, 61).

Upon arrival to the USNA, the plebes receive training to transition from civilian life to brigade life. Activities start their indoctrination seven weeks before the returning students arrive for the academic year. During this "Plebe Summer" and the entire "Plebe Year," training proves to be quite rigorous and long.

> The frantic, exhausting pace of Plebe Summer leads you somewhere. It gets you ready for your responsibilities when the brigade returns from summer training and the academic year begins. The summer also builds the foundation for the tangible and intangible qualities that make an outstanding naval officer. You learn self-discipline. You learn to organize your time and decide which things are most important. You reach top physical condition. You develop your ability to think clearly under stress and to react quickly when the unexpected comes your way. Any officer who has stood the watch on the bridge of a ship in a storm or landed a jet on the deck of an aircraft carrier at night can tell you the importance of these qualities. (USNA Catalog "Life at the Naval Academy," 2005, 4)

Each summer, midshipmen have a 30 day summer break and two professional "cruises," in which they directly experience military service in naval or marine commands. During these summer cruises, the midshipmen relate their studies to practical applications. These experiences tend to influence the selection of military community for the five years of obligated military service following graduation.

D. MISSION

The United States Naval Academy proposes to transform its midshipmen into well educated, exceptional junior officers for a professional naval career. Its mission is stated as:

> To develop midshipmen morally, mentally and physically and to imbue them with the highest ideals of duty, honor and loyalty in order to provide graduates who are dedicated to a career of naval service and have potential for future development in mind and character to assume the highest responsibilities of command, citizenship and government. (USNA Catalog Introduction, 2005, 4)

After graduation students receive a commission in either the United States Navy or Marine Corps. Selection begins during their senior year. Community assignments depend on the needs of the naval services, the student's overall record, and personal and physical qualifications. (USNA Catalog, 2005, Chapter 6) In 1994, service selection policy changed to require women midshipmen to select warfare specialties under the same guidance as men.[9] All physically qualified graduates are required to become an unrestricted line officer in one of the warfare communities, which include:

- Surface Warfare
- Submarine Service or Nuclear Propulsion Systems (still excluded to women)
- Naval Aviator or Naval Flight Officer
- Marine Corps Officer

E. CHAPTER SUMMARY

The USNA successfully admits young candidates every year that become the leaders of naval service after four years of intensive education and training. From admittance to commissioning the process remains competitive. Unlike other colleges and universities that merely help place graduates into jobs, the United States Naval Academy hires, trains, and educates young adults to become officers.

[9] "January 29, 1994: The first genderless service assignment is held. All billets are open equally to men and women with the exception of special warfare and submarine duty." (USNA website: A Brief History of the United States Naval Academy, 2005, 990's page) (http://www.usna.edu/VirtualTour/150years/1990.htm retrieved on September 05, 2005)

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III. LITERATURE REVIEW

A. INTRODUCTION

With an understanding of the unique education provided by the service academies, specifically the USNA to newly commissioned officers, one can apply some theories from behavioral and social science to the military officers who start their careers at the Naval Academy. The following literature review explores some ideas from economics and psychology. The theories presented herein establish the logic and assumptions underlying the methodology in this thesis. The salary models depend upon the relevant economic theories to explain earnings and the psychological theories lay the groundwork for the evaluation of satisfaction to collect a comprehensive depiction of the civilian career experiences of USNA graduates that separate from the military.

B. LABOR ECONOMICS

"The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is any where directed, or applied, seem to have been the effects of the division of labour" (Smith, 1776, 4). As mankind divided up work and started to specialize, trade and markets formed and grew. In the labor market, people sell their time and skills in order to earn money, or whatever compensation has been agreed upon with the employer.

"Human labor, through all its forms, from the sharpening of a stake to the construction of a city or an epic, is one immense illustration of the perfect compensation of the universe" (Emerson, 1914). Everything has a price, be it a good or a service. Laborers need to be compensated for their time and skills, with the 'price' of their skills and time being the wage rate.

Employers can pay their employees in many different manners as detailed by Rabin (1995). First, the firm determines the overall pay *level*, or the amount of pay. After setting the level, the employer has the choice of different *forms*, or types, of pay. Finally, the employer decides what kind of pay *mix* to divide up the pay *forms*. (Rabin, 1995) For example, a business may devote 90 percent of its compensation to cash and

the other ten percent to health benefits. The ninety-ten split would be the pay *mix*, while the cash would be one *form* and the health benefits another.

1. Monetary Compensation

In the U.S., wage denotes an hourly rate for laborers that qualify for overtime, while salary applies to workers whose pay does not get derived from time worked.[10] However, in economics the terms wages and salaries are often interchanged and that use prevails throughout this thesis.

Most employers set a base wage; many establish this based upon education or prior experience. Employers sometimes choose to increase the pay base by a cost of living adjustment. Merit based increments can also be added to base pay. Other direct monetary compensations come in the form of bonuses. Bonuses are short term incentive pays, while other long term incentives could be offered in many forms. Merit pays usually reward past behavior, while incentives attempt to influence future behavior. Merit pays usually become permanent salary enhancers, while incentives are one-time payments (Milkovich and Newman, 1999).

2. Other Compensations

Beside salaries and other pays, employers offer a variety of benefits to the total compensation packages for their employees. Some of these benefits take the form of paid time away from work, service and allowances, and protection programs. Protection programs cover all or some of the costs of things like health care and retirement. Protection programs have recently become some of the most hotly-debated and sought after benefits. Recently, health care costs have been rising rapidly in the U.S. "Employer health care costs rose 15% from 2002 to 2003 and are expected to double again in five years" (Lair, 2004). With large companies like United Airlines defaulting $6.6 billion on its retirement fund and the Pension Benefit Guaranty Corporation providing federal subsidies, the level of benefits are eroding in the U.S. (Fox, 2005). Workers turn to personal acquisition of benefits rather than expecting them from their employer.

[10] The separation has been determined by guidelines set forth in the Fair Labor Standards Act (1938). Most professionals usually draw salaries; thus, most college educated people received salaries.

3. Compensation Mix

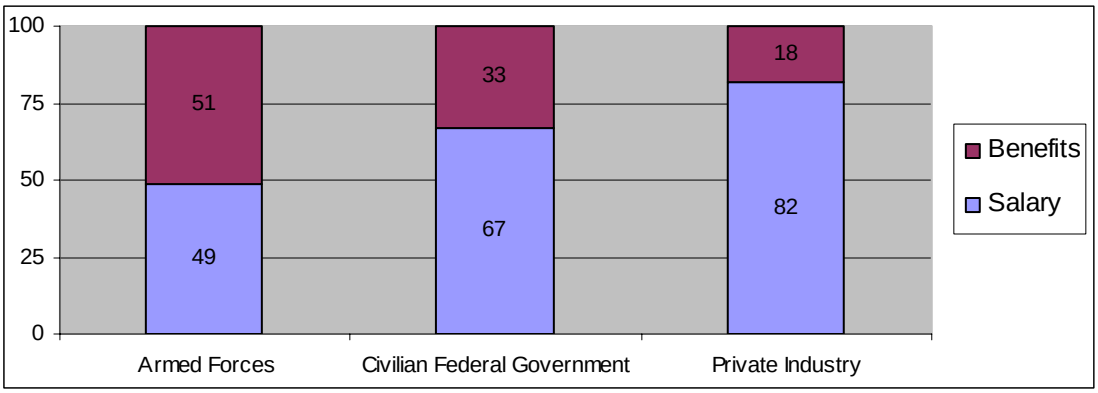
Three relatively distinct employment sectors can be identified in the U.S.: the Armed Forces; civilian service (government); and private industry. The compensation mix varies between these three groups. Congress regulates the distribution of funds to the military and the structure of the compensation systems thus all the branches of military services have similar pay structures and compensation mixes.

The U.S. Armed Forces pays out only 49 percent of its compensation in cash, with 20 percent going to non-cash benefits and the final 31 percent to deferred benefits (GAO Report-05-798, 2005, 22). Military cash compensation includes: basic pay; housing allowance; subsistence allowance; special and incentive pays; other allowances; and federal tax advantage. Non-cash benefits include: health care; installation-based benefits; subsistence in kind; family housing and barracks; education; and other benefits. Deferred benefits include: retired pay accrual; Veterans Administration (VA) compensation and pension; VA health care; VA other; and health care accrual. Only 17 percent of military personnel receive the non-disability retirement since the program requires 20 years of service to be fully vested (GAO Report-05-798, 2005, 25). Despite the high percentage of benefits, service-members earn more cash compensation than 70 percent civilians with the same education (GAO Report-05-798, 2005).[11]

The civilian federal government also pays out a significant portion of compensation as benefits, yet they provide more cash compensation than the military services. Salary and wages comprise 67 percent of civil service compensation; therefore, only 33 percent is left to benefits (GAO Report-05-798, 2005, 24). On average, private employers disburse more via salary and wages—a full 82 percent (GAO Report-05-798, 2005, 24). Private industry distributes an average benefit rate of 18 percent to their employees (GAO Report-05-798, 2005, 24). Figure 1 provides a pictorial comparison of the varying compensation mixes.

[11] From a 2002 study that is quoted in GAO-05-798 Overview.

Figure 1. Compensation Mix for U.S. Labor Markets in 2003 (After GAO Report-05-798)



The compensation system of the Naval Selective Reserves parallels, but does not mirror, the active duty side. Reservists receive medical care only during periods of active duty. Reservists earn points toward retirement; these points come from the combination of the active duty time and drill periods. Reservists cannot qualify for either the retirement pay or health benefits until they reach 60 years of age (Career Transition, 2005).

Almost half of the respondents to the USNA graduates survey chose to serve in the Selective Reserves. While this delays the receipt of the deferred military benefits, it preserves the military benefits if the member earns all the points. Those that completely leave the military sector for the civilian labor market demonstrate a preference for cash compensation over benefits. Many companies in the U.S. offer fewer benefits than in the past. Since this study examines civilian career experiences of non-retiree veterans, it focuses on cash compensation to avoid the vast complexity of varying benefit packages for such a small portion of the overall compensation.

C. INCENTIVES

Employers mainly aspire to produce their products and services at the lowest cost and they use a blend of motivational and economic to reduce the most effort from their employees. Many behavioral scientists offer different explanations for human behavior. Abraham Maslow identified five sets of basic needs: physiological; safety; love; esteem; and self-actualization (1943, 396). The physiological needs provide the starting point for

motivational drive (Maslow, 1943, 370). In a fiat society, earnings from a job create a means to accomplish the first two sets in the hierarchy of needs.

Victor Vroom argues that all employees receive incentives (via pay, recognition, prestige, and etc.) and contribute to the organization (Vroom and Deci, 1971, 91). Their satisfaction depends upon the matching of expectations and outcomes (Vroom and Deci, 1971). Fredrick Herzberg proposes that job dissatisfaction stems from hygiene or maintenance factors because the employee wants to avoid unpleasantness. Conversely, he states that motivators lead to job satisfaction due to the employee needs for growth or self-actualization. (Vroom and Deci, 1971, 90)[12] USNA graduates who have left the military may have experienced dissatisfiers in the military which influenced them to separate and they may perceive the potential for greater growth in a civilian career.

1. Wages

The labor market can be viewed like any other market. Employers offer a wage and employees decide whether or not they want to work for that wage. Complications arise as the market forces pressure the wages to rise and fall. Unlike making the decision upon whether or not to buy an apple at a higher price, pressure to reduce wages has more implications than the purchase decision at the supermarket. Employees do not desire decreasing wages, yet mobility between jobs can be sluggish. Thus wages become "sticky," that is to say they have difficulties declining during lean years. Thus, employees tend to lose their jobs as the company tries to keep cost low when wages have climbed too high in a company that needs to cut costs.

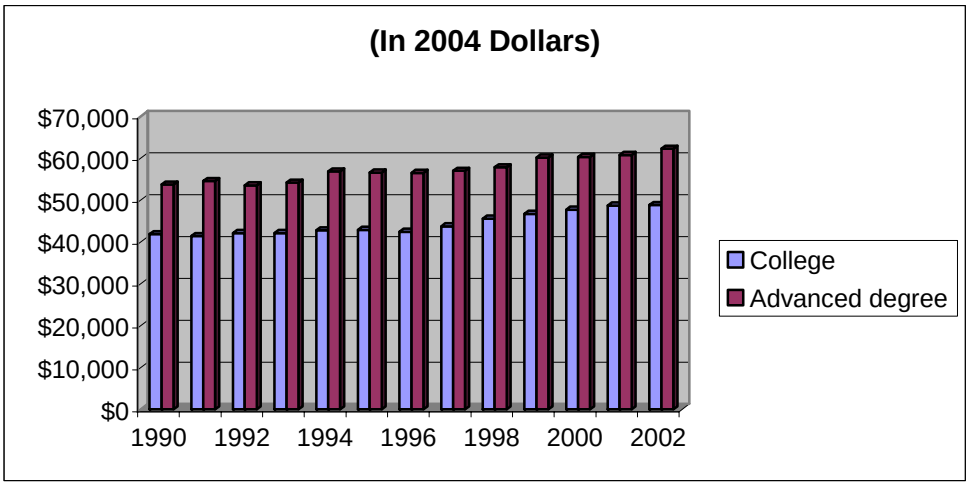
a. U.S. Averages

Recent the average yearly wages of U.S. college educated workers ranged between $40,000 and $60,000 with an average premium of approximately $13,000 for an advanced degree (Mishel, Bernstein, and Allegretto, 2005). Figure 2 depicts the yearly real salaries converted from hourly wages of U.S workers with college degrees and

[12] Herzberg, Frederick. (1966) *Work and the Nature of Man*. World Publishing Company. (Unabridged excerpt of Chapter 6)

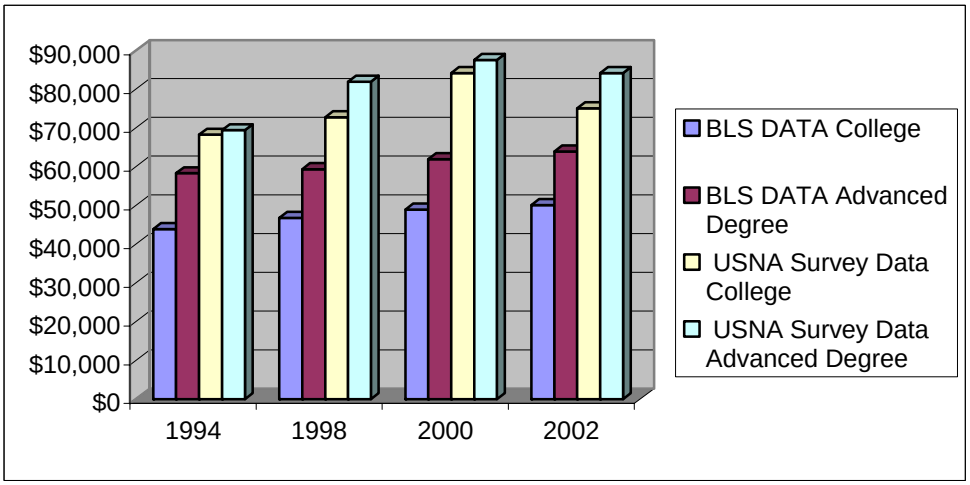
advanced degrees.[13] Figure 3 incorporates the average earnings of the U.S. workers and compares the average reported earnings of the USNA graduate for the midpoint years that they reported leaving the service. This figure demonstrates the above average earnings of the surveyed graduates.

Figure 2. Annual Average Earnings of U.S. Worker (in 2004 Dollars)



Source: Mishel, Bernstein, and Allegretto

Figure 3. Comparison of Average Earnings between U.S. Workers and Surveyed USNA Graduates



Sources: Mishel, Bernstein, and Allegretto and "Career Experiences after USNA" (2005, data)

[13] The conversions were made using 40 hour workweek and 52 weeks of the year (2080 hours). This method may understate wages since salaried workers may work longer hours than the U.S. standard workweek and receive higher compensation overall than a simple conversion of hourly wages to salaries.

b. Veterans in the Civilian Labor Market

Loughran finds "that military retirees earn substantially lower wages than their civilian peers upon entering the civilian labor market" (2002, iii). Hirsch and Mehay found a 0.10 log wage premium for reserve officers (non-retirees) who previously had served on active duty (2003, 689). Other sources find a "veteran premium." Military retirees may accept civilian jobs with lower salaries since their retirement pay and benefits can maintain a higher quality of living even with lower civilian earnings. However, it is still unknown whether officers who separate from the military prior to retirement earn higher wages than those who did not serve on active duty.

c. Executive Pay

Since the 1980s executive pay has been increasing rapidly. Mishel, Bernstein, and Allegretto document some astounding figures from the Bureau of Labor Statistic's Current Population Survey data:

> From 1989 to 2000, the wage of median chief executive officer grew 79.0%, and average compensation grew 342%. In 1965 CEOs made 24 times more than a typical worker; by 1989 the ratio had risen to 71-to-1, and by 2003 it was 185-to-1. (Facts and Figures 2004/2005)

While an upsurge of executive incentives may be stylish, some doubt the efficiency and effectiveness of these incentive pays—including executives. Surveys reveal that many executives deem that "incentives have only a slight ability to motivate executive performance" (Beer and Katz, 2003, 10). The true purpose of these grandiose compensation packages appears to be attracting and retaining lower and middle-level executives (Beer and Katz, 2003, 10). Higher "prizes" attract both better workers who must compete to become executives.

Labor economics presents the promotional tournament theory as a reason why higher positions pay very well. With the prize of high pay, more quality workers compete to achieve the promotion, which creates a more productive workforce (Ehrenberg and Bognanno, 1990). The military's pay spreads are flatter than private industry (Asch and Warner, 2001, 555-556). Flag officers do not get high executive pay; therefore, officers may separate from the military to join the tournaments of private industry.

> Pay spreads need not be as large to evoke the same effort in large contests as small ones. This finding might be one reason why interrank pay spreads in the military and other large public organizations are not as large as those found in the private sector at comparable levels. (Asch and Warner, 2001, 556)

This preference for private industry as opposed to the military's high retirement pay may indicate a sorting out of military members who prefer cash compensation. However, many may try to get the best of both worlds, by separating from active duty and joining the Selective Reserves. This form of splitting a career would preserve a military retirement while earning the higher cash compensation offered by private industries.

d. Expected Indicators of Success

Beyond market forces, some attributes of laborers help them yield higher wages. Knowledge, skills, and abilities that are created by education and experience generate differences between wage-rates of otherwise similar workers. In performance pay systems, highly productive workers realize greater wages.

While wages provide the means to gratify basic needs, some argue that a concentration of extrinsic means, like salary, deprives workers of better motivation and satisfaction. Ryan and Deci (2000) conclude from their study on rewards and human nature:

> [W]hen people are more oriented toward external rewards and controls than internal needs and cues, there are a variety of negative consequences, including poorer mental health, and . . . when people place strong importance on the extrinsic life goals of wealth, fame, and image relative to the intrinsic goals of growth, relationships, and community, they exhibit poorer well-being. (13)

2. Satisfaction

While the Rolling Stones may not be able to get satisfaction,[14] most educated and employed Americans find varying levels of satisfaction with their professional and personal lives. Satisfaction differs across different aspects of life and fluctuates throughout the events of people's lives; however, some sources of satisfaction and its opposite, dissatisfaction, are well studied. Social theories may diverge on what makes a

[14] As sung in their 1965 hit, "(I Can't Get No) Satisfaction."

person satisfied, yet one of the best gauges of satisfaction comes from the self-reporting most often associated with surveys.

a. Satisfaction with Job

Beyond salary, people derive satisfaction from the job itself. "[P]eople value and therefore derive utility from characteristics of the output of their work in addition to how much they are paid for that work" (Murdock, 2002, 650). Murdock demonstated that firms could generate more profits overall if they combined projects that "generate large intrinsic returns to the agent" with other high profit projects that have less intrinsic appeal to the firm's employees (Murdock, 2002, 667).

Since people seek intrinsic rewards from their jobs, the lack of those rewards and the presence of dissatisfiers drive people to leave their jobs regardless of the salary. Using a survey of fully employed adults Fields, Dingman, Roman, and Bloom (2005: 11) demonstrated that lower overall job satisfaction had a significant impact on the decision to change jobs and/or organizations. However, salary can also be a contributor to job satisfaction. Pay did impact the job turnover of people transferring to the same job in a different organization or to a different job in a different organization in the Field et al (2005: 11*)* study. Laborers tend to leave a job they are dissatisfied with, while they do not seem to leave a satisfactory job for the promise of a better job. (Bretz, Boudreau, and Judge, 1994, 10) Greener pastures do not lure as much as poor meadows repel.

b. Other Sources of Satisfaction

Beyond the job itself, other factors contribute to satisfaction levels. The desire for a better "work-family balance" leads a significant portion of employees to search for another job (Bretz, Boudreau, Timothy, 1994, 275). No occupation other than military service demands such great commitment, time, and energy as the military (Segal and Segal, 2004, 32). Some service members may leave the military to find greater balance for their work and family obligations.

Entrepreneurs may be more satisfied, since they have become their own boss and control their work environment. Those with very high self-efficacy have greater job satisfaction while self-employed, yet this group of highly self-efficient people also

tends to be self-employed (Bradley and Roberts, 2004). Hours worked and work demands were found to be positively associated with job satisfaction; in fact, only self-employed people who worked more than 78 hours per week could expect higher job satisfaction than their otherwise employed peers (Bradley and Roberts, 2004). Satisfaction does not appear to increase as the period of self-employment lengthens. (Bradley and Roberts, 2004) The satisfaction model in this thesis tests whether the self-employed graduates report higher satisfaction than the other workers.

A recent study of British professionals demonstrates that some people attain higher education more for personal satisfaction than for pecuniary reasons:

> The majority of our respondents stated that personal satisfaction and a theoretical perspective on their professional practice were important. Our study suggests that they are therefore investing in their future capacity, less to gain a higher monetary return than to achieve personal satisfaction and the development of their professional capacity (Pratt, Hillier, and Mace, 1999, 107).

Both social and economic reasons drive life investments. While the basic needs of life require economic means to be fulfilled, people may expect more from their education and careers. To gather a better picture of human activity, both economic and psychological aspects need to be evaluated. Thus, this study evaluates both to capture a more complete picture of the payoff of investments—both financial and emotionally.

D. HUMAN CAPITAL STRATEGY

In the labor market, employers and employees exchange labor services and wages. These laborers invest in themselves and economists call this an investment in human capital. Investing in formal schooling on the acquisition of various certificates or qualification would be examples of this self-investment. Any investment that increases the individual's productivity in a particular organization would be classified as specific human capital. An investment that contributes to one's productivity in any occupation would be classified as general human capital. One would expect formal that higher education leads to higher salaries and satisfaction levels.

"Education is, beyond a doubt, one of the most important components of human capital investment. Higher education is strongly correlated with higher income." (Huang, 1999, 361) Recently, scholars have been divided on whether higher education acts as an

attainment of human capital or a signal. The completed degree sorts new hires for employers and describes an effect commonly known as the "sheepskin effect." Edward Gullason (1999: 148) found that returns rates increase with each year if the schooling relates to their occupation; however, people whose schooling does not match their occupation do not realize the same returns. He concludes that the diplomas are used as a signal for these employees. No matter why salaries increase, more education raises salary levels. This study also seeks to determine the difference between the varying degrees, because certain graduate fields may return more yield a higher return than others.

Many people join the Armed Forces to obtain education benefits and job training. Debate arises over how much of the human capital gained in the military transfers to civilian jobs. In the All Volunteer Era, one would expect that people would enter military specialties that reflect the civilian occupations they would eventually like to enter. Thus, the rate of occupational transfer should be higher than during conscription. It appears that the percentage of military training that transfers to civilian occupations has risen. About 45 to 50 percent of military training currently appears to transfer to civilian job skills. Civilian training programs have higher skill transfer rates, yet neither civilian nor military training exceed a rate of skills transfer of 50 percent (Mangum and Ball, 1998, 243).

Specific human capital accumulates as a person learns on the job. Thus, human capital theorists expect to see wages increases with tenure at a given job. One study found that ten years of current job seniority raises the wage by over 25 percent for a typical male worker in the U.S. (Topel, 1991, 145). Some argue that the increase in salary comes from the employee-firm match and quality of the job; however, controlling for the fixed effects of firms did not change the correlation between wages and tenure (Hersch and Reagan, 1990).

E. WAGE GAPS

1. The Role of Gender in Pay Differences

It has been demonstrated that women earn less money than their male peers in the same jobs and that predominantly female occupations pay less than male-dominated

occupations. One study found that a ten percent increase in the proportion of women in a job correlates to one percent lower total compensation and an 8.4 percent drop in the probability of receiving incentive bonuses (Elvira and Graham, 2002, 611). Looking at the manufacturing industry across countries reveals that the gender gap is observed in most countries. Table 2 tabulates international wage gender differentials by country or region as compiled by Tung-Chung Huang.

Table 2. International Gender Wage Gap in Manufacturing

Country or Region	Wage (% of Male Counterparts)
United Kingdom	68%
France	79%
Nordic Countries	78-89%
Japan	44%
South Korea	56%
Singapore	58%
Taiwan	61%
Hong Kong	66%

Source: Tung-Chung Huang (1999, page 361).

Women experience three percent lower starting wages when placed in similar jobs of the same organization as their male peers, even when educated at the same college (Graham, Hotchkiss, and Gerhart, 2000, 9). These pay differences tend to become magnified over time. Some research has shown that women benefit at a higher rate from education above junior college than their male counterparts and that returns from seniority increase more for women (Huang, 1999). This study indicates that women would close the gap if they attained higher levels of education and more seniority.

After World War II in the U.S., women earned about 60 percent of the wage of men. The gender gap started to close from the middle of the 1970s until the mid-1990s. It peaked around 76.5 percent in the 1990s (Kim, 2002, 80). Currently, the gender gap appears to be widening once again. Cohen and Huffman measured the starting wage gap for U.S. civil service workers at 30 percent less for women (2003, 444). Light and Ureta measured the gender gap for college-educated U.S. workers to be 72 percent (1990, 296). Their research showed that people who remained continuously employed had higher wages and that continuous employment dropped the gap from 72 to 77 percent for

college-educated white women (Light and Ureta, 1990, 296). Women could possibly lower the gender gap by remaining in the labor market longer and acquiring more human capital. Using a meta-analysis approach, Stanley and Jarrell found the gender gap to be closing. Their estimates placed the gender gap at 68.2 percent for 1970, 88.5 percent for 1990, and 96.7 percent of male wages for 1998 (Stanley and Jarrell, 1998, 966). They expected the gender gap to close in 2001. This thesis study evaluates the gender gap an average for the 1990s and for the year 2004.

2. The Role of Family in Pay Differences

Family status affects the salaries of people in nations like the United States and the Britain. Married men typically receive a wage premium and women with children typically receive wage penalties (Waldfogel, 1998, 533). However, women that have access to maternity leave are more likely to return to their jobs and receive a wage premium (Waldfogel, 1998, 534). A study by Avellar and Smock (2003) found that working mothers received a "motherhood penalty" of about four percent.[15] Waldfogel (1998: 532) estimated that U.S. mothers earn 70 percent of men's pay and non-mothers earn 90 percent. He also estimates the "family gap" to be 20 percentage points (Waldfogel, 1998, 532). Beyond gender gap, this thesis explores the family status effect on salary of USNA graduates.

F. PREVIOUS STUDY OF USNA GRADUATES

Midshipman Fraser studied the retention and post-service employment and earnings of USNA graduates with the same survey used within this thesis. He found that graduates who focused on pay left the military quickly and earned more (Fraser, 2005, 37). These graduates may prefer the high paying tournament "prizes" of the civilian sector. He also discovered that some performance variables from the USNA, like Honors Graduate, high GPA, and athletic participation, translated into higher salaries in the civilian sector (Fraser, 2005, 38). Fraser (2005: 37) also notes that Economics majors leave the service early and earn higher wages and speculates that the increased civilian work experience helps create higher earnings. This study uses controls for general

[15] The first cohort of women, who were 14-24 in 1968, earned 3.8 percent less, while the second cohort, who were aged 14-21 in 1979, earned 3.3 percent less. However, the decrease across the cohorts is not statistically significant. (Avellar and Smock, 2003, 597

human capital gained in the civilian labor market so a distinction can be made between performance indicators, like majors, and human capital, like work experience. He found that naval aviators were more likely to "stay longer and earn less" (Fraser, 2005, 37). This finding could be indicative of the financial turmoil of U.S. airlines in recent years and its affect on officer retention. Fraser (2005:37) found that overall salary was directly proportional to satisfaction; however, this thesis examines whether any particular groups trade-off satisfaction for their salary.

G. SUMMARY

Labor economics and psychology explain the benefits of compensation for labor services. Labor economics provide theoretical reasons why pay differs between individuals. Using these theories, one can make basic predictions about salary. Beyond salary, people derive satisfaction from work and other life accomplishments. Evaluating one without the other would create an incomplete assessment.

IV. DATA AND METHODOLOGY

A. SURVEY: "CAREER EXPERIENCES AFTER USNA"

The data in this study come from an original survey written by John C. Fraser for his honors thesis from the USNA with the help of Professor William R. Bowman, from the USNA Department of Economics, who advised Midshipmen Fraser. John Fraser intended to "determine the relative importance of achievements and experiences of Naval Academy graduates during years spent at Annapolis and in the fleet on post-service employment and earnings of those employed in the civilian workforce" (Fraser, 2005, 1).

The survey targeted fairly recent Academy graduates (classes 1985 through 1996) who should have reached their minimum service obligation, yet not be able to retire. The survey contained 43 questions and was split into three main sections. The first section contained 20 questions on experiences while at the USNA (Academy Experience), some basic demographics (Personal Information), and Military Experience. The middle section inquired about the factors that influenced the officer to stay in the military; only those still on active duty could respond in the second section. Since this section gathers information on people who stayed in the military, it is not used in this study. The final section captured information from graduates who had already separated from the service. This section identified various reasons for leaving the military and respondents rated them based on a Lickert scale. This section gathered information on post-military experiences and current civilian employment. The entire survey contained 41 multiple choice questions and two open-end questions. The survey questionnaire is reproduced in Appendix A.

The USNA Office of Institutional Research, Planning, and Assessment (IR) administered the survey during the fall of 2004. The office converted the survey to a web-based format and compiled the responses into a database. Individual Class Presidents from each of the targeted graduation classes emailed the web-based survey to his/her classmates with email addresses listed in the Alumni Association's database. A technical error led to the survey being sent to all addresses in the Alumni Association's

database. While the error created complications for this study, the overwhelming response to the survey demonstrates the fertile information available on the topic for further research.

B. DATA AND SAMPLE

The survey responses provided the data about the USNA. There were 2,741 respondents to the survey, but some deletions were necessary. First, the response to the class question indicated that people outside the targeted class years replied to the survey. Due to the overrepresentation of responses in the graduating class of 1985, it was clear that many of the responses from that year group were actually from prior classes.[16] Some of the write-in answers support the assumption of incorrect responses to the "Class of 1985" category.[17] People had restricted choices on class year, so those who were outside the intended sample chose an incorrect year group. Thus, all the responses corresponding to the "Class of 1985" were eliminated from the data set.

After removing the "Class of 1985" responses, 1,875 responses remained. Twenty one people did not mark a gender and two more did not list a graduation year, thus those 23 were cut from the sample as well. After this cut, 1,854 total responses remained; of those respondents, 1,398 were no longer active duty. A total of 1,344 people responded to all three questions that make up the dependent variables that cover their civilian employment situation.[18]

C. MODEL SPECIFICATION

The quantitative study evaluates the satisfaction and civilian salaries experienced by the USNA graduates who left the military. The salary models include an analysis of both the first salary upon leaving the service and the current salary at the time of the

[16] 1985 had 16.49 percent of responses, while all other class had less than ten percent.

[17] Sample excerpts to validate incorrect response to class year: "I was 1977 grad - the year graduated only went to 1985;" "I am Class of 1971 (your survey does not allow input before 1985);" "Also, I'm class of 1983 (your dropdown box didn't go any further back than 1985 - you're making me feel OLD!!!);" "I was Class of 1976; your survey only goes to 1985; and I don't know how you got my name in the post-1985 grad group, but any attention is always welcome." All of the above examples were taken from respondents who marked their class year as 1985.

[18] Twenty-four people did not respond to the first salary question (#37) and an additional 26 people did not respond to the current salary question (#40) for a total of fifty missing responses.

survey in 2004. Both first salary and current salary models are estimated with multiple linear regressions. Since salary cannot drop below zero and the expectation of the explanatory variables would be linear in the parameters, this study uses a semi-log ordinary least squares estimation model for both salary models. The logarithmic transformation of the dependent variable smoothes out the dispersion and allows the independent variables to have increasing slopes for larger salaries. Both of the semi-log salary models assume that no one can earn a negative salary and that the independent variables are linear in the parameters.[19] Semi-log salary models allow each estimated coefficient to be interpreted as the percentage change in salary for each one unit change in the independent variables.

The first salary model tests the relationships between demographics, USNA experience predictors, military service predictors, and job preparation actions, and how much each graduate in the sample earned. The individual variables that compose each group are further defined and discussed in the next major section, "Discussion of the Variables" for both salary models. The current salary model contains both the USNA and military service predictors used in the first salary model, but also adds graduate education types, specific work experience (tenure in current job), and general civilian work experience (years since leaving the military).

The current satisfaction model includes some of the same independent variables as the current salary model to test for a trade-off between salary and satisfaction. Since the dependent variable of the satisfaction model is binary, maximum likelihood techniques are used to estimate the model. The survey takers who were currently "dissatisfied" make up the base outcome group. Multinomial logit analysis allows the estimation of the probabilities of being "satisfied" or "neutral" relative to being "dissatisfied." The significant variables in this model compared to the current salary provide a test of potential tradeoffs between salary and satisfaction.

[19] Basically, linear in the parameter means that each unit of the variable will have the same partial effect for adding another unit across the spectrum of the dependent variable range. For example, each year of varsity participation will increase salary a certain percentage, no matter where along the salary range that athlete happens to fall.

D. DISCUSSION OF THE VARIABLES

Since the models estimate the first and current salaries and the satisfaction of the survey takers, those categories compose the three dependent variables. The independent variables attempt to explain the partial effect of each of the included variables. Since the survey responses were anonymous, none of the data was merged with official records. Thus all variables are self-reported.

1. Dependent Variables

Nearly 60 percent of survey takers leaving the military reported initially earning between $40,000 and $80,000. Since the survey only asked for salary to be reported in ranges, the salary ranges needed to be converted to salary levels for easier interpretation. The conversion assigned the midpoint dollar amount from each salary bracket.

The survey provided the salary range for the first civilian job after leaving the military.[20] Survey respondents reported their salaries in nominal dollars as of the time of their military separation, which differs for each individual. Table 3 describes the reported first salary (in nominal dollars) experienced after military separation and Figure 4 graphically shows the frequencies of the nominal first salary. Table 4 presents the inflation-adjusted salaries in 2004 dollars.[21]

The inflation problem does not affect the current salary reported, since all of those salaries were in 2004 dollars.[22] Table 5 expresses the current salary reported during the survey period in November 2004. Figure 5 presents the current salaries in a histogram.

The first salary model aligns with the range of averages for U.S. workers with a college education, yet shows USNA graduates have a slightly higher earning capacity.[23] The current salary model show a much higher earnings level than U.S. averages. Almost half (44%) of the survey taker's current salary ranged between $80,000 and $125,000 and another 19.3% exceeded $150,000. Some survey respondents felt that the $150,000

[20] Question 37: "What was the salary range for your first civilian job after the Academy?"

[21] The conversions were based upon the Bureau for Labor's website posting of the unadjusted Cost Price Index for All Urban Consumers. The index came from http://data.bls.gov/cgi-bin/surveymost in July 2005. (CPI-U) 1982-84=100 (Unadjusted) - CUUR0000SA0

[22] The variable of current salary stems from Question 40. What is your current salary range?

[23] The averages range between $40,000 and $60,000 (see page 21).

reporting cap seemed too low. For example, one stated, "I think your current salary range is flawed. I make over $400K / year and know many other Academy [graduates] (to include USMA) who also make this and more." (Survey ID #331)

Table 3. Nominal First Salary after Leaving the Service

Salary Range ($)	Frequency of Response	Percent of Responses (%)	Cumulative Percentage (%)	Salary Mid-point
<20,000	55	4.00	4.00	$10,000
20,001-40,000	216	15.72	19.72	$30,000
40,001-60,000	459	33.41	53.13	$50,001
60,001-80,000	355	25.84	78.97	$70,001
80,001-100,000	169	12.30	91.27	$90,001
100,001-125,000	63	4.59	95.85	$112,500
125,001-150,000	30	2.18	98.03	$137,500
150,000+	27	1.97	100.00	$150,000
Total	1,374	100.00		

Figure 4. Distribution of First Salary Received after Leaving the Service

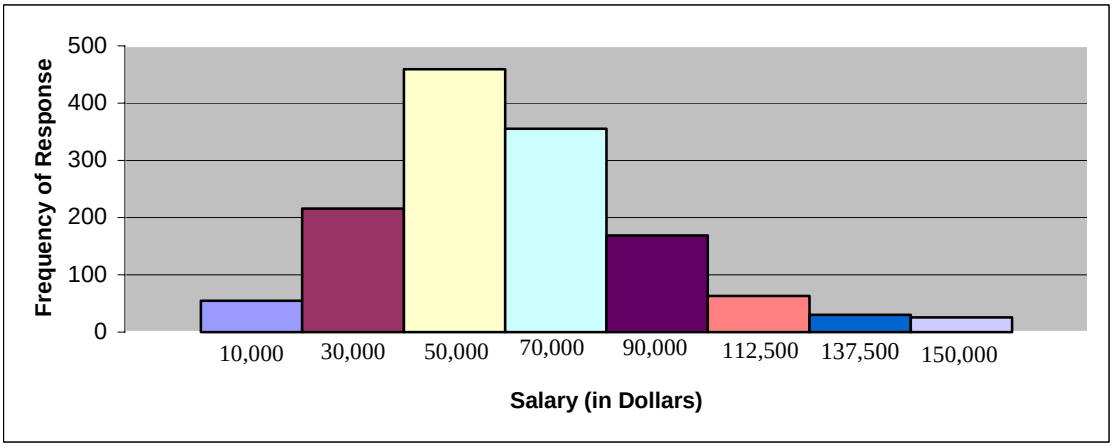


Table 4. Inflation-Adjusted First Salaries (in 2004 Dollars)

Salary Range ($)	Frequency of Response	Percent of Responses (%)
10,500	11	0.80
10,970	6	0.44
11,589	8	0.58
12,746	29	2.12
31,500	10	0.73
32,910	16	1.17
34,767	16	1.17
38,238	174	12.72
52,500	23	1.68
54,850	38	2.78
57,945	112	8.19
63,730	284	20.76
73,500	43	3.14
76,790	125	9.14
81,123	88	6.43
89,222	98	7.16
94,500	49	3.58
98,730	50	3.65
104,301	27	1.97
114,714	42	3.07
118,125	14	1.02
123,413	23	1.68
130,376	15	1.10
143,393	11	0.80
144,375	3	0.22
150,838	4	0.29
157,500	5	0.37
159,349	6	0.44
164,550	4	0.29
173,835	4	0.29
175,258	17	1.24
191,190	13	0.95
Total	1,368	100.00

Figure 5. Distribution of Inflation Adjusted First Salaries

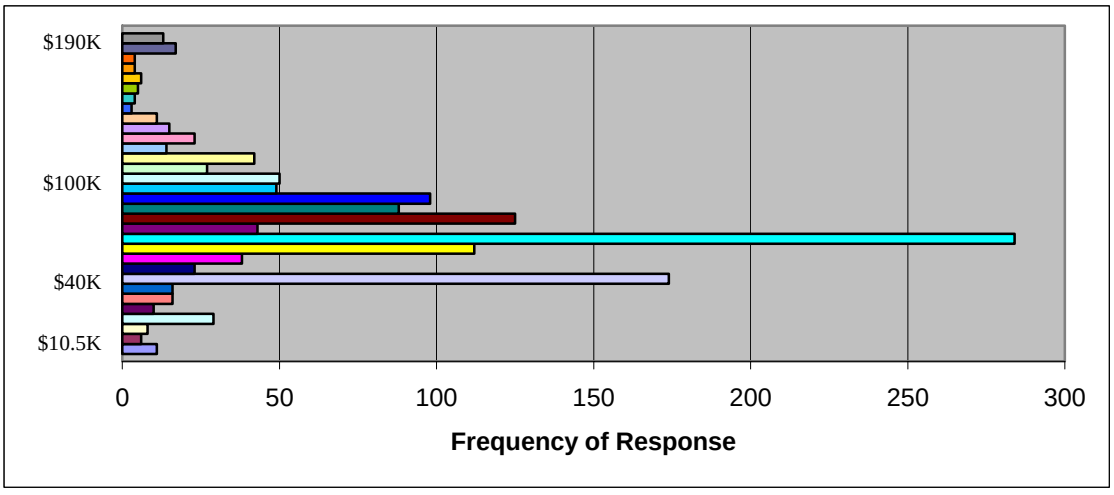
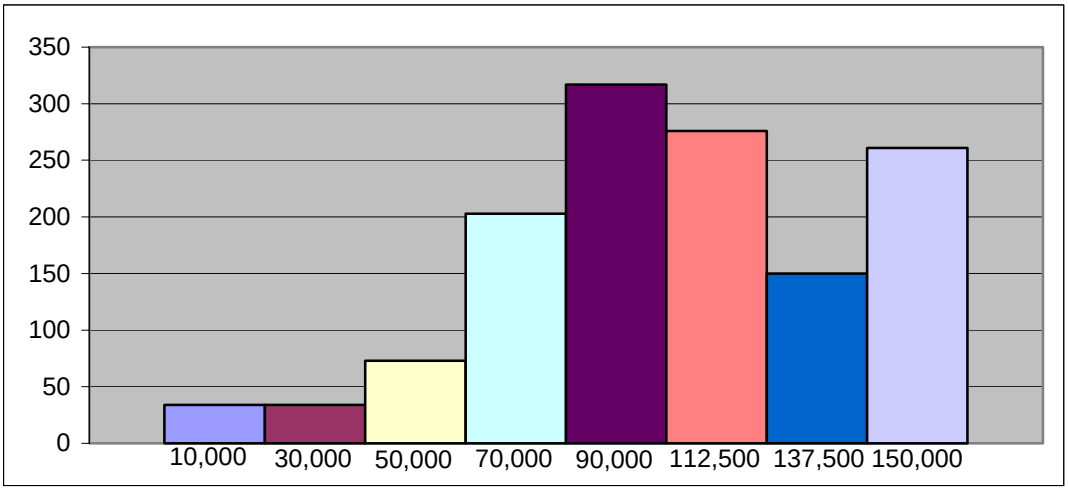


Table 5. Reported Current (2004) Salary

Salary Range ($)	Frequency of Response	Percent of Responses (%)	Cumulative Percentage (%)	Converted Salary Equivalent ($)
<20,000	34	2.52	4.00	10,000
20,001-40,000	34	2.52	5.04	30,000
40,001-60,000	73	5.42	10.46	50,001
60,001-80,000	203	15.06	25.52	70,001
80,001-100,000	317	23.52	49.04	90,001
100,001-125,000	276	20.47	69.51	112,500
125,001-150,000	150	11.13	80.64	137,500
150,000+	261	19.36	100.00	150,000
Total	1,348	100.00		

Figure 6. Distribution of Reported Current (2004) Salary



While job satisfaction may have been the initial interest, the final wording of the question designed to garner job satisfaction could be interpreted more broadly than merely satisfaction with one's work.[24] The preceding questions on the survey focus on job and salary, so the context lends the respondent to concentrate on job satisfaction. Yet, it is possible that the respondents also reported on satisfaction of non-job-related aspects of life. Thus, the satisfaction variable can encompass more than simply job

[24] Question 42: "Considering everything, how satisfied are you with your current civilian situation?"

satisfaction. Table 6, columns one to three, show the reported levels of satisfaction on a five point Lickert scale. Columns four and five show the combined groupings used in the satisfaction model.

Table 6. Reports of Satisfaction

Original Levels of Satisfaction	Frequency of Responses	Percentage of Responses	Cumulative Percent (%)	Percentage of Responses (Freq)	New Variable (satdep) Value
Very Dissatisfied	41	2.98	2.98	(109)	0
Dissatisfied	68	4.94	7.92	7.92%	base group
Neither Satisfied nor Dissatisfied	110	7.99	15.90	(110) 7.99%	1
Satisfied	546	39.65	55.56	(1,157)	2
Very Satisfied	611	44.44	100.00	84.08%	
Total	1,376	100.00		(1,376)	

2. Independent Variables

All of the quantitative models incorporate some basic demographics as derived from the survey, including gender, marital status, and dependents. Such surveys normally include race and age, but neither was asked in this survey. However, age is automatically compressed at the USNA, since no midshipmen can be outside the range of 17 - 23 upon entry. Race and ethnicity have been used as predictors in other wage studies, but were not available in this survey. To evaluate wage gaps between self-employed workers and students, the individual's employment status is controlled in the current salary and satisfaction models.

Academic and military performance at the USNA should predict later career performance. Some variables in the model capture human capital gained via formal education and via training, such as undergraduate major and leadership billet. Yet, other variables capture a portion of ability and motivation. Academic grade point average (GPA) describes academic ability, while participation in sports captures athletic ability. Honors graduates and trident scholars capture the interaction between the academic ability and motivation of the individual. Varsity sports demand more effort and ability, so this variable should capture the interaction between motivation and athletic ability.

Thus, GPA, honors programs, sports participation, leadership positions, and other indicators should predict variations in salaries among graduates from the same undergraduate college.

The service community and military career performance of USNA graduates also should help explain salary variations. The military communities provide significant investments in human capital, while the military performance captures the ability to excel in the military.[25] People who perform well in the military sector should also perform well in the civilian section.

Human capital theory suggests that those who invested in human capital in preparation for their upcoming civilian jobs should have earned higher salaries. Thus, the returns on employment preparation and graduate education during active duty are evaluated in the first salary model. Graduate education gets a second look in the current salary model since some obtain graduate education after leaving active duty. The current salary model has variables that capture both when the graduate education occurred, before or after duty, and the type of degree earned.

Table 7 presents the descriptions of the variables used in the models. Not all variables are included in every model. Some variables, such as civilian career preparation methods, only apply to the first salary model. The current salary model and the satisfaction model contain many similar variables to test whether or not survey respondents trade salary for satisfaction.

[25] Rather than use the highly correlated highest rank achieved and years of service, this study analyzes the variables that capture non-automatic promotions. Lieutenant Commander, Commander, and above can only be achieved by passing a board, thus those who get promoted in this fashion should experience more promotions in the civilian sector as well.

Table 7. Description of the Variables

Variable Description	Variable Name	Variable Type	Range
Dependent Variables			
Inflation Adjusted First Salary after Military Service	fstadjsal	Continuous	$10,500 – $191,190
Current Salary	currsalary	Continuous	$10,000 - $150,000
Satisfaction-Increasing from Dissatisfaction to Satisfaction	satdep	Categorical	0 = Dissatisfied 1 = Neither 2 = Satisfied
Independent Variables			
Demographics			
Gender	female	Binary	=1 if female, =0 if male
Current marital status	married	Binary	=1 if married =0 if not
Married Women	femmar	Binary Interaction	= 1 if married and female = 0 if not both
Reported dependents other than spouse in household	kids	Binary	= 0 if none, =1 if any other dependents
Married Mother	marmom	Binary Interaction	= 1 if female, married, and have dependent, = 0 if none
USNA			
Prep School Attendance	prepsch	Binary	=1 if prep, =0 if not
Graduate with Honors	honors	Binary	= 1 if graduate w/ honors = 0 if not
Trident Scholar	trident	Binary	= 1 if scholar, = 0 if not
Grade Point Average	gpa	Categorical	1 = 2.0 - 2.5 2 = 2.5 - 3.0 3 = 3.0 - 3.5 4 = 3.5 - 4.0
Varsity Athlete	varsity	Continuous	0-4, 0 if never played, each unit represents a year of varsity participation
Club Sports	club	Continuous	0-4, 0 if never played, each unit represents a year of club participation
Striper Highest Billet Earned during Senior Year Commander – Cmdr	striper	Categorical (by increasing rank)	=0 if no answer =1 if other =2 if squad leader =3 if Company Staff =4 if Company Cmdr =5 if Battalion Staff =6 if Regiment Staff =7 if Brigade Staff =8 if Battalion Cmdr =9 if Regiment Cmdr =10 if Brigade Cmdr
Commander for a billet at the Academy	commander	Binary	=1 if Commander (striper=4,8,9,10) =0 if not
Military Service			
Promotion to LCDR	lcdr	Binary	=1 if O-4 last rank, =0 if not
Promotion to CDR or Above	cdrabv	Binary	=1 if O-5+ last rank, =0 if not
Reserve Service	reserve	Binary	=1 if Reserves, =0 if not
Final Community—SWO			Base
Final Community—Subs	endsubs	Binary	=1 if subs, =0 if not

Variable Description	Variable Name	Variable Type	Range
Final Community—Aviation: Navy & Marine Corps	endair	Binary	=1 if aviation, =0 if not
Final Community—USMC ground	endmcgd	Binary	=1 if mcgd, =0 if not
Final Community—Staff	endstff	Binary	=1 if staff, =0 if not
Final Community—All Others	endother	Binary	=1 if other, =0 if not
Years of Military Service[26]	yos	Continuous	5 – 18.5 years
Years of Service Squared	yossq	Continuous	25 – 342.25 years
Current Employment Status			
Employed			Base
Self Employed	selfempl	Binary	=1 if self-employ, =0 not
Student (In school)	inschool	Binary	=1 if student, =0 if not
Unemployed & Retired	Restricted from Salary Model		
Specific Human Capital			
Tenure w/ current employer			Base (0-2 years)
Tenure w/ current employer	tenure35	Binary	=1 if 3-5 years, =0 if not
Tenure w/ current employer	tenure68	Binary	=1 if 6-8 years, =0 if not
Tenure w/ current employer	tenure9plus	Binary	=1 if 9+ years, =0 if not
General Human Capital			
Years of civilian experience			Base (0-2 years)
Years of civilian experience 3-4	yearciv34	Binary	=1 if years of exp = 3 - 4
Years of civilian experience 5-6	yearciv56	Binary	=1 if years of exp = 5 – 6
Yrs of civ experience 7 & more	yearciv7mo	Binary	=1 if years of exp = 7 +
Graduate Education			
No Grad Education			Base
Grad Ed on Active Duty	gradedonact	Binary	=1 if GE on mil time, =0 if not
Grad Ed After Separate Mil	geaftsep	Binary	=1 if GE after sep, =0 if not
Business Degree	busgrad	Binary	=1 if MBA, =0 if not
Engineering Degree	enggrad	Binary	=1 if Eng, =0 if not
Education Degree	educgrad	Binary	=1 if Educ, =0 if not
Math or Science Degree	mthscigrad	Binary	=1 if Math/Sci, =0 if not
Law Degree	lawgrad	Binary	=1 if Law, =0 if not
Other Graduate Degree	gradother	Binary	=1 if Other deg, =0 if not
Preparation Done Before Separation & Needs for New Career			
No Preparation for Civilian Job			Base
Networking for Preparation	network	Binary	=1 if network, =0 if not
Sought Employee Counseling	empcounsl	Binary	=1 if got counsel, =0 if not
Joined a Professional Assoc.	joinprofass	Binary	=1 if joined, =0 if not
Prepared Resume	resume	Binary	=1 if resume prep,=0 if not
Attend Lectures/Conferences	atlectconf	Binary	=1 if attend, =0 if not
Other Preparation	prepother	Binary	=1 if other, =0 if not
No Additional Training Needed			Base
Need for Additional Education	neededuc	Binary	=1 if need educ, =0 not
Need for Technical School	needtechsch	Binary	=1 if tech school, =0 if not
Needed Other Training	needother	Binary	=1 if other needed, =0 if not

[26] The variable was derived from the categorical responses concerning years of active military Service: 1-5 Years; 6-8 Years; 9-11 Years; 12-13 Years; 14-17 Years; and 17+ Years.

E. LIMITATIONS OF THE DATA

1. Potential Bias

Whenever a survey has been conducted some bias can be expected. Even with the best intention of obtaining a random sampling of all USNA graduates from 1985 to 1996, some bias may have crept into the survey. For example, the survey was distributed via electronic mail (e-mail) by the class presidents. These mailing lists may be long; however, graduates who neither have email capabilities nor have their address registered with the class presidents would have been omitted. However, this sampling error should not be very large due to the close-knit alumni association shared by USNA graduates and the widespread use of the internet and e-mail.

A response bias may arise in surveys, since those who choose to respond may not be representative of the target population. Since this survey's on-line post time remained quite short, only the few quick responders became part of the sample. Even though the survey targeted a specified group of people that fall within approximately the same life cycle, the heavy number of responses in year group 1985 was unreliable. The introduction clearly stated that only certain year groups should respond, yet people from other, mostly earlier year groups, answered anyway. The large response rate of pre-1985 graduates demonstrates that this particular population does not suffer from survey fatigue. The overrepresented Class of 1985 had a 59 percent response rate compared to the mean response rate of 20 percent.

2. Survey Design

Invariably, most surveys leave out desirable information that the authors wanted to gather. The exclusion of certain variables may create potential omitted variable bias in the estimating models. In this survey, race/ethnicity was omitted, thus one could expect that salary is overestimated for black males and underestimated for white males, if this survey group were to experience similar wage variations as other studies of U.S. workers. Even if this group had been free of such wage differentials normally found in prior studies, the lack of racial or ethnic information indicates this study could not test for wage discrimination among the survey group. While the list of demographics variables is not extensive, the group of USNA graduates shares a more homogeneous college

experience and follow on work experience than many other groups of college graduates which means that omitted variable may not be serious.

F. HYPOTHESIZED RELATIONSHIPS

Drawing on human capital theory, labor economics, and some expectations about naval officers and the USNA, a few hypotheses about the effects of the explanatory variables on the dependent variables were developed. Table 8 details the hypothesized effects and the following section explains these hypotheses.

Table 8. Expected Signs of Partial Effects for Salary and Satisfaction

Variable Name	First Salary	Current Salary	Satis-faction
Demographics			
female	-	-	?
married	N/A	+	+
femmar	N/A	-	?
kids	N/A	+	+
marmom	N/A	-	?
USNA Predictors			
prepsch	?	?	N/A
honors	+	+	?
trident	+	+	?
gpa	+	+	N/A
varsity	+	+	?
club	+	+	?
striper	+	+	N/A
command	+	+	N/A
Military Experiences			
lcdr	+	+	?
cdrabv	+	+	?
reserve	-	-	+
endsubs	+	+	+
endav	-	+	+
endmcgd	-	-	?
endstff	+	+	+
endother	?	?	?
yos	+	+	?
yossq	-	-	?
Graduate Education			
gradedonact	+	+	?
geaftsep	N/A	+	?
busgrad	N/A	+	-
mthscigrad	N/A	+	?
educgrad	N/A	-	+
lawgrad	N/A	+	?
enggrad	N/A	+	?
gradother	N/A	?	?
Preparation for Civilian Career in Military			
network	+	N/A	N/A
empcounsl	+	N/A	N/A
joinprofass	+	N/A	N/A
resume	+	N/A	N/A
atlectconf	+	N/A	N/A
prepother	?	N/A	N/A
Employment Aspects			
selfempl	N/A	+	?
inschool	N/A	-	?
unemploy	N/A	Restricted	Restrict
curretire	N/A	Restricted	Restrict
tenure35	N/A	+	N/A
tenure68	N/A	+	N/A
tenure9plus	N/A	+	N/A
yearciv34	N/A	+	+
yearciv56	N/A	+	+
yearciv7mo	N/A	+	+

1. Salary

Human capital theory predicts that people who invest time and money in graduate education and civilian career preparation experience higher wages. Not all graduate programs yield the same rate of return, nor do all career preparation activities carry the

same weight. This study tests the differences in returns between the graduate degree programs and career preparation activities and when they were carried out (during active duty or after.)

Labor economics predicts that many of the independent variables reflect sorting mechanisms for future employers. Since the minimum time from graduation to civilian employment should be about five years, the power of normal college predictors may decline. College performance predictors are proxies for the person's abilities. For example, grade point average serves as a proxy for academic ability and motivation whereas athletic participation proxies for the often unobservable characteristics of competitiveness and team skills. This model evaluates the effects of USNA academic and athletic performance on their civilian experiences.

The greatest performance sorter should be the rank achieved in the military service. However, if the employer does not readily understand the military promotion structure, the highest rank may not signal greater performance. Also, the rate of promotion could very likely be correlated with ability. The ranks of Lieutenant Commander and Major (O-4) and above obtain promotions from a panel of officers rather than an automatic promotion via seniority. Thus, the salary models in this study use the ranks of officers who are promoted by boards (O-4 and above), rather than including the automatic promotions (O-2 and 0-3). This process should capture the individuals who achieved more in their military career. Beyond performance, each service community also should impart skills that differ in their transferability to the civilian sector. The controls for different officer communities should indicate which fields contain skills with a high or low transfer rate. The military community variable comes from the last service community since officers may select one community at commissioning and not finish the training or laterally transfer to a different community.

Some of the above variables may explain changes in one of the salary models, but not the other. The means of career change preparations should impact the first salary realized after leaving the military, yet these preparations should not predict current salary levels. Also, current tenure should predict current salary but not first salary.

2. Satisfaction

Using the current salary model as a foundation, the satisfaction model attempts to discover possible trade-offs in the effects of predictor variables on salary and satisfaction. Specifically, the satisfaction model tests many of the same independent variables that explain current salary. This model explores the age old cliché, 'Money cannot buy happiness.' This study seeks to test whether or not the effect of an independent variable on income corresponds to its effect on satisfaction or whether the coefficients in each equation have different signs.

Since satisfaction cannot be described as a linear function, the satisfaction model uses a maximum-likelihood estimation model—the multinomial logit analysis. The five-part Lickert scaled satisfaction responses were converted to three categories: Dissatisfied; Neither Satisfied nor Dissatisfied; and Satisfied. In this model, the base outcome is the respondents who were currently dissatisfied.

The interpretations of the results of the multinomial logit model are not as straightforward as the linear salary models. The multinomial logit analysis coefficients are the natural logarithm of the probability of being satisfied (or neutral) over the probability of the base category (dissatisfied). The log-odds ratio is the natural log of the odds ratio. The larger the odds ratio is above zero, the greater the affect of the independent variable on the dependent variable. The farther below zero the odds ratio is, the more negative the association between the two variables. The odds ratio is the ratio of the number of subjects with the event in a group to the number of subjects without the event. The exponentiation of the coefficient yields the odds of the level of satisfaction to the base. Sometimes, the odds ratio is below one, which indicates that the base outcome is more likely.

G. PRELIMINARY DATA ANALYSIS

1. Salary and Satisfaction

Tabulating the change in salary from first salary to current salary provides an interesting perspective into the patterns experienced by the USNA graduates who took the survey. The sample used to analyze the change in income excludes currently unemployed and retired personnel. The remaining group is composed of 70 women and

1,003 men. Eighty-four people experienced a decrease in salary, eleven of whom were women. That breaks down to about 16 percent women and seven percent men experiencing a pay decrease. About 56 percent of the sample saw an increase between $20,000 and $80,000 dollars. Table 9 breaks out the difference between current salary and first salary by year groupings of civilian service. As one would expect the longer the period since leaving the military, the greater the salary increases.

Table 9. Salary Growth by Years in Civilian Sector

Change in Salary: First to Current ($)	Years Since Leaving Military Service				
	1-2	3-4	5-6	7+	Total
More than (-60,000)	2	4	0	4	10
(-60,000) – (-40,000)	2	4	2	16	24
(-40,000) – (-20,000)	2	10	11	27	50
-(20,000) – 0	122	67	40	34	263
0 – 20,000	15	99	75	67	256
20,000 – 40,000	6	43	66	136	251
40,000 – 60,000	5	16	47	131	199
60,000 – 80,000	0	17	24	113	154
80,000 – 100,000	0	4	8	84	96
100,000 – 140,000	0	0	1	32	33
Total	154	264	274	644	1, 336

Table 10 tabulates current salary with satisfaction. An initial glance demonstrates that salary and satisfaction do not seem to be highly correlated. In fact, current salary and satisfaction have only a weak simple correlation coefficient (0.224). While the correlation may be positive, it might be expected to be much higher. Much of the abnormalities occur just below the median salary range. Respondents who earned wages between $40,000 and $80,000 are overrepresented in the 'Dissatisfied' level and underrepresented in the 'Satisfied' level. Table 11 presents the same satisfaction breakdown, but tabulates satisfaction by the change in civilian salaries. In Table 11, the two highest changes in income have an overrepresentation of 'Dissatisfied' for the highest increased category and an overrepresentation of 'Satisfied' for the two highest decreased categories.

Table 10. Satisfaction by Current Salary

Current Civilian Salary ($)	Dissatisfied	Neither	Satisfied	Total
10,000	5	7	22	**34**
30,000	7	2	25	**34**
50,000	**14**	8	**51**	**73**
70,000	**28**	28	**144**	**200**
90,000	22	36	257	**315**
112,500	12	11	248	**271**
137,500	6	8	135	**149**
150,000+	10	9	241	**260**
Total	104	109	1,123	1,336

Table 11. Tabulation of Growth in Salary and Satisfaction

Change in Salary: First to Current	Dissatisfied	Neither	Satisfied	Total
More than (-60,000)	0	0	10	**10**
(-60,000) – (-40,000)	2	3	19	**24**
(-40,000) – (-20,000)	4	5	41	**50**
-(20,000) – 0	30	29	203	**262**
0 – 20,000	28	32	195	**255**
20,000 – 40,000	28	32	195	**250**
40,000 – 60,000	17	17	216	**198**
60,000 – 80,000	11	11	176	**154**
80,000 – 100,000	6	7	141	**96**
100,000 – 140,000	3	5	88	**96**
More than 140,000	3	0	30	**33**
Total	104	109	1119	1,332

2. Summary of Descriptive Statistics

The mean of first salary (inflation adjusted) was $73,130 and 67 percent of the sample fell between $40,192 and $106,068 (using raw dollars). The current salary averages $102,765 with a standard deviation spread of between $66,887 and $138,644. The satisfaction level averages out to be 1.77 where the most positive response is two and the most negative is zero. The summary statistics describes less for this variable since it has such a high skewness. Eighty-four percent of the sample describes him/her self as satisfied, while the other 16 percent considered themselves to be neither satisfied nor dissatisfied. The means of all of the binary variables describe the percentage of that

variable that has the chosen quality. For example, 81.8 percent of the sample is married. The variable for years of military services is the only continuous dependent variable and its mean represents the average length of service; whereas its square allows for a quadratic function of the original variable and has no separate meaning for its descriptive statistics.

Table 12. Summary of the Variables

Variable	Observations	Mean	Standard Deviation	Minimum Value	Maximum Value
Dependent Variables					
logadjsal	1368	11.087	.515	9.259	12.161
logcurrsalary	1343	11.446	.510	9.210	11.918
satdep	1376	1.76	.583	0	2
Independent Variables					
Demographics					
female	1397	.088	.283	0	1
married	1397	.818	.386	0	1
femmar	1397	.064	.244	0	1
kids	1397	.647	.478	0	1
marmom	1397	.022	.147	0	1
USNA					
prepsch	1397	.229	.421	0	1
honors	1397	.062	.240	0	1
trident	1397	.016	.127	0	1
gpa (each unit=0.5 increase)	1391	2.201	.923	1	4
varsity	1397	1.196	1.546	0	4
club	1397	1.167	1.499	0	4
striper	1397	3.141	1.577	0	10
command	1369	.119	.324	0	1
Military Service					
lcdr	1397	.087	.281	0	1
cdrabv	1397	.021	.143	0	1
reserve	1397	.475	.500	0	1
endswo	1397	.349	.477	0	1
endsubs	1397	.139	.346	0	1
endav	1397	.196	.397	0	1
endmcgd	1397	.092	.290	0	1
endstff	1397	.069	.254	0	1
endother	1397	.196	.397	0	1
yos	1388	7.264	2.340	5	18.5
yossq	1388	58.237	44.186	25	342.25
Employment Status					
employ	1397	.812	.391	0	1
selfempl	1397	.086	.280	0	1
Student (inschool)	1397	.062	.240	0	1
Unemployed	1397	.020	.141	0	1
Tenure					

tenure02	1397	.428	.495	0	1
tenure35	1397	.316	.465	0	1
tenure68	1397	.149	.356	0	1
tenure9plus	1397	.077	.267	0	1
yearciv12	1397	.121	.326	0	1
yearciv34	1397	.194	.396	0	1
yearciv56	1397	.1997	.3999	0	1
yearciv7mo	1397	.480	.4998	0	1
Graduate Education					
nograded	1397	.306	.461	0	1
gradedonact	1397	.234	.424	0	1
geaftsep	1397	.446	.497	0	1
busgrad	1397	.407	.492	0	1
enggrad	1397	.082	.274	0	1
educgrad	1398	.011	.106	0	1
mthscigrad	1397	.042	.201	0	1
lawgrad	1398	.011	.106	0	1
gradother	1397	.114	.318	0	1
Preparation Done Before Separation & Needs for New Career					
noprep	1397	.185	.388	0	1
network	1397	.512	.500	0	1
empcounsl	1397	.324	.468	0	1
profass	1397	.131	.338	0	1
resume	1397	.563	.496	0	1
atlectconf	1397	.208	.406	0	1
prepother	1397	.178	.383	0	1
noaddtra	1397	.526	.499	0	1
neededuc	1397	.367	.482	0	1
needtechsch	1397	.044	.204	0	1
needother	1397	.101	.301	0	1

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V. DATA ANALYSIS AND RESULTS

A. SALARY RESULTS

To better understand the salary models that follow, one should reflect on what the coefficients describe. The binary variables provide the effect on salary of changing from zero to one. For example, the variable female describes the difference in salary between men (=0) and women (=1). The base case is based on setting the binary variables equal to zero. For the first salary model the base case is a male engineering major who left the military as a Surface Warfare Officer without selection to Lieutenant Commander or above. Also the base case did not join the reserves, achieve a graduate degree while on active duty, conduct any preparation for civilian life, or need any additional education for his new career. The base case for the current salary model keeps the same attributes as above except that he loses the career preparation and civilian requirement aspects while gaining full time employment with up to two years of tenure and civilian work experience. The base case in the current salary model does not have a spouse or any kids. For the continuous variables the coefficient represents the effect of one unit increase in the variable on the dependent variable.

Both salary model regressions are presented in Table 13. The side-by-side presentation allows a better comparison of the effects of the independent variable over time. In both models the dependent variable is the log of salaries in 2004 dollars, thus the coefficients are interpreted as a percentage change in the dependent variable for a one-unit change in an independent variable.

Table 13. Linear Regression Results for Log of Salary Models

	Variables	1. First Salary	2. Current Salary
Demographics	female	-0.2954 (0.0500)***	-0.2389 (0.0830)***
	married		0.0966 (0.0338)***
	femmar		-0.3417 (0.1051)***
	kids		-0.0482 (0.0264)*
	marmom		0.4356 (0.1150)***
USNA	prepsch	0.0546 (0.0327)*	0.0460 (0.0299)
	majmthsc	-.0306 (0.0336)	-0.0495 (0.0314)
	majhumss	-.0194 (0.0342)	-0.0507 (0.0316)
	majecon	0.0840 (0.0705	0.0592 (.00645)
	honors	0.1111 (0.0589)*	0.1756 (0.0533)***
	trident	0.0508 (0.1055)	0.1350 (0.0984)
	gpa	0.0151 (0.0176)	-0.0018 (0.0165)
	varsity	0.0311 (0.0093)***	0.0349 (0.0085)***
	club	0.0159 (0.0093)*	0.0120 (0.0085)
	striper	-0.0042846 (0.0091)	-0.0087 (0.0087)
	command	0.0010 (0.0010)	-0.0004 (0.0010)
Military Service	reserve	-0.0822 (0.0271)***	-0.0525 (0.0248)**
	lcdr	0.0752 (0.0540)	0.1158 (0.0495)**
	cdrabv	0.1350 (0.1295)	0.2383 (0.1310)*
	endsubs	0.1519 (0.0452)***	0.0921 (0.0412)**
	endstff	0.0945 (0.0554)*	0.0706 (0.0504)
	endmcgrnd	0.0080 (0.0488)	0.0325 (0.0442)
	endav	-0.0419 (0.0392)	-0.0096 (0.0357)
	endother	0.0332 (0.0376)	0.0556 (0.0345)
	yos	0.1220 (0.0284)***	0.0657 (0.0274)**

	Variables	1. First Salary	2. Current Salary
	yossq	-0.0054 (0.0015)***	-0.0040 (0.0015)***
Graduate Education	gradedonact	0.1160 (0.0338)***	-0.0511 (0.0771)
	geaftsep		-0.1165 (0.0761)
	busgrad		0.2407 (0.0793)***
	enggrad		0.1683 (0.0874)*
	mthscigrad		0.1002 (0.0986)
	educgrad		-0.2803 (0.1411)**
	lawgrad		0.2377 (0.0937)**
	gradother		-0.0558 (0.0708)
Preparation Done Before Military Separation and Needs for New Career	networkprep	0.0998 (0.0307)***	
	empcounsl	0.0253 (0.0307)	
	joinprofass	-0.0149 (0.0421)	
	resume	-0.0924 (0.0317)***	
	atlectconf	0.0947 (0.0357)***	
	prepother	-0.0039 (0.0346)	
	neededuc	0.1044 (0.0287)***	
	needtechsch	-0.1043 (0.0636)	
	needother	-0.1743 (0.0443)***	
Employment Status	selfempl		-0.0783 (0.0428)*
	inschool		-0.5344 (0.0559)***
	employother		-0.2636 (0.1348)*
Specific and General Work Experience	tenure35		0.0449 (0.0292)
	tenure68		0.0831 (0.0388)**
	tenure9plus		0.1021 (0.0515)**
	yearciv34		0.1588 (0.0468)***

	yearciv56		0.2131 (0.0482)***
	yearciv7mo		0.3212 (0.0468)***
Constant		10.3929 (0.1319)***	10.8610 (0.1403)***
Observations		1356	1333
R-squared		0.14	0.31
Standard errors in parentheses	*significant at 10%; **significant at 5%; ***significant at 1%		

1. Results of First Salary after Military Service

Each group of variables should contribute different aspects to the first civilian salary; and reveal the contribution of that group of human capital attributes. The indicators for USNA experiences and graduate education on active duty provide the education background for recently separated service-members. The military service indicators describe the general and specific human capital gained after graduation from the USNA. The civilian career preparation category provides information on the most, and least, helpful methods for transferring skills from the military to the civilian workforce. The differences between the groups illustrate the varying degrees of importance that employers and the civilian labor market place upon each attribute of human capital.

a. Demographics

The first salary model estimates a 30 percent wage gap for females. This gap is comparable to the gender gap for continuously civilian peers who earn an average of 28 percent less than their male counterparts (Light and Ureta, 1990, 296). Thus, the women of this sample left the military where pay is equal to join a labor market where women tend to be paid less than men.

b. USNA

The survey respondents who attended a prep school prior to entering the USNA saw a 0.05 log salary return to their first salary; however, the respondents did not have any statistically significant differences based on their undergraduate majors. While Trident Scholars did not receive a wage premium, Honors Graduates realized an 11 percent difference in salary (with GPA held constant). With both Trident Scholars and Honors Graduates as included variables, GPA is not significant. Without those variables, a half point increase in GPA returns a 3.5 percent higher wage; however, the effect

mainly comes from the highest two categories in the GPA.[27] The Trident Scholars and Honors Graduates capture the very interesting interaction of high academic ability and motivation, thus they remained in the model at the expense of not capturing the effect of GPA. Athletes experience a 3.1 percent increase for every year they played a varsity sport or a 1.6 percent increase for every year they played a club sport. Holding a leadership billet was not associated with a higher first salary.

c. Military Service

Reservists suffer a civilian wage penalty for their continued service in the Selective Reserves, which averages 8.2 percent when they first leave the military. This study cannot determine if the lower civilian pay is balanced by the pay and benefits from reserve service, nor can it verify the cause of the penalty. Reservists may be hindered in gaining specific human capital at their civilian organizations due to their reserve commitments; another possibility is that they may take jobs that facilitate reserve service duties that pay less. Thus, they may trade off salary for flexibility. Their lower paying jobs may entice them to continue with military service to collect retirement and other future benefits.

The group of officer designator variables captures the specific human capital gained during military service in specific officer communities. Market forces may affect the wage levels for some of these skills, yet the varying levels of human capital explain most of the differences between the officer communities. The submariners experienced the largest wage premium at 15.2 percent. The high retention bonuses paid to submariners reflects the fact that this group's intensive training is associated with better wages in the civilian labor market. Staff officers also experienced a nine percent wage premium after leaving the military. The similarities of staff specialties to civilian occupations provide them with more specific human capital that transfers to a civilian

[27] Since the only model presented in this thesis includes honors and tridents, the following values describe the differences ceteris paribus without those two variables. The estimation without honors or trident and gpa as a categorical variable: coefficient = 0.0350; standard error = 0.0162; and t-statistic = 2.16 with the corresponding p-value = 0.031. The estimation with dummy gpa categories where the base case would be the gpa range of 2.0 – 2.5: (The insignificant variable of gpa 2.5 – 3.0 excluded.)
gpa 3.0 – 3.5—coefficient = 0.0861 standard error = 0.0412 t-statistic = 2.09 p-value = 0.037
gpa 3.5 - 4.0—coefficient = 0.1055 standard error = 0.0541 t-statistic = 1.95 p-value = 0.052

career. Judging by the higher wage premiums for submariners and staff officers, those military communities seem to have a greater transferability of professional skills into the civilian labor market.

Surprisingly, the aviation community did not see any statistically significant wage premiums. This could possibly be caused by the declining airline industries during most of the period or the effect of aviation retention bonuses keeping higher quality people in the military. One survey respondent indicates that airline salaries start low and then increase at a steep rate. "Just wanted to say the initial salary after leaving the academy will be skewed if looking at an aviator working for a major airline. My 1st year salary at American Airlines was 28K, but tripled the 2nd year." (Survey ID #2126) None of the other communities had any significant differences in salary.

Each year of military service provided an increase of civilian salary until 11.29 years. Thereafter, each year of military service reduced civilian wages. It seems that military service provides general human capital, but after a certain point the officer becomes too specialized in military skills to benefit from the experience in the civilian workforce.

d. Graduate Education

Obtaining graduate education while on active duty yielded about 12 percent higher salary. Thus the increase in formal education provides a higher salary for those who invested in their education.

e. Civilian Career Preparation and Needs

Two methods of civilian career preparation correlate with significantly higher first salary after leaving the military—networking and attending lectures and conferences. Both predict statistically and practically significant premiums of between nine and ten percent (9.9 percent and 9.5 percent respectively). However, seeking employment counseling, joining a professional association, and other preparation did not show any statistically significant difference over not doing any preparation at all (the base case). Surprisingly, just sending out resumes decreased the salary received by 9.3 percent over doing no preparation at all. Most used some combination of methods which led to multi-collinearity problems, such as the spurious result of sending a resume

creating a wage penalty. In Figure 7, the combination of preparation activities are presented to demonstrate the preponderance of multiple activities. Survey respondents used an average of 2.2 methods, although 247 used none. Notice that only 4.6 percent (64 of 1392) of the sample sent resumes as the sole preparation.

Figure 7. Number of Respondents Using Civilian Career Preparation Methods

	Number of Preparation Methods Used								
Type of Search	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Total**
Sent out Resume	0	64	179	238	175	87	13	10	786
Attended Lectures & Conf.s	0	11	22	55	95	66	32	10	291
Employment Counseling	0	15	74	134	118	71	30	10	452
Graduate Education	0	73	78	101	102	50	27	10	441
Joined Professional Assoc'n	0	2	19	33	39	49	31	10	452
Networking	0	51	152	215	168	85	34	10	715
No preparation	247	7	4	0	0	0	0	0	258
Other preparation	0	54	40	49	47	32	17	10	249
Total	247	270	282	275	186	88	34	10	1392

The survey respondents who reported needing more education for the type of job they had in mind earned 10.4 percent more than those who reported not needing any additional type of preparation. However, those who need some other training or education, not specified in the survey, experienced the lowest pay decrease (17.4 percent) outside of the gender gap.

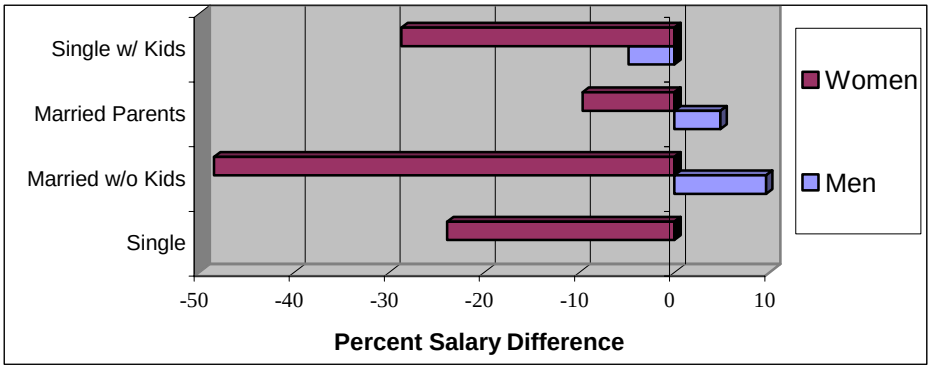
2. Results of Current Salary

The second model analyzes the salary of the respondent at the time of the survey (November 2004). The variable groupings vary slightly from the first salary model. The civilian career preparation categories are deleted since they should no longer affect one's salary. A few demographics and the types of graduate education provide new information on the differences in current salary. Finally, specific civilian human capital (tenure) and general civilian human capital (years as civilian) are added to the military human capital variables. A comparison of values between the two salary models contributes some interesting findings.

a. Demographics

Married male graduates earned a marriage premium of 9.7 percent over their single peers. This approximates the marriage premium they experienced while in the military (Fauntleroy, 2005).[28] However, having children reduced current salary by 4.8 percent. Married women without children have the highest disparity in salary with their peers, married men. Whereas married men without any children earn more than their peers—the singles and the fathers, married women earn less than both of their demographic peer groups. Married mothers earned more than the single women. This finding contradicts the studies of the "motherhood penalty" by Avellar and Smock (2003) and Waldfogel (1998). These women may have high reservation wages, thus they may chose to not work unless they receive the expected wages. Therefore, the sample probably has a participation bias which creates the illusion that they would earn more than their female peers, yet less than their male peers. Single parents of both sexes earn less than their peers. See Figure 8 to visualize the effects marriage, children and gender have on salary.

Figure 8. Demographic Differences in Civilian Salary (in Percentages)



b. USNA

Neither the survey respondents who attended prep school nor the club sport athletes saw a statistically significant difference in their current salaries, even though they experienced higher wages in the first civilian salary. Both the honors

[28] This thesis estimated the marriage premium to be between 4 – 10 percent in the Navy using Housing Allowance, Family Separation Allowance, and medical costs. The Marine Corps would have the same costs for both the Housing Allowance and medical costs.

students and the varsity athletes experienced higher salaries than their peers, with the differences being 17.6 and 3.5 percent, respectively. These two groups show higher pay for starting salary and then a further increase in salary beyond the first civilian job outside the military. Thus, these variables seem to capture the higher ability and motivation of this group. The USNA leadership billets and majors did not predict increased salaries in this model.

Once again GPA appears insignificant, but the honors students and trident scholars have been held independent, thereby striping the top tier students of the brightest and most motivated people. Both the honors students and trident scholars demonstrate the interaction of high academic ability and motivation, but those who earn an honors degree achieve a statistically significant earnings that seems to grow over time.

c. Military Service

As hypothesized, the personnel who promoted from a military board received higher wages in the civilian sector as well. Of important note, the years of services have been held constant. Thus, the dummy variables capture the quality of those who promote given the same time in service. Those who promoted to Lieutenant Commander (LCDR) / Major (O-4) reported a 11.6 percent civilian salary difference over their peers, while those who promoted to Commander / Lieutenant Colonel (O-5) and above earned a 23.8 percent difference. Since these promotions were not statistically significant in the first salary model, it seems that these folks have a higher performance and greater propensity to be promoted—both in the military and the civilian sector. These military promotions seem to capture some of the often immeasurable characteristics of ability, motivation, or likeability by superiors.

The penalty for reserve service persisted in this model, but it decreased to only a 5.3 percent lower salary as compared to the 8.2 penalty of the first salary. Both groups of board-promoted personnel maintain their higher salaries. Submariners held onto their difference in pay. It slipped to only 9.2 percent increase over their SWO peers, but they represent the only group to earn more based upon their military community. Once again, aviators did not experience a wage premium. The airline industry's difficulties post 9/11 may be indicated by the experience of this survey sample.

As in the first salary model, each additional year of military service predicted higher salaries until a point. In the current salary model the peak occurred at the 8.2 year mark. This shows a tendency for a decrease in the return to military service as individuals accumulate civilian work experience.

d. Graduate Education

The impact of graduate education stems mostly from the type of education and not from when the education was attained. Graduate education either before or after separating from the military did not create any statistically significant wage differences compared to than not having the degree at all when the types of degrees were held constant. Business, engineering, and law graduates received higher salary. However, type of degree was important. Business graduates earned the largest premium, 24.1 percent, but the law graduates did not trail by far with a 23.8 percent premium. Engineers earned a 16.8 percent premium, whereas education graduates earned 28.0 percent less. None of the other graduate fields return a statistically significant penalty or premium on the postgraduate education.

e. Employment Status

The current salary model eliminated those who described themselves as unemployed or currently retired. The self-employed workers bore the smallest wage penalty with only a 7.8 percent lower salary than their peers. Students earned less than half of the employed base at -53.4 percent. The survey respondents, who reported being employed via some other mean than any already listed, earned 26.4 percent less than the part and full time employed base.

f. Specific and General Work Experience

As expected both specific and general work experience increased the salaries of this group. The bases reflected two years or less on the job or in the workforce. Six to eight years of tenure increased wages by 8.3 percent and nine or more years enlarged salaries by 10.2 percent. Civilian work experience returned even higher salaries. The jump into the three to four year group increased earnings by 15.9 percent. Five to six years of tenure increased salaries by 21.3 percent and seven years or more increased it by 32.1 percent.

C. SATISFACTION RESULTS

The final quantitative model explores the possibility the people in this survey traded off monetary success for greater satisfaction. The only tradeoff between salary and satisfaction found came from time in the military. Table 14 displays the three log odds models. Group 1 has the log odds of someone in the sample being neutral when compared to the group who are dissatisfied. Group 2 displays the log odds of someone being satisfied when compared to those being dissatisfied. Group 3 shows the remaining comparison case.

The negative signs are the first indication that the odds of the denominator are greater than the numerator. Thus, the Trident Scholars' negative coefficient in Column 2 indicates that they are more likely to be dissatisfied than satisfied. In fact, they are 5.0 times more likely to be dissatisfied than satisfied. Since the coefficient does not immediately display this relationship (it is displayed in log odds), a separate table that has the exponentiation for the significant variables follows Table 14 to facilitate interpretation of the coefficients.

Table 15 displays the odds of the statistically significant variables with the exponentiation of the log odds already computed; therefore, the estimation for being married (in Column 2 of Table 14) is displayed as 2.3 in Table 15 (also Column 2) to indicate that married people are 2.3 times more likely to be satisfied than dissatisfied. For all of the odds below one, the inverse is displayed under the odds ratio in parentheses. Since odds below one indicate that the denominator is more likely than the numerator's group to occur, the inverse demonstrates the relationship. For example, the comparison for Trident Scholars has the odds of being satisfied over dissatisfied at 0.20 (Column 2), being below one indicates that this group is more likely to be dissatisfied than satisfied. The inverse (5.0) is listed below in parentheses and shows that the Trident Scholars are 5.0 times more likely to be dissatisfied (denominator) than satisfied (numerator). The averages in Table 15 provide the overall average that someone would be in the numerator group when compared to the denominator group first for the general group (without indicators) and then ceteris paribus (with indicators).

Table 14. Satisfaction Multiple Logit Results

Variables	Comparing Neither with Dissatisfaction	Comparing Satisfaction with Dissatisfaction	Comparing Neither with Satisfaction
	Log of:	Log of:	Log of:
	Probability of Neither / Probability of Dissat	Probability of Sat / Probability of Dissat	Probability of Neither / Probability of Sat
	1	2	3
female	-0.1487 (0.9100)	0.4529 (0.6753)	-0.6016 (0.6767)
married	0.0509 (0.3324)	**0.8364** **(0.2561)*****	**-0.7855** **(0.2469)*****
femmar	-1.4952 (1.4595)	-0.6390 (0.8696)	-0.8561 (1.2237)
kids	0.0768 (0.3058)	0.2584 (0.2311)	-0.1816 (0.2235)
marmom	-30.8521 (5784072.85)	-0.6317 (0.8276)	-32.2203 (.0000)
prepsch	0.1979 (0.3517)	0.2446 (0.2643)	-0.0467 (0.2556)
honors	0.8433 (0.6635)	0.5660 (0.5638)	0.2773 (0.3991)
trident	-1.2913 (1.0203)	**-1.6048** **(0.7086)****	0.3135 (0.8287)
varsity	0.0319 (0.0994)	0.0612 (0.0755)	-0.0294 (0.0717)
club	-0.0806 (0.1023)	0.0310 (0.0739)	-0.1117 (0.0776)
inschool	0.7328 (0.5791)	0.1977 (0.4768)	0.5351 (0.3878)
selfempl	0.1581 (0.5735)	0.4049 (0.4214)	-0.2467 (0.4199)
employother	-0.3329 (1.2806)	-0.4535 (0.7396)	0.1206 (1.1268)
reserve	0.4526 (0.2866)	-0.0854 (0.2111)	**0.5381** **(0.2133)****
endsubs	0.5378 (0.5442)	0.5719 (0.4688)	-0.0341 (0.3122)
endstff	**-2.8153** **(1.0806)*****	**-0.6994** **(0.3895)***	**-2.1159** **(1.0250)****
endmcgrnd	**-1.6635** **(0.5393)*****	**-0.9542** **(0.3332)*****	-0.7093 (0.4567)
endav	-0.5290 (0.3799)	**-0.6436** **(0.2764)****	0.1146 (0.2923)
endother	0.0605 (0.4201)	0.1729 (0.3249)	-0.1123 (0.2962)
yos	**-0.2072** **(0.0713)*****	**-0.1421** **(0.0464)*****	-0.0651 (0.0584)
busgrad	0.3970 (0.3512)	0.0467 (0.2544)	0.3502 (0.2655)
enggrad	-0.1919 (0.6695)	0.3554 (0.4561)	-0.5473 (0.5209)

Variables	Comparing Neither with Dissatisfaction	Comparing Satisfaction with Dissatisfaction	Comparing Neither with Satisfaction
mthscigrad	0.4042 (0.7302)	0.0495 (0.5528)	0.3546 (0.5337)
educgrad	0.8927 (1.5182)	0.4821 (1.1287)	0.4106 (1.0965)
lawgrad	0.2036 (0.6247)	-0.1541 (0.4891)	0.3577 (0.4438)
gradother	0.1099 (0.5107)	0.1281 (0.3735)	-0.0181 (0.3819)
tenure35	-0.3231 (0.3298)	-0.2389 (0.2447)	-0.0842 (0.2458)
tenure68	0.2394 (0.5573)	**0.7962** **(0.4249)***	-0.5568 (0.3858)
tenure9plus	-0.1772 (0.6893)	0.2645 (0.4924)	-0.4418 (0.5143)
yearciv34	0.1199 (0.5012)	-0.0216 (0.3774)	0.1416 (0.3717)
yearciv56	-0.0482 (0.5185)	-0.1634 (0.3853)	0.1152 (0.3886)
yearciv7mo	-0.2554 (0.5080)	-0.0887 (0.3794)	-0.1667 (0.3762)
Constant	1.5920 (0.8233)*	2.7471 (0.6026)***	-1.1552 (0.6211)*
Observations	1359	1359	1359
L/L_o	0.9167	Pseudo R^2	0.08326
Standard errors in parentheses			
* significant at 10%; ** significant at 5%; *** significant at 1%. Significant Findings also in Bold			

Table 15. Odds of Satisfaction of the Significant Variables

Indicators (odds of the category against the opposite group)	**Comparing Neither with Dissatisfaction**	**Comparing Satisfaction with Dissatisfaction**	**Comparing Neither with Satisfaction**
Married	N/S*	2.3	0.5 (2.2)**
Trident	N/S	0.2 (5.0)	N/S
Reserve	N/S	N/S	3.5
Final Military Community: Staff	0.1 (16.7)	0.5 (2.0)	0.1 (8.3)
Final Military Community: Marine (non-aviation)	0.2 (5.3)	0.4 (2.6)	N/S
Final Military Community: Aviation	N/S	0.5 (1.9)	N/S
Increasing Years of Military Service (yos)	0.8 (1.2)	0.9 (1.2)	N/S
Tenure 6-8 Years	N/S	2.2	N/S
Averages (without any indicators)	1.0 (N/S)	10.6	0.1 (10.5)
Averages (after including the indicators)	4.9	15.6	0.3 (3.2)
*N/S—Not Significant		** The inverse odds	

The married people in the sample were far more likely to be satisfied. They were more than twice as likely to be satisfied as dissatisfied or neutral as satisfied when compared to those who were not married (2.3 and 2.2 respectively). The married group reported both higher satisfaction and higher salaries.

Those who remained in the service longer increased their odds of being dissatisfied with their current situation. Looking at the years corresponding to two of the initial categories (years since leaving the military) provides an interesting evaluation concerning the increase in dissatisfaction based on military tenure. Veterans who had five years of service were 2.8 times more likely to be dissatisfied over neutral and were 2.0 times more likely to be dissatisfied over satisfied. Yet, veterans who reported 17 to 20 years of service had very high odds of being dissatisfied. This group of highly tenured veterans reported being 46.2 times more likely to be dissatisfied over neutral and 13.9 times more likely to be dissatisfied over satisfied. While this result seems alarming, these respondents possess an abnormally high response rate in the dissatisfied level. Five respondents were dissatisfied (all five were highly dissatisfied), one reported neither, and only six reported being satisfied. Considering the fact that 84 percent of the overall sample reported being satisfied and only 8.0 percent reported being dissatisfied, a mere 50 percent reporting satisfaction and the large 41.7 percent being dissatisfied demonstrates the abnormality of the group.

While those who finished their military service in the staff officer communities did not reveal a tradeoff between salary and satisfaction, their case may indicate that they expected the immediate, post-service wage premium to persist. Their peers' salaries rose faster than their salary until they no longer had a significant premium as indicated by a wage premium in the first salary model and no difference in the current salary model. They were more likely to be dissatisfied and less likely to be satisfied; they were 16.7 times more likely to be in the dissatisfied than the neutral category, twice as likely to be dissatisfied as satisfied, yet over eight (8.3) times more likely to be satisfied than to be neutral.

Like the staff officer peer group, naval aviators were twice as likely to be dissatisfied over satisfied. This group may have expected higher wages than they

actually received, since they received no significant difference in pay over their SWO counterparts. The airline community had some difficult times in recent years, one pilot cited the unavailability of a good career as his source of dissatisfaction:

> I am currently employed as an airline pilot. The industry is severely depressed, limiting opportunities. Had times been a little more 'normal', I am sure I would have been hired by one of the major airlines. Since none of them are hiring, I am working at an airline with little tradition/experience with officer aviators possessing multi-engine fixed-wing experience. I have good skills, but the marketplace is very different from just 5 years ago, as well as the time period when I submitted my resignation (3 yrs). (Survey ID # 406)

The Trident Scholars were five times more likely to be dissatisfied versus satisfied. Unlike the Honors Graduates, they did not experience higher wages and this may have triggered their dissatisfaction. The survey respondents who separated from the Marine Corps were 1.9 times more likely to be dissatisfied than satisfied. They did not see any significant wage differences, but their satisfaction may stem from the vast difference in the overall work environment. One wrote:

> I have achieved some significant victories and goals for legal clients (e.g. winning trials, effecting mergers) and I am successful in my job. However, I do not have anywhere near the job satisfaction I had when leading Marines. If I were to do it all over again, I would have stayed in the Corps. (Survey ID # 1291)

Being in the Selective Reserves increased the odds of a survey respondent being neutral to being satisfied. These people also received lower civilian salaries. Only one of the tenure (current civilian job) groups experienced higher satisfaction levels; the six to eight year category were twice as likely to be satisfied as dissatisfied. This model had a low goodness of fit ($L/L_o=0.9167$) and few significant variables. Many omitted factors probably explain overall satisfaction of an individual rather those than the same factors that explain higher earnings. While this study did not find a tradeoff between salary and satisfaction, most groups that earned more did not see higher levels of satisfaction, either.

D. SUMMARY

The quantitative analysis portion returned some unexpected results. Naval aviators currently receive a retention bonus to prevent their loss to the airlines, yet the graduates of this sample did not receive any significant wage differences from their SWO

counterparts in the salary models. The current salary model demonstrated that the pursuit of graduate education while on active duty does not provide any additional income as compared to attaining the degree after separation; however, the type of degree creates some very large wage differences. Also surprising, Trident Scholars did not see the same salary increases that the Honors Graduates received. In a similar vein, being an athlete at the USNA returns a higher starting salary, yet being a varsity athlete returns a significantly greater salary in the long run.

The Selective Reserves suffered a wage penalty. The gender wage gap persists in this group of graduates and is comparable to the civilian gender gap for college educated peers. However, the sharp decrease in the wage gap for married mothers creates an interesting prospect for the issue of working women and salary. Some forms of job preparations created better wages than others. Most followed the expectations established by labor economics and human capital theory.

While many of the surveys did not fit with the time period being studied, the words of wisdom portray the vast experience of the survey takers. One 1960 graduate deftly summarized the transition of military skills to the civilian workforce and how (job) satisfaction should be handled.

> I have employed many of the graduates in the group you are surveying. Their strongest abilities were in technical knowledge, application and dedication to the organization and leadership skills. I could not have achieved my successes without the military experience. I found those individuals who remained on active duty past Lt. were better suited for senior assignments than those who left as early as possible. Additionally, those who remained in the reserves were disadvantaged because they could not devote the time and dedication needed to advance far in their new organization. The qualities that assure success are the same in the corporate world as in the military: technical competency, leadership skills, communications (especially listening), and continued learning abilities. . . One last observation--dissatisfaction with the current situation carries forward into the next. The key is to change careers while still satisfied and happy with your accomplishments and the organization.
>
> -John Groth Captain, USN (Retired)[29]

[29] He granted permission to use his name via e-mail (dated September 05, 2005). Name originally provided by Mr. John Groth in the space provided within the survey for question #43.

This indicates that those who received board promotions created more human capital in the military than their peers, possibly due to greater leadership roles after earning their higher rank. Captain Groth (USN Retired) suggests that the lack of human capital invested in the new career of Selective Reservists creates the wage penalty. From the perspective of paralleling qualities of success between military and civilian job performance, the idea of general human capital accumulation in the military makes a lot of sense; however, this study found that the general human capital had a time limit to its value to civilian careers. The last point on satisfaction poses an interesting problem since tenure did not have great significance in describing satisfaction in this model. Since only a few of the variables were significant, the qualitative responses are needed to verify his observation and explain sources of satisfaction divergence.

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VI. QUALITATIVE ANALYSIS

A. INTRODUCTION

Some gains from the respondents USNA experiences may have been missed in the survey design. Thus, the write-in portion allowed survey takers to express, in their own words, the experiences at the USNA that influenced their current careers and what they have accomplished in their civilian careers. The experiences listed by survey respondents reflect human capital theory and the mission of the USNA. While accurately capturing the skills and knowledge acquired by an individual may be difficult, the perception of the importance of some skills, such as leadership or multi-tasking, adds significant understanding to the trends captured by the quantitative analysis in this research. The analysis of these qualitative data complements the previous quantitative methods.

B. DATA COLLECTION

The data for this section came from the two write-in questions of the "Career Experience after USNA" survey.[30] All of the responses have been written by the survey-takers with the same prompts. Two questions in the survey served as prompts (#11 and #43). Question 11 could be answered by all survey respondents regardless of military status. The responses come from the answers to the question, "What experience at the Academy has had the greatest impact or influence on your current job?" (#11) The second question appeared as the last question on the survey and could only be answered by the military leavers, since the survey stopped at question #21 for active duty service-members. The second section of write-in responses comes from the final question of the "Career Experiences after USNA" survey, "As a civilian, what are some of your significant accomplishments? (Please do not be humble!)" (#43) The survey takers directly typed the responses analysis in this section. Survey takers have anonymity, thus no interviews or observations were conducted.[31]

[30] The entire survey can be found in Appendix A.

[31] While no identification information was asked, some voluntarily included personal identification information in the write-in responses.

C. SAMPLE SELECTION

A survey identification number labels all of the data, both the previously used categorical and the written responses. To correlate the quantitative and qualitative sections, the qualitative sample was reduced to the same sample as used in the quantitative section by using the assigned survey identification numbers. The remaining sample only includes veterans from the USNA graduating classes of 1986 through 1996. While this excludes the active duty service-members who answered the first question, it creates the same group as those who answered the final question and were included in the quantitative models above.

D. METHODOLOGY

The qualitative analysis should answer the third and fourth research questions:

3. What human capital aspects of the USNA were most influential and impacting on their current civilian careers?

4. What do the reports of the most significant civilian accomplishments explain about current satisfaction?

The questions seek to describe the responses and then use those descriptions to further the understanding of the estimations of the quantitative models. The two types of analyses do not overlap, rather they complement each other. Information from one lends further explanation of the other.

Using an inductive method with a *resume* context, some categories emerged from the written responses after repeated reviews of the raw data. Inductive methods assume that one can reach conclusions based on observation, yet no researcher lacks theories or personal frameworks (Silverman, 2000, 72). Silverman (2000: 65) identifies these notions as sensitivities. He lists four: historical; cultural; political; and contextual (2000, 65). The "contextual sensitivity" used in this survey combines professional military with college student.[32] The researcher's perspective of being a naval officer provided some of the deciphering needed to sort the segments into the categories due to the naval science

[32] Silverman states that contextual sensitivity refers to social units, like families, that need to be evaluated in the context "for what they do and that social researchers should not simply import their own assumption about what context is relevant." (Silverman, 2000, 66)

terminology and the professional environment of the USNA. Thus, the evaluator shared similar experiences and language, yet never resided in the institution from which the studied sample graduated.

Every college student and professional creates a resume of their experiences to describe themselves. The major sections of a resume usually consist of the main categories used in this schema. With this framework of *resume* topics, this research conducted a textual analysis of the survey. A textual analysis collects documents, like surveys, and categorizes the data (Silverman, 2000, 89-90).

Two theoretical assumptions drive the two following analyses. First, human capital gained from the USNA can take many forms, some of which can be quantified, like the inputs to salary increases. Others may be very important, but not quantifiable. Thus the textual analysis of the responses describes the human capital gains from the USNA. Secondly, the satisfaction level portrays the quality of life experienced by these USNA graduates who served in the military and then separated prior to retirement. While not a direct cause of the level of satisfaction, the description of the different accomplishments create a more illustrative picture of the survey takers and pose possible explanations of the sources of the satisfaction differentials.

Repeated themes were noted and collected with each review. Each response contained at least one segment. Blank answers were considered to be one segment. Some responses had been segmented by the survey-taker, while others had to be broken apart by interpretation. For example, the following had a clear segmentation of ideas: "1.) Time Management 2.) Leadership Skills 3.) Public Speaking" (Survey ID # 1375). Whereas other responses had to be broken down into the multiple segments: "The general chaos of the place taught me excellent time management and stress coping skills. My ability to deal with last minute changes to plans and schedules and still perform to an extremely high level has impressed my supervisors in my civilian job." (Survey ID # 1003)

After compiling the themes, the researcher organized the segments into categories. The method of organizing the categories forms a continuum from personal attributes to team dynamics. Some categories overlap, yet they roughly seem less personal as they progress. The broadest categories for the two different analyses can be sorted as:

1. Influential Experiences from the USNA:

Ethics	Personal Skills
Time Management	Leadership
Professional	Academic
Social	Athletic
Plebe Experiences	Others (All, None, Other)

2. Significant Civilian Accomplishments

Spiritual-Religious	Personal Attributes
Personal-Professional Mix	Professional
Academic Obtainment	Community
Athletic	Family
Other	

Several subcategories make up the large categories. All of the major categories and the larger subcategories are described in the "Description of the Categories" section, but a complete list can be viewed in Appendix B with the minor subcategories as well.

Once separated into categories and subcategories, the responses were tallied. The tallies are reported in the "Qualitative Results" section of this chapter with a complete listing of all of the counts alongside their category and subcategory sorted in Appendix B. The survey identification numbers are also included, but all of the responses are too long to be included within this thesis.

The two analyses use slightly different methods of categorization. For the first qualitative analysis, the categorization stems from the very first segment in the response. The question asked for *the* most influential experience. Many survey takers listed more

than one segment per response. Only the first segment was used in this qualitative analysis process. Using the first segment helps retain the context for all the survey takers that only gave the one response and stems from the assumption that survey takers would list the most important experience first. This method may underestimate some categories that were reported later in the responses; however, by applying the first segment only, this study intends to capture the most important, influential experience and not give extra weight to segments that consistently occur later in the answers.

The second qualitative analysis evaluated the significant civilian accomplishments of the two extremes of satisfaction levels. With a majority of very satisfied respondents, 44 percent of the sample self-reported satisfaction levels as very satisfied. Its opposite—the very dissatisfied—make up the smallest group with less than three percent of the sample.[33] Since these groups are polar opposites in quality and quantity, their comparison lends additional information to the satisfaction of current civilian situation.

Rather than taking the primary segment in the response only, this analysis uses the first four segments within the response provided. Unlike the first analysis, the percentage of people responding to a category does not equal the same percentage of answers, nor do the percentages total 100 percent. Both analyses report the number of people listing the categorized response to describe the response rate by the survey takers rather than just the percentage of answers. The sorting process follows the same procedure as used in the first analysis of influential experiences and the entire categories are presented in Appendix C.

E. DESCRIPTION OF THE CATEGORIES

The first qualitative analysis seeks to answer research question number three by evaluating what the graduates expressed to be most influential upon a civilian career from their USNA experience. Analyzing the civilian accomplishments directly answers research question number four. The second qualitative analysis also seeks to supplement research question number two to detect trends in satisfaction among the surveyed group.

[33] Refer to Table 6 on page 34 of this thesis for the complete break-down of the satisfaction levels.

1. Influences and Impacting Experiences

The replies have been organized into a schema that starts with very personal skills and spreads to more team and social based skills acquired from the USNA. While ten major categories exist, five create the main spectrum of conceptual framework: personal; professional; academic; social; and athletic. Of interesting note, the USNA mission seeks to develop the mental, moral, and physical aspects of the midshipmen—which correspond to three of the main categories.

a. Personal Skills

Personal skills do contribute to the other five main categories, yet those in this category have been so denoted by the absence of any reference to another category in the responses of the graduates. For example, the following response did not mention any reference to either academics, sports, or professional demands, "Daily grind. Just keep going." (Survey ID #2123) Therefore, the segment falls under 'Personal Skills' with the subcategory of 'Endurance / Handle High Task Loading.' The main subcategories of this section consist of the following subcategories with their percentage weight of the category stated in parenthesis:

- Self-Discipline (38%)
- Endurance / Handle High Task Loading (32%)
- Ability to multi-task (29%)
- Stress Management (25%)
- Prioritizing (15%)
- Responsibility / Accountability (15%)
- Confidence (14%)
- Work Ethic (13%)

Most responses easily fit into the subcategories listed in the 'Personal Skills,' but some were a little more difficult to discern. For example, most of the 38 survey respondents simply wrote "discipline" or "self-discipline" as the first portion of their response that were sorted into 'Self-Discipline;' however, many stress management answers had a discussion of the issue without using the term 'stress management.' Thus, survey responses look more like: "The ability to think under pressure;" (#604) "Ability to calmly deal with stress and busy schedules;" (#1380) and "Being able to think and function while under duress / pressure." (#400)

'Prioritizing' usually contained straightforward responses, yet one particular response reflects the midshipman experience for using the personal skill of prioritizing:

> Learning how to separate what is fundamentally important from what is not (i.e. honing military and leadership skills rather than honing ability to complete triple integrals in Calc III). Bottom line: learning how to prioritize so FUNDAMENTAL skills trump altogether archaic ones. (#1044)

Many military officers may take for granted the need to multi-task, but many of the graduates first learned the skill at the USNA:

> Multi-tasking/time management. Although a great form of harassment, lessons learned from uniform races still linger... More so however, the amount of time required of me to get everything done (being a varsity athlete and brigade striper) and still have time to 'play' taught me how to more efficiently multi-task and manage my time. (#2568)

Many responses describe and list skills that comprise the vast category of personal skills. Since this category led the responses as a top category with the tie at 17.9 percent, the category demonstrates the importance of personal development at the USNA.

b. Professional Skills

Since the USNA effectively trains midshipmen to become officers, it conducts a large amount of professional development. Between the summer cruises, the informal professional training, and the professional classes, midshipmen receive tremendous training and earn generous amounts of naval service specific human capital. Military personnel assigned to the USNA provide professional mentorship to the midshipmen. For example, one survey respondent wrote, "Working under a Marine officer in the summer of 1996. His mentoring and example made a significant impact on my choice of military occupational specialty. This choice led me to where I am today." (#1107) Summer cruises provide professional training and a realistic job preview. Those experiences help midshipmen with both military and post-military job choices.

> My summer experiences at the Academy helped me to hone my decision for a post-Academy military career. That career, as a Special Operations Officer, helped me gain acceptance to graduate school and got my foot in the door for my future career in finance. (Survey ID #923)

The top three professional developments specifically mentioned by the sampled USNA graduates include (with percentages of responses within the category): summer cruises (28.6%); Marine Corps Officer Candidate School (OCS) (14.3%); and professional interaction with military personnel (16.7%). The category remained a fairly small portion of the overall responses at only 3.0 percent.

c. Academic

While 'academic' skills and a college degree seem an obvious answer for the graduates, some interesting aspects of the responses slow how the USNA impressed its graduates. Certain professors provided inspirational influence; however, the segments were categorized by the academic context associated with the professors.[34] Almost half of the survey respondents listing academic experiences as their most influential experience cited either their major or specific courses taken (40.9%). Of those surveyed graduates, over half (55.4%) listed engineering specifically as their primary impact. While 38 percent of the entire survey sample majored in an engineering subject at the USNA, even some non-engineering majors cited their engineering courses at the most impacting on their current civilian job.

> My engineering classes as a non-engineering major. I was able to get an engineering sales job based on the amount of calculus, ee, physics, etc. that I had to take. Because of this I was able to convince my current company that I was technical enough to handle selling technical equipment. (Survey ID #2381)
>
> Intensive training in English language and literature coupled with a broad-based background in engineering (Survey ID #2320).[35]

Almost a quarter (22.5%) of the survey takers, who listed academics in the first segment, cited the overall academic experience as a primary influencer. This count includes those who specified the quality, rigor, and challenge of the USNA, but those subcategories remain separated in the listing in Appendix B. Many felt graduation and

[34] Some examples: "Dean Kelley's BioChemistry Class." (Survey ID # 2179) was classified under Science major; and "Being a poli-sci major under people like Dr. Steve Wrage, Dr. Ellie Malone, etc." (Survey ID #1282) was classified under the specific major of Political Science.

[35] This example depicts the struggle for categorization, since more than one segment was presented. To maintain consistency, the response is tallied under English major, but its illustration of the cross major impact of the engineering courses reinforced the appreciation of the USNA engineering courses by non-engineering majors.

earning the degree with its inherent value impacts their job the most, and 10.9 percent cited this first. "First, graduating, because having that on my resume got me hired" (Survey ID # 2331). "Graduating. Nothing beats having USNA on a resume" (Survey ID #1158). Two respondents felt that it "opened doors" for them that would have otherwise been shut.[36] One even felt, "being an Alumnus of USNA supersedes any individual experience at the Academy" (Survey ID #535).

d. Social

Social interactions provide excellent skills for professional development. Yet, for some the most tremendous aspects of the academy were the close personal friendships or the camaraderie they experienced. Just over a quarter of the responses for this category list friends and another 13 percent list the relationships and camaraderie:

- Friendships made with fellow classmates (Survey ID #1095).
- The bond that is established between classmates from initiation day (Survey #1875).
- The friends I made: While I did not spend a great deal of time on my mental, moral or physical development, I did make lasting friendships with amazing people. (Survey ID #706)
- As the years go on, I would say the friendships and bonds formed over the years at USNA have had the greatest impact. (Survey ID #2426)
- Lifelong relationships and camaraderie with other USNA grads. All the experiences that we went through created this bond (Survey ID #2634)
- Classmate loyalty made the biggest impact on me. While working in consulting, it is important to be able to count on your peers in high stress situations or when deadlines are pending (Survey ID #680).

The listing of business relationships and networking almost match the frequency of personal relationships:

- Meeting people who can help you later in life. USNA alumni are a great networking tool. (Survey ID #456)
- The network itself. I have utilized it and also helped several USNA alums obtain jobs as well. (Survey ID #1511

[36] "Simply graduating from the Naval Academy has opened doors in my civilian career" (Survey ID #2256). Just having graduated from there has opened doors that may have been other wise shut" (Survey ID # 803)

- I owe my job to the academy network. I was referred by a USNA grad and interviewed by a USNA grad, and subsequently hired almost immediately. (Survey ID #2699)

This category captures the peer relationships developed at the USNA. While the inclusion of the 'Extra-Curricular Activities' (ECAs) subcategory in 'Social' did not seem to fit at first, the emphasis on the gathering of peers prevailed over any other consideration. Thus, the top groupings in this category are included with their weight in the category: friends (25.9%); business contacts and network (22.2%); ECAs (18.5%); meeting people (14.8%); and camaraderie and relationships (13%). The category covers 3.9 percent of the most influential experiences of the entire sample.

e. Athletics

Considering that around 90 percent of the incoming plebes tend to have played varsity sports in high school and many athletes are personally recruited by the USNA, this becomes a logical influence for many of the USNA graduates even though they may not play sports professionally. The various sports proved too scattered to group individually. Almost a third (31.1%) listed their individual sport or the general sports (like "College Sports" from Survey ID #1583). Another third (34.4%) listed their varsity experience. Eighteen percent wrote that they learned leadership through their sport(s). Usually, a team captain wrote about the leadership in sports, but more general answers were also present, like the following, "Sports and the leadership it required" (Survey ID #559). Athletics only contains 4.2 percent of the overall response for the most influential or impacting experience.

f. Cross-Spectrum Categories

Some major categories span a couple of the main categories in the spectrum; for example, ethics denote personal attributes, yet are very necessary for professional and academic life. Plebe experiences (summer, year, and leadership billets) provide skills that potentially span the entire scope, thus these warrant a separate category due to the inclusiveness of the category and the uniqueness of the experience.

Personal skills development seems to be the most influential experience garnered form the USNA. Almost half of the responses deal with some form of a personal skill. Combining ethics, time management, and leadership into the personal

skills category would capture almost half (46.4) percent of the first segment responses. While ethics may be a personal matter, it represents a quality beyond skills like organizing or multi-tasking. Twenty percent of the respondents were influenced by the Honor Code (or Concept) from the USNA. Many (37.3 percent of the ethics responders) felt the integrity and honor learned from the USNA had the most impact currently. Time management appears to be the personal skill that predominantly impacts the surveyed USNA graduates in their current jobs with its respectable rate of occurrence within the write-in responses as the primary segment—3.7 percent of the entire sample. Leadership skills learned from the USNA have a major impact on this sample. Just the general leadership skills accounts for 18.5 percent of the responses—a tie for the lead influencing experience. Since other categories had leadership caveats included, combining all of the leadership responses together creates the majority of the impacting experience on current civilian jobs at 20 percent.[37]

While many college graduates may reflect upon their freshman year in college, they probably do not have the variety of experiences that USNA graduates have. Many still refer to that experience and its impact on their daily working life. Almost six percent of these survey respondents referred to either their own personal year or their involvement with training other Plebes.

- Plebe summer- without a doubt- has had the greatest impact on my current job. I learned discipline, teamwork, perseverance, and gained a sense of honor that summer. (Survey ID #2402)
- Plebe summer - taught me to keep my sense of humor and keep focused on the long-term goal when times got tough (Survey ID #1177).
- Plebe year - dealing with the ups and downs of demanding lifestyle while keeping a positive attitude. (Survey ID #2211)
- Plebe year. Going through that year taught me to take things in stride, handle pressures, and use effective time management. (Survey ID #2555)
- The trials and tribulations of plebe year have had the greatest impact on my civilian jobs. The training in multi-tasking, persistence, accuracy of work, ability to function in a team

[37] Both Athletics and Plebe Experiences had leadership aspects.

> environment, have collectively contributed to my civilian work achievements. (Survey ID #425)

Since the experiences of this year affect so many aspects, its represents portions of all of the five main categories in this *resume* context.

g. Other Responses

Some responses could not be easily placed into a category, usually due to an incomplete response or lack of context. For example, the response "Practical understanding, development and execution of the [no further writing]" (Survey ID #577) did not have the rest of the response to provide the context of the experience. Whether by operator error or technical failure, these errors affect less than one percent of the sample.

Some of the survey respondents felt that the USNA does not impact their current job. This group only consists of 1.4 percent of the sample, while 5.1 percent of the sample thinks the overall experience of the USNA impacts their current job. The group that feels the USNA has no impact on their current career could be underestimated since 13.3 percent of the sample chose not to respond at all. However, only the responses received can be described.

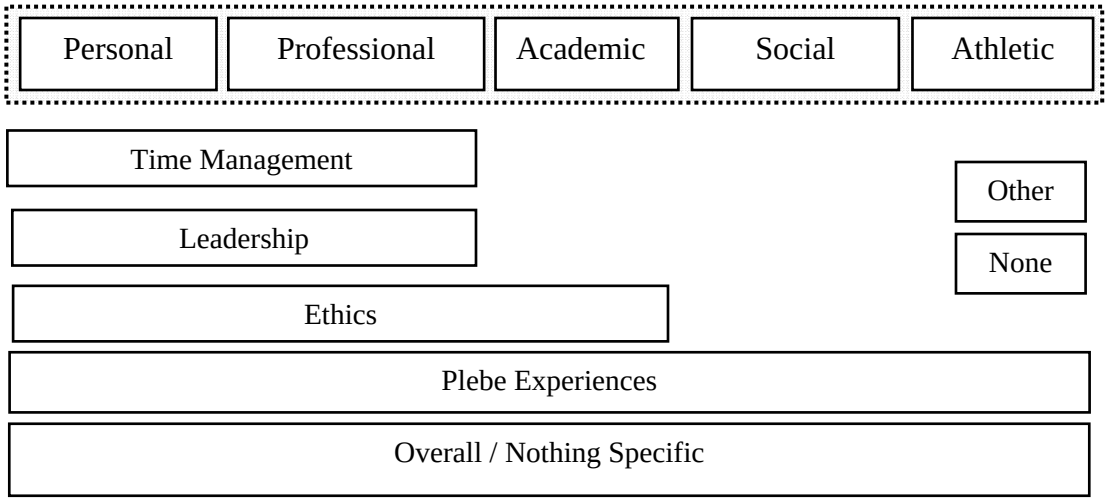
- My academy experience has had no impact on my current job other than to support my resume (in general). (Survey ID #2275)
- None, although just the fact that I attended USNA probably got me into med school. (Survey ID #1029)

- Beats me. I'm a police officer and while the Academy experience as a whole has certainly had a positive impact, I couldn't honestly single out any one thing. (Survey ID #2031)
- There is no single defining experience, rather it has been a cumulative effect of all the unique experiences the academy offered. (Survey ID #873)
- There was no single experience, it was the overall gestalt of what I learned, saw, and experienced. Currently, as in nearly all things I've done I'm drawing on the leadership skills I learned and developed, as well as my engineering education. (Survey ID #2413)

A comparison of the previous descriptive categories is matched with the findings from the quantitative models in a later section of this chapter labeled 'Discussion of Qualitative Findings.' While the ideas concerning the organization of the categories that describe the most influential experiences from the USNA have been discussed within this

section, Figure 9 illustrates the personal to team continuum used to explain these experiences. The dotted outline encases the five main categories of the continuum. The major categories that expand across the spectrum are displayed under the portions of the main categories they incorporate the most. Arguments can be made concerning the expansion of these categories into other spheres (e.g. ethics into sports), yet this framework seeks to organize the data coherently in the fewest categories.

Figure 9. Summary Matrix of Influential Experiences from the USNA



2. Civilian Accomplishments

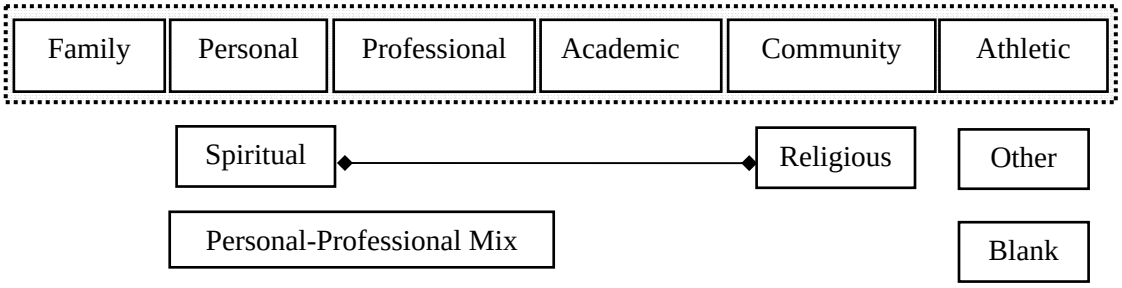
Since many alumni accomplishments are well documented, this study uses this open-ended question's responses to seek out satisfiers and dissatisfiers among the survey respondents. The significant civilian accomplishments of those who reported being either very satisfied or very dissatisfied should uncover the problems and satisfiers not specifically queried in the survey. The significant civilian accomplishments do not provide a direct correlation to the stated satisfaction levels since the survey only asked for the level of satisfaction and not the self-perceived reasons the respondent experienced that satisfaction level. However, this qualitative analysis describes the two extreme groups on the satisfaction continuum—the very satisfied and the very dissatisfied—to discover the differences between the groups.

The *resume* context equally applies to professionals as it did to the analysis of the (military) college experience. While trying to avoid holistic fallacy[38] and provide a simple schema that reflects similar logic as the influential experiences, the matrix summarized in Figure 10 emerged from the civilian accomplishments as a simple organization. Once again, the main categories that embody the framework are outline with a dotted line. Much like the matrix before, some of the categories need to be classified under more than one category. The 'Spiritual and Religious' listings come together in a subcategory, yet share attributes of both personal and social accomplishments. The denial of marriage for USNA midshipmen and the boarding school-like environment prevents any family influence during that life stage. However, since the survey respondents have aged and some created their own families, the importance of family members emerges as a new category. The 'Personal / Professional Mix' category captures the individual achievement awards most often received at work and other accomplishments that have earning potential, such as having a patent. In this portion, the academic category refers to higher education received. Those who work in academia were categorized in professional for those aspects of their accomplishments, so that 'Academic' captures student accomplishments.

Whereas question 11 only asked for the most influential experience, this final question sought multiple answers. The first four segments of the responses are broken apart into the framework presented in Figure 10. Thus, the percentage used refers to the number of respondents rather than the number of responses for comparison between the groups, especially since the very satisfied category had many people that wrote multiple segments. The previous analysis had many responses that indicated the entire experience influences their current job, whereas this analysis has many listings. Survey Respondents usually answered with accomplishments from multiple categories, but there are no overall categories like the previous model. This does not connote that such a category may not exist; just that it is not captured in this analysis.

[38] "The holistic fallacy: interpreting events as more patterned and congruent than they really are, lopping off the many loose ends of which social life is made (Miles and Huberman, 1984, 230).

Figure 10. Summary Matrix for Significant Civilian Accomplishments



A complete listing of all of the categories, subcategories, counts, and the classified survey identification numbers can be found in Appendix C.[39] This analysis incorporates a compare and contrast method to describe differences between the groups to seek the reasons the satisfaction levels diverge so significantly.

a. Family

Family status significantly impacts a person's life. For the very satisfied respondents, 13.5 percent mentioned some aspect of family as an accomplishment. The very dissatisfied group responded at a slightly lower rate of 12.2 percent. Most mentioned their spouses or children, but the categorization of family applied to any family member or combination listed. The following is a sample of responses from the very satisfied group:

- I'm out for family reasons - ie - I wanted to spend some time with my kids (Survey ID #882)
- Solid marriage by God's grace¶Entrusted with four sons so far (Survey ID #919)
- Mother of 3 great kids-Graduated magna cum laude from 1st tier law school -Successful attorney w/great firm working on multi-million dollar business deals -Happy marriage (16 years and counting!) (Survey ID #35)
- Upon leaving active duty, I became a full time stay at home mom for a 4 and 1 year old and my husband deployed for six months for Iraqi Freedom. (Survey ID#1662)
- A loving wife and 2 kids. Kids and family come first. The Navy doesn't teach that, and your survey about success seems focused more on

[39] Military members and government workers please note that this use of classified refers to sorting, not risk to national security.

money than anything else. As I've gotten older, I've realized that money is not the goal in life. My success is measured in ways your survey doesn't touch upon. (Survey ID #1158)

The next segment contains all of the very dissatisfied group's writings on their families:

- Helping my wife overcome severe panic disorder and agoraphobia without medication . . . Changing from a workaholic to someone who maintains a healthy balance between family, community, and work (Survey ID #481)
- Being a father is my most enjoyable & challenging job. The enjoyment I get from the roles of father and husband is the primary reason I left the military. (Survey ID #2597)
- After divorce, found a good woman and married her. (Survey ID #1107)
- You need to list those of us who have chosen to raise children after several successful years in civilian job market. The most important job of all—(Survey ID #1229)
- My personal motto is gratitude. Every day I am thankful for #1) my faith in God and his provision, #2) the family that raised me, and the family I have today #3) the nation that allowed me such a wonderful education, and the community I'm so privileged to be a part of today in the USA. (Survey ID #766)

b. Personal Attributes

Some survey takers describe themselves to describe their accomplishments. Almost twice as many from the very satisfied group listed personal attributes compared to the very dissatisfied group—13.5 to 7.3 percent. Once again, leadership rose as a sizable portion. While many discussed their leadership in terms of their work, this category focuses on the self-description through attributes rather than awards, promotions, or positions. The following depict the descriptions of self of the two groups:

Very Satisfied:

- Role model for working with integrity. (Survey ID #821)
- One of our most important assets is integrity. It is expected when we are hired and typically [USNA] grads deliver. Helps in finding jobs and establishing credibility within an organization. (Survey ID #2248)
- My "accomplishment" is being known as a producer--a go-to guy. My clients and staff/colleagues know this fact to be true. At the end of the day, only one's ability to produce tangible results counts in life in my opinion. (Survey ID #2735)

- Early identification of one of the future leaders in a Fortune 200 company. Leadership is the key. (Survey ID #1255)

Very Dissatisfied:

- Taking care of the people who work for or with me. (Survey ID #691)
- Leadership in legal aspects of business deals for my clients¶¶Developing younger lawyers into better lawyers (Survey ID #1883)

c. Professional Accomplishments

Professional matters expand in scope in this analysis of accomplishments, when compared to the influential experiences from the USNA. Now over half (61.0%) of the very satisfied group have listed a professional achievement that relates to their job, such as promotions, positions, working for a very successful firm, top salesman, and certifications. The very dissatisfied group only had 31.7 percent of their respondents specifically addressing professional issues.

Very Satisfied:

- Six listed themselves as CEOs (Survey ID: 118, 2611, 896, 1985, 1303, and 2611)
- Seven listed themselves as Presidents (Survey ID: 2611, 896, 768, 2647, 2660, 1850, and 2443)[40]
- Five were partners: (Survey ID: 131, 1595, 2735, 575, and 34)
- Nineteen reported being a Vice-President: (Survey ID: 2273, 366, 1704, 847, 1957, 2181, 2191, 798, 203, 1459, 1268, 1985, 420, 432, 1904, 1516, 184, and 875)

- I am currently the CEO of a fast-growing small company, and have held the positions of Chief Operating Officer (twice), Chief Technology Officer, General Manager, and VP of Marketing, all with fast-growing companies, some high-tech and some very low-tech (ship repair, outdoor advertising). I have worked at senior levels in five distinct industries since I left the Navy. Largely because of the skills I learned in the Navy - particularly in the Nuclear Power Program - I am able to think and act strategically while simultaneously understanding the details and inner workings of a process or an industry, and to see structural patterns across industries. Perhaps most importantly, I have the ability to remain calm

[40] Reminder: repeats allowed since up to four segments of each response counts. Percentages reported are per capita.

under fire and to provide steady leadership to my teams during the extremely stressful and chaotic times one encounters when growing a company. (The oft-repeated, Survey ID #1985)

- normally quite humble, the anonymity of this allows me to relay the following:¶-I am employed at a prestigious wall street firm and was recently promoted to director at age 37¶-my name has appeared in the wall street journal¶-my compensation/pay is nearly unlimited and in recent years has surpassed $500k in a single year¶-I own a very nice home¶None of these material things would mean anything without good friends and family - and victory against army!¶...and last, the civilian job would have been near impossible to attain if I had not attended the naval academy - an academy degree opens more doors than you could imagine both in getting the job and generating business once you have the job. (Survey ID #566)

Very Dissatisfied:

- I have received a few awards for work I have done or have been a part of. (Survey ID #181)
- Was selected twice as Teacher of the Year by my school. Once I was selected as Top Ten teacher of the Year for San Diego county (38,000 teachers).¶¶Am financially secure. (Survey ID # 812)
- [W]orked for Hewlett Packard in Germany for 18 months to launch a new product¶- every new position has been a promotion¶- grew an acquired business from $15M/yr to $180M in 5 years¶- was able to convince my employer to transfer me from CA to the East Coast for personal reasons¶- I've always said that even though I have an MBA (which is very important for a finance guy), it's the USNA degree and military experience that gets me my new jobs. (Survey ID # 1478)

Both groups had the same percentage of people reporting promotions—7.2 percent.

d. The Mix of Personal and Professional Accomplishments

Some professional activities have a more personal quality than working at a top firm. This category captures the entrepreneurs, personal awardees, public speakers, published authors, subject matter experts, and patent receivers. Many have started their own businesses; 12.2 percent from the very dissatisfied collection and 8.9 percent from the very satisfied group. This category contains more very dissatisfied respondents than the very satisfied respondents—1.5 more. Thus, the dissatisfied group tended to list their personal awards and accomplishments more than accolades of their employer, company position, or specified field (the professional category). A couple of sample responses

concerning ownership of a business relay the sense of satisfaction level differences between the groups.

Very Satisfied

- 1. Happy, healthy and loving family.¶2. Went to Wall Street and earned my first million within a few years of leaving the Navy.¶3. Quit my job and started my own successful money management business now making several million per year.¶4. Able to build my team/staff that is as motivated as I experienced at the Academy - this was not possible while I worked for a big firm. (Survey ID #652)
- When I worked full time for a company, I basically performed myself out of a job by organizing and streamlining things to the point that I wasn't needed anymore! We are now self-employed. This isn't very glamorous but my most significant accomplishment is what I pull off every day. I have 5 happy children who earn straight A's, are involved in sports, and eat a home cooked meal every night. I keep an organized, peaceful, and clean house and work 25+ hrs a week managing all the accounting for our business that conducts 5 mil in sales/year. I do this without feeling constantly stressed out. I handle every detail in our household and every financial aspect of our business so my '90 grad husband can focus on earning a great living for us! We take home about $200K a year through hard work, focus, good leadership, and a great partnership between us. As a wife and mother I can't ask for anything more. (Survey ID #1827)

Very Dissatisfied

- I left the military to start my own business, invest in real estate, and focus on family. I have since started several businesses with varying degrees of success. I have worked as a consultant for an employer and put myself in a position to become a partner in the firm (not without risk). I left to continue investing in real estate, worked as an independent contractor for the company I left and its competitor, and ultimately was invited back as the second most senior partner. I continue to pursue investments in businesses and will never go back to work for an employer of my own will. My salary does not reflect the net worth I have accumulated, nor my potential for future income. The Naval Academy relationships have helped me get to this point as many of my business associates are like-minded academy grads. (Survey ID #1988)
- 1. Staying happily married for 16 years through two continents, 8 moves, & 5 kids!¶2. Adopting three (3) special needs kids;¶3. Starting up a new factory from zero employees to over 250 employees;¶4. Directing the profitable growth of two different businesses making two different products (Survey ID #134)

e. Academic Accomplishments

Many survey respondents obtained graduate education, or were in the process of getting a degree. Sixty-eight percent of the entire sample responded that they had earned a post-graduate degree. Of the very satisfied group, 18.4 percent listed their academic achievements; whereas, the very dissatisfied group only had 7.3 percent of its respondents reported academic accomplishments. Some of the following academic accomplishments:

Very Satisfied

- Graduated with 2 advanced degrees (MBA, MEM) from the #1 ranked business school in the U.S. (Kellogg Grad. School / Northwestern Univ.)¶- Started a company that is now profitable and growing¶ (Survey ID #2553)
- 1. Graduated with distinction from Harvard Business School¶2. Had eight job offers coming out of HBS (2x as many as most of my classmates)¶3. Hope to be running a business soon. (Survey ID #1971)
- Acceptance into Harvard MBA program was due significantly to USNA (Survey ID #579)
- Soon I will earn a Ph.D. in the field of Old Testament and return to the active duty Navy as a chaplain. (Survey ID #930)
- While I did not have to attend graduate school to attain this position, I did have to get another Bachelor of Science degree (Nursing) to be even somewhat competitive in my field. (Most nursing schools were not too amazed at my bevy of engineering courses from USNA, although my engineering (EOOW) experience has come in quite handy with the sophisticated monitoring equipment we use. (Survey ID #1928)

Very Dissatisfied:

- Law school graduation (Survey ID #1883)
- I actually finished my master in electrical engineering at cornell university right after graduation. Went back to the philippines to serve for 16 years commissioned service. Started law studies in 1999 and i am now on my last semester at the Ateneo Law School here in the Philippines. (Survey ID # 2364)
- MBA (Survey ID #1478) (Previously cited in full for professional development)

f. Community Involvement, Athletic Accomplishments

Both of these categories received such low response rates that their existence seemed questionable, yet no other category describes community involvement and athletic accomplishments deserve a separation from educational and professional achievements. The very satisfied group reported the highest involvement in the community with 3.5 percent. The very dissatisfied group only had one member reporting community involvement (Survey ID #1883), thus creating a total of 2.4 percent involvement. The reported personal athletic involvement remains low for both groups; coaching youth sports were reported under community involvement. The very satisfied group had less than one percent (0.8%) listing athletic accomplishments and the very dissatisfied had no representatives. With the scale difference, if only one person from the dissatisfied group listed an athletic achievement that group would have reported three times the involvement of the very satisfied group. All of the non-coaching, personal athletic accomplishments are reported below:

- US national rowing team member 1996/1997¶Winner 1996 US Olympic rowing trials¶Gold medallist, 2004 World Dragonboat ¶ Championships (Shanghai, China) (Survey ID #883)
- 5X Ironman triathlete (Survey ID #1088)
- Running USMC Marathon (Survey ID #2043)
- Running a marathon (Survey ID #837)
- Ran 6 1/2 marathons and 3 full marathons (Survey ID #451)

g. Spiritual and Religious Affirmations

A small category for the very satisfied group (only 3.1%), this category also had the same response rate for the very dissatisfied group (2.4%). However, this group seemed too important to its few respondents to leave out. Some made a profession out of their religious beliefs and all of those respondents reported themselves as very satisfied.

- I work for the Church. They pay poorly and frequently do not get the better trained and professional employees. I have been able to teach and mentor other Church leaders on leadership issues and improve the life of the Church here in our diocese. (Survey ID # 2414)
- I'm going to be off your scale a lot because I am a United Methodist Pastor and my success rate will not be reflected in terms of

dollars. I graduated magna cum laude in 1994 from The Divinity School at Duke University. I can tell you that I serve a 350 member church together with my wife (also a USNA 1986 grad) that has tripled in attendance and budget since we began leading it in 1997. We have just completed a $2 Million building program and oversee a part-time and volunteer staff of 25 people. Our direct supervisor in the United Methodist hierarchy has commented to us that we are two of the few pastors he can truly call leaders in a conference of over 480 congregations. I imagine the Naval Academy and our experience as surface line officers had a great deal to do with that. (Survey ID # 1125)

- Helped plant a church. (Survey ID #1015)
- I managed to attend graduate school (with good grades) in Indiana, drill two weekends a month in Philadelphia and still hold together a household. Now I am being asked to start a new church and school while I am completing the practical portion (internship) for a MDiv. (Survey ID # 1124)
- I am the pastor of a 350+ member church and every day I deal with issues of their faith and life. I have watched three of them take their last breath and been at the bedside of many others and shared their sorrow, trials and grief. Every year I preside at dozens of funerals, weddings and baptisms. Every day is an opportunity to give thanks to God for the opportunity to be Christ for someone - to journey with someone in their joys and struggles. In my line of work humility is a virtue. (Survey ID #1053)
- As a reserve Navy chaplain, I saved a Marine's life through suicide intervention. Soon I will earn a Ph.D. in the field of Old Testament and return to the active duty Navy as a chaplain. (Survey ID #930)

h. Other Accomplishments

This category ties together a few odd statements and those who felt they had no significant civilian accomplishments yet. Only 1.6 percent of the very large, very satisfied group was categorized in this section and none from the very satisfied fit. This does not preclude the absence of unaccountable categories embedded within the responses. Some examples of the few responses in this category, besides the no significant accomplishment people, are “I do not need any supervision or hand-holding.” (Survey ID #2151); “I'll be humble!” (Survey ID #902); some thesis advice (Survey ID #1888); and “Using what I learned from military service in education.” (Survey ID #489). The very satisfied group had 12.9 percent who chose not to answer and the very dissatisfied group had 1.3 percent of its sample also leave blanks.

One person listed many items, of which only four were tallied, but his storied response speaks of the many significant accomplishments of some USNA graduates and the difficulties to enumerate them. This response comes from the very satisfied group:

> This is difficult. It's more of the whole thing. Pre-USNA, my family was very poor and after graduating everything I owned fit in a few boxes. Now I have a wife and 2 children in a $400K house in a nice area etc, etc. It comes with constant hard work and commitment. Things I'm most proud of or accomplished:¶- Family¶- Home¶- Coahing kids sports¶- Business accomplishemnts are a wide array of things:¶ - New product launches¶ - Quality projects that saved GE $ millions.¶ - In sales, growth at 4 times the rest of my group¶ - Cost reductions and parts manufactured while I was in Ops¶ - Patent awarded while I was Internet program manager¶ - There is tons. Hard to say which I think is best¶¶When I started with GE Appliances I owned the database of the more than 250 junior military officers (JMO) in the company and was on the JMO advisory group. I can speak a lot about who succeeded and why. (Survey ID #1705)

D. DISCUSSION OF QUALITATIVE FINDINGS

Now that the categories have been explained and a background built, the following section lays out some of the interwoven concepts. While the survey questions do not link the two groups together explicitly, some of the general characteristics of the groups lend themselves to comparisons. Overall, these two analyses provide a sampling of the human capital gained while at the USNA and the successes that come, even if indirectly, from those human capital gains. While some survey respondents directly discuss their dissatisfaction in the significant civilian accomplishment section, most do not. Descriptions of the two groups can be made and compared, but no direct causes can be ascertained since they were not specifically asked about the causes of their satisfaction levels.

1. Influences and Impacting Experiences

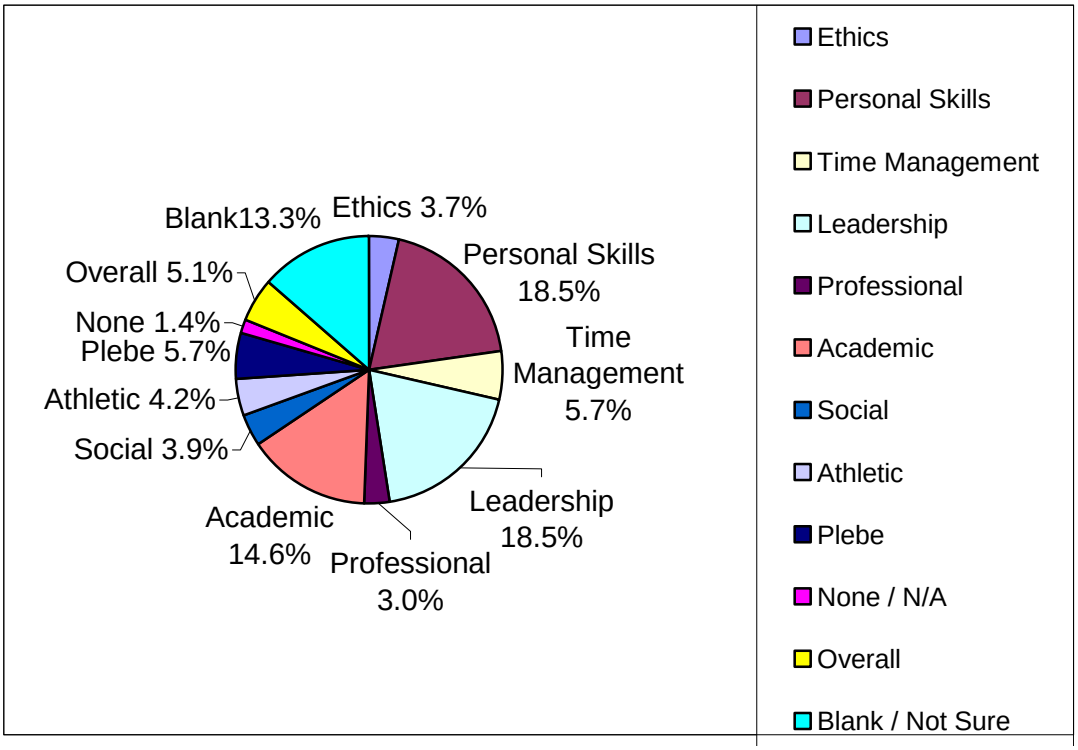
The survey takers listed various forms of personal, leadership, and academic skills from the USNA as the three largest contributors to current jobs by volume. The ‘Plebe’ experience holds a lot of relevance even outside of the military, as noted by its strong fourth place. Surprisingly, only 4.2 percent referred to some form of athletics, especially

since varsity athletes experienced a significant increase in pay for each year they competed. Interestingly, five percent thought the overall experience helped them on their current civilian job. Table 16 tabulates all the responses by response rate and Figure 11 displays the categories by relative impact via a pie chart.

Table 16. Summary Table of USNA Influential Experiences

Major Categories	**1st Segment Responses**	**Percentage of Responses**
Personal Skills	258	18.5%
Leadership	258	18.5%
Academic	204	14.6%
Plebe	79	5.7%
Time Management	80	5.7%
Athletic	61	4.2%
Social	54	3.9%
Ethics	51	3.7%
Professional	42	3.0%
Overall	73	5.1%
None	19	1.4%
Blank	186	13.3%

Figure 11. Percentage of Influential USNA Experiences



Three categories—ethics, personal skills, and time management—could all be a single category, yet ethics and time management would be overlooked and some of the most important aspects of personal attributes would have been lost in the great size of the category. If the categories would have been one combined category, it would have been 27.9 percent of the overall responses. This high reporting of personal skills indicates a strong collection of general human capital gained at the USNA. Midshipmen learn time management through a constantly high academic course load, many professional requirements, and the required participation in both ECAs and sports. One alumnus described the environment in which the time management skills were learned:

> The discipline, development of routine (read process in civpac land), and focus on results (grades, competition in sports/company competition, grease ratings . . . The academic rigors of 20+ credit hours, varsity sports participation (played 1.5, participated all 4 years), drove me to always handle more tasks than my peers after USN. (Survey ID # 1026)

This response also points out a plausible factor for the varsity athletes earning the significant three percent wage premium for every year of participation.

Apparently, the varsity athletes have even more requirements on their time in an already demanding environment.

As the other tie for the highest section, 'Leadership,' seemed quite interesting. Forty-three people, which makes up 16.7 of the category, cited the practical experience and / or the leadership billet as their most influential experience, yet having a higher billet in the brigade did not return higher salaries in either model. While not specifically mentioned in the USNA mission statement, the school focuses on developing leadership in their future officers. Fortunately, the leadership education, training, and experience benefit the graduates beyond military service even if the leadership positions do not correlate directly to salary. While the combined effect of all the responses describes leadership's importance for civilian careers, a couple of direct quotes better indicate the gravity of the leadership learned at the USNA. Some of the most expressive responses on the benefit of USNA taught leadership skills in the civilian sector follow:

> The leadership and stewardship concepts that one learns at USNA have had a tremendous impact on my performance in the civilian sector. These concepts are somewhat nebulous to many outside of the military but incredibly important to earning the respect of your coworkers and team building. (Survey ID #1373)

> I think the biggest impact on my professional development was learning the difference between leadership and management of people. There is a distinct difference, but we really cannot be successful in the military or in the private sector without being balanced in both areas. (Survey ID #1550)

> Leadership skills have given me the ability to take charge in any situation and lead. Many people in the corporate world don't have this capability, and when problems crop up, they can't react to it. (Survey ID #1376)

A significant portion of the surveyed graduates (3.3% overall) felt that their engineering degree or classes creates the most influence on their current job. However, the engineering major served as the base case for the salary models and did not return any significant increase (or even change) than the other categories. While the surveyed graduates may cite the importance of engineering for their current job, it does not return its value through higher salary. Once the Honors Graduates and Trident Scholars are held constant, GPA loses its increasing return to wage. This may be due to the strong

affect of the interaction between the motivate midshipmen of the two honors program, yet some of the survey responses indicate that GPA from the USNA does not have the same high requirements as it would from other schools for quality graduate schools.

> Just having the degree from there helped the most. It helped me get into a top 10 law school (despite a 3.3 GPA) and has consistently impressed my potential employers during interviews. (Survey ID #2520)
>
> Finishing Georgetown grad school with honors and a 3.7 GPA was nice (especially after achieving a lowly 2.44 at boat school). (Survey ID #207)
>
> I was not only admitted with less than the minimum GPA, but I have held my own in classes with much more recent (and thorough) academic preparation for my field.¶ Finally, I know of other graduates who were admitted to top schools (University of San Diego Law School, Dartmouth) with lower GPAs than mine. (Survey ID #952)

One of the most unique experiences at the USNA is the first summer indoctrination and school year, affectionately known as "Plebe Summer" and "Plebe Year" respectively. In fact, even up to 22 years later, 5.7 percent cite that experience as the most impacting on their current job. Some even say that, "Challenges of Plebe year have made every difficult situation since pale in comparison (including law school & the bar exam)" (Survey ID #2585). The following is the most descriptive analysis offered by a survey respondent of the connection between the Plebe experience and the civilian workforce:

> The trials and tribulations of plebe year have had the greatest impact on my civilian jobs. The training in multi-tasking, persistence, accuracy of work, ability to function in a team environment, have collectively contributed to my civilian work achievements. (Survey ID #425).

2. Civilian Accomplishments

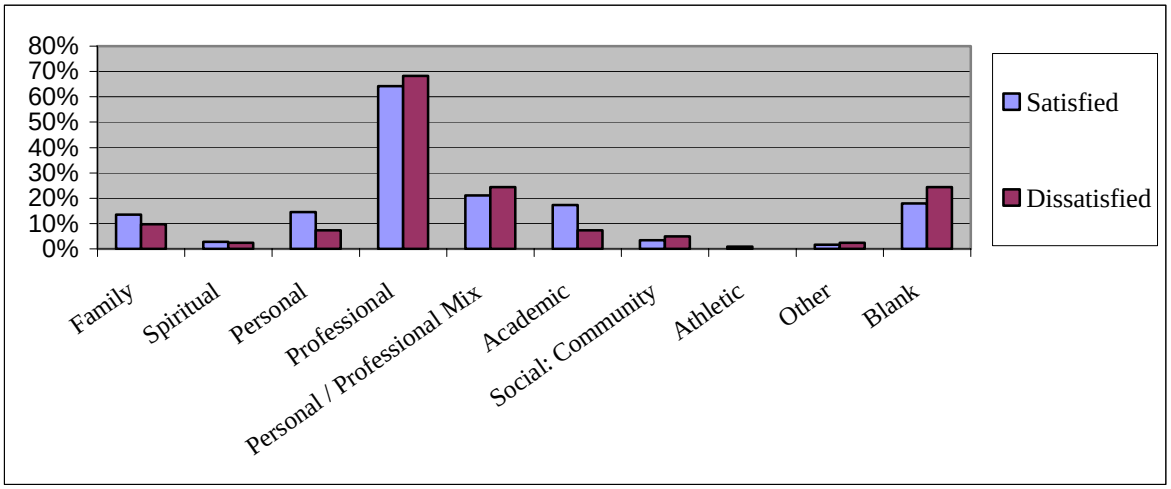
While the survey responses on significant civilian accomplishments provide enlightenment on many issues, the chief purpose for this study is the comparison of the two opposite satisfaction levels to learn more about satisfaction. Table 17 displays the response rates by categories and the satisfaction groups. Once again, the focus of the reporting lies with the percentage of people provided the response, but the percentage of

the answers has been provided to demonstrate those weights, too. Figure 12 displays the response rates of each of the satisfaction levels side by side for direct comparison.

Table 17. Summary Table of Civilian Accomplishments Sorted by Satisfaction Extremes

Major Categories	Family	Spiritual	Personal	Profess-ional	Personal / Profess-ional Mix	Academic	Social: Community	Athletic	Other	Blank
Very Satisfied	82	17	88	390	128	105	21	5	10	109
Percentage of Answers	8.6%	1.8%	9.2%	40.8%	13.4%	11.0%	2.2%	0.5%	1.0%	11.4%
Percentage of People	13.5%	2.8%	14.5%	64.1%	21.1%	17.3%	3.5%	0.8%	1.6%	17.9%
Very Dissatisfied	4	1	3	28	10	3	2	0	1	10
Percentage of Answers	6.5%	1.6%	4.8%	45.2%	16.1%	4.8%	3.2%	0.0%	1.6%	16.1%
Percentage of People	9.8%	2.4%	7.3%	68.3%	24.4%	7.3%	4.9%	0.0%	2.4%	24.4%

Figure 12. Response Rates of Civilian Accomplishments



The most cited categories are similar for the two groups and both are professional aspects. Thus, the previous satisfaction model seems to hold more validity than the low pseudo R-squared of 0.0833 and Log Likelihood Ratio of 0.9167 imply. More than half

(61.2) percent of the very satisfied people listed accomplishments in their professional life and 21.1 percent have listed a professional and personal mix of accomplishments. The very satisfied provided a plethora of positive professional accomplishments, whereas out of the 13 very dissatisfied people who discussed their professional life, two had bad experiences with the airlines, one felt behind the power curve due to his time in the military, another expressed displeasure with employers, and another cited her employer's major financial reasons as the direct cause of her dissatisfaction.

> I rated my current level of satisfaction as "very dissatisfied" because the plant where I work is very distressed financially as is all of Visteon. Because of drastic head cuts, the quality of life is bad and the workload is overwhelming. Lack of salaried resources makes it very difficult to be successful. That, combined with a traditional UAW hourly workforce that refuses to leave behind its unproductive ways makes it impossible to achieve performance goals. That said, I'm about to receive an offer from an international manufacturer and when I do, I envision I'll be leaving my current position. (Survey ID #2406)
>
> None for my employer. That is just resume B.S. (Survey ID# 885)
>
> Behind the curve in terms of age because of time in the military but in a fantastic role that without military background I probably would not have been hired for. (Survey ID # 1469)
>
> I am currently employed as an airline pilot. The industry is severely depressed, limiting opportunities. . . The desirable few air carriers that are hiring have barriers to employment. Most are artificial. The factors airlines use to determine whom to invite to an interview vary. Some airlines interview based on quotas determined by background (military vs. corporate vs. commuter, etc.), others by networking (i.e., you have to know a pilot at the company), others require an FAA type rating in expected equipment. Almost all use more than one of these three to varying degrees. It is relatively easy to get a low-paying job at a commuter/regional airline, and some brave few are still getting out and going that route in hopes of eventually (soon) gaining employment with a major airline (most "major" airlines do international flying, though some, like Southwest, do not). (Survey ID #406)
>
> I continued my flying career outside the military and flew commercially for two airlines, one a regional airline where I earned $17,500 in 1999, and the other a major airline. The major airline job was the culmination of much hard work and dedication (especially considering I had a Navy pilot background of helicopter and single engine fixed wing, which necessitated the stint at the regional level to get the multi engine fixed wing time I need to get hired by a major). It was bar none my dream

> job and I loved it. Additionally, it would have provided very well financially. Of course, 9-11 happened and I got laid off from United along with 2171 other pilots. I took a job briefly in outside sales and then another brief stint as an instrument simulator flight instructor for the US Air Force, before plugging into the USNA network and calling a Navy buddy of mine working in the defense contracting industry. That is the job I've held for a little over two years now. The pay is reasonable, but I think those classmates of mine that went 'straight into industry' from the Navy are doing much better than I am financially. Further, the job is work that I never did before and never aspired to do. It has been a difficult time adjusting to work that I feel does not resonate with my skill set and in fact, I am seeking desperately a job change. (Survey ID #220)

Since five out of 28 of the very dissatisfied group claim job difficulties if they speak about their jobs, an undesirable job situation appears to act as a severe dissatisfier. Whether the job itself or the inability to provide other needs due to lower than expected earnings leads the dissatisfaction experienced in this group can not be determined. However, success on the job clearly correlates to greater satisfaction.

On average, both groups clearly saw the family as the next most important aspect of life after the career. The 'Social' and 'Athletic' categories keep their low response rates; for the influencing experiences from the USNA, they were 3.9 and 4.2 percent, respectively. In the new categories, they drop even further. The very satisfied group has 3.5 percent of their people accomplishing events in social community activities and only 0.8 percent proclaiming victories in athletics. The very dissatisfied group has no mention of athletics and they are also less likely to participate in community service for this sample.

E. SUMMARY

Sorting written responses requires personal judgment; therefore some of the responses of these qualitative may have been classified differently by another analyzer. The inclusion of the survey identification numbers in the appendices provide another analyzer the ability to recreate the categorization used in this thesis and test the reliability of the analysis. Only one researcher produced this project, thus no internal reliability has been tested. This qualitative aspect of the project has similar limitations as the quantitative analyses, the findings indicate trends that may be generalized to the sample

for the periods studied, yet the true population could have some differences that have not been captured by this sample.

This qualitative section provided additional information that could not be captured by the quantitative models. Each process describes significant portions of the USNA experience and its relation to future civilian careers, yet all together the varied analyses create a strong description of the inputs of the USNA and military experiences and the outcomes of civilian accomplishments. The respondents overwhelming focused on personal attributes for the description of influential experiences from the USNA and primarily cited professional aspects of their significant civilian accomplishments.

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VII. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The surveyed graduates of the USNA fare well in the civilian sector after separating from the military. Some predictable factors contributed to better earnings, while a few expected ones did not. On the whole the USNA graduates express overall satisfaction, although there are few exceptions. Few tradeoffs between salary and satisfaction were found; however, the study of reported civilian accomplishments uncovered some plausible explanations for the USNA graduates who were dissatisfied. The cited influential USNA experiences portray very personalized, general human capital gains. Women graduates experienced a similar gender gap in wages as their female peers. Some civilian career preparation activities returned higher salary for the surveyed graduates.

1. Civilian Salaries

Some activities and background characteristics were associated with higher civilian earnings. Honors graduates, varsity athletes, and submariners earned wage premiums in both salary periods—at separation and current job. Club athletes, preparatory school attendees, and staff officers earned wage premiums immediately after leaving the military, but they did not hold onto their higher earnings. Promoted officers (O-4 and above) received wage premiums in the long run, but not in their first salaries after leaving the military. Some preparation activities were correlated to higher salaries, like networking and attending lectures and conferences, yet returns were not discovered for all of the job preparation activities. The surveyed graduates who sought jobs that needed more education, either graduate or undergraduate, earned a sizable return. Yet, some other certifications, not specified in the survey, correlated with lower salaries.

Selective Reservists suffered a penalty, but the effect decreased over time. Self-employed graduates suffered a wage penalty for their entrepreneurial spirit. However, those who were employed via other means reported much lower salaries.

The women in this sample earned lower wages than men. The single women earned very similar wage differential, gender gap, as measured by other studies, yet the

married women without children earned substantially less. However, the motherhood gap was quite small for this group. People with children did suffer a small penalty in wages; both genders experienced the lower salaries. The largest wage gap exists between the married men and the married women; married men earn more than their single peers whereas the married women earned less than their single peers.

Graduate education on active duty returned a sizable wage premium for the first salary. Its effect eroded over time until the period when graduate education became less important than the graduate degree type. The professional degrees received the highest salaries; business graduates, law graduates, and engineering graduates all received substantial wage premiums, whereas education graduates suffered a relatively large penalty.

Both specific and general human capital increased wages. Apparently, human capital earned in the military applied to the civilian labor market, yet the gains diminished with time in the military. The first salary model estimated an 11.3 year turn around point. A military officer would experience higher wages for every year of military service until he or she had stayed past the turn around point, after which wages decreased with additional military tenure. The turn around point was 8.2 years for the current salary model. Civilian work experience provided general human capital as shown by the increasing effect on wages as post-military time increased. Specific tenure increased salary after about six years on the job.

2. Influential Experience from the USNA

The respondents indicated that the USNA provided a large amount of personal development for the survey graduates. Many skills taught at the Academy were reported as powerful contributions to current civilian jobs. The most reported USNA experiences with the greatest impact on current civilian job were: personal skills; leadership; academic; time management; and plebe experiences.

3. Satisfaction

While the satisfaction model had difficulties capturing a large portion of contributions to satisfaction, it provided some trends that were repeated in the write-in portions of the questionnaires. The quantitative model explained some tendencies, yet

the qualitative write-in responses provided rich information about satisfaction levels. Not everyone may place the same emphasis on career, family, and community. Some change their perspective, thus describing satisfaction poses many difficulties. The following survey response correlates to the hypothesis that high salary and high satisfaction are trade-offs, yet the overall sample does not demonstrate this to be universally true.

> I worked in consulting for about five years, made lots of money, played lots of golf, took vacations, bought nice suits, joined the country clubs, . . ., and was utterly miserable. I had plenty of money, but I was spiritually bankrupt. I did things I regretted for many years. Today I am happy. I like my job, and I love my family. I no longer pursue money, rather I only pursue happiness. The pursuit of happiness is far more rewarding than the former.¶¶I work as a helicopter pilot in the Gulf of Mexico, work 14 days on/14 days off, and I have more time with my wife and son in any given month than many "business men" have in a year. Remember, no man ever used his last breath to say, "I wish I had spent more time at work and less time with my family." . . . Remember, an MBA may give you opportunity for a better job, more money, and a bigger office, but it doesn't do a damn thing to help your little boy learn to catch a baseball. (Survey ID #738, Class of 1988, Current Salary: $40,000- $60,000)

a. Tradeoffs

Marines show very strong odds of being dissatisfied with their civilian situation. Aviators and Trident Scholars were also more likely to be dissatisfied than satisfied. Marriage increased the odds of being satisfied. Additional military service increased the odds of being dissatisfied, yet has an increasing effect on salary. Military service provided the only demonstrated tradeoff of salary and satisfaction for this study.

b. Satisfaction Viewed through Significant Accomplishments

While this analysis used an indirect approach to study satisfaction, some respondents included unprompted reasons for their satisfaction in the written comments section. The question prompted the survey takers to describe their significant accomplishments, yet many of the dissatisfied people described their satisfiers and dissatisfiers. Not all divulged their reasons for their current dissatisfaction and no question directly sought the reasons, yet many helpful insights were gained through this process. Many dissatisfied graduates cited professional difficulties. Both Aviators and

Marines described reasons for not being satisfied by referring to career issues. The many discussions of professional difficulties imply that lower job satisfaction correlates with lower overall satisfaction.

B. RECOMMENDATIONS

The survey elicited responses from many early USNA graduates, thus expanding this study to earlier class years could provide excellent insight into intergenerational career experiences. Future studies could include the midshipmen and junior naval officers of today by expanding the survey to include later graduating classes. This expanded study could discover enhanced programs and human capital gains of certain periods that may be missed with military-centric studies of the USNA, such as the gender integration of 1976.

Since this study focused solely on the USNA, an expansion to other U.S. military academies (and international ones) could test whether the experiences are unique to the USNA. Other service academies may have similar experiences or one could find that some schools contribute greatly in some career fields but lag in others. An expanded study could also present new information about the relative quality differential of military academies by comparing these graduates to graduates of the Reserve Officer Training Corps at civilian universities and colleges. Also, including separated military officers, who were commissioned through the Officer Candidate (or Training) Schools, would help separate out the specific military experience from the various education and commissioning experiences and the varying effects on civilian career experiences.

No matter what other populations are studied, a few changes to the questions would improve the survey. Allowing continuous choices for numbered responses would provide more precise information. For example, survey respondents should be allowed the choice of years rather than ranges. A write-in question concerning the reasons for the varying levels of satisfaction should also be added.

APPENDIX A. SURVEY: CAREER EXPERIENCES AFTER USNA

Career Experiences After USNA
This survey is for the classes of 1985-1996 only. Thank you for your interest, but if you are not in the classes 1985-1996 please do not continue with this survey.

Part I: Academy Experience - Please indicate your experiences while at the Academy.

1. What year did you graduate from USNA? Select A Year (Drop down menu)

2. Did you attend Prep School or a Foundation school before USNA?
□Yes
□No

3. What was your major (what major did you graduate from)?
□Group I: Engineering
□Group II: Math/Sciences
□Group III: Humanities/Social Science
□Economics/Management (from the1980's)

4. Did you take an honors major?
□Yes
□No

5. Were you a Trident Scholar?
□Yes
□No

6. What was your Academic GPA at graduation?
□3.51-4.00
□3.01-3.50
□2.51-3.00
□2.00-2.50

	0 years	1 year	2 years	3 years	4 years
7. How many years did you play any varsity sport?	□	□	□	□	□
8. How many years did you play a club sport?	□	□	□	□	□

9. Striper duties senior year (select all that apply):
□Squad leader
□Company staff
□Battalion staff
□Regimental staff
□Brigade staff
□Other

10. Were you a commander of (select all that apply):
□Company
□Battalion
□Regimental
□Brigade
□I was not a commander
□Don't remember

11. What experience at the Academy has had the greatest impact or influence on your current job? (Blank area for fill-in here.)

Part II: Please tell me about yourself.

12. What is your gender?
□Male
□Female

13. What is your current marital status?
□Single
□Married
□Separated/Divorced
□Widowed

14. Were you married while on active duty?
□Yes
□No
15. How many legal dependents are currently in your household?
□0
□1
□2
□3+

Part III: The following questions deal with your military experience.

16. What was your service community coming out of the Academy?
□SWO
□SUBS
□Navy Air
□USMC Ground
□USMC Air
□Special Warfare/Operations
□Restricted Line
□Staff Corps
□Cross-service
□Other

17. What is your current service community (or what was it when you separated)?
□SWO
□SUBS
□Navy Air
□USMC Ground
□USMC Air
□Special Warfare/Operations
□Restricted Line
□Staff Corps
□Cross-service
□Other

18. How many years have you been/were you on Active Duty?
□1-5
□6-8
□9-11
□12-13
□14-16
□17-20

19. What was the highest rank that you achieved while on active duty?
□O1-02
□O3
□O4
□O5
□O6

20. Are you currently on active duty?
□Yes
□No

[If yes to question 20, survey continues to number 21 and stops. If no to question 20, survey continues starting with question 22.]

21. If yes, why did you decide to remain in the military?
Please rank the significance from 0-5
(0-doesn't apply, 5 being very important)

Enjoy billet/job	**0□ 1□ 2□ 3□ 4□ 5□**
Pay	**0□ 1□ 2□ 3□ 4□ 5□**
Benefits	**0□ 1□ 2□ 3□ 4□ 5□**
My personal satisfaction of being a leader	**0□ 1□ 2□ 3□ 4□ 5□**
Education opportunities	**0□ 1□ 2□ 3□ 4□ 5□**
Retirement	**0□ 1□ 2□ 3□ 4□ 5□**
Health benefits	**0□ 1□ 2□ 3□ 4□ 5□**
Lifestyle	**0□ 1□ 2□ 3□ 4□ 5□**
The military leadership structure	**0□ 1□ 2□ 3□ 4□ 5□**
Other	**0□ 1□ 2□ 3□ 4□ 5□**

Career Experiences After USNA Part III: Please share your experiences since you left the military.

22. How many years have you been in the reserves?
□I did not serve in the reserves.
□1
□2
□3
□4
□5+

23. Why did you leave the military?
Please rank the significance of each on a scale of 0-4:
(0-doesn't apply, 1-Not important; 2-Somewhat important; 3-Important; 4-Very important)

Pay	**0□ 1□ 2□ 3□ 4□**
Benefits	**0□ 1□ 2□ 3□ 4□**
Lifestyle - stress, moving, hours	**0□ 1□ 2□ 3□ 4□**
Family pressures	**0□ 1□ 2□ 3□ 4□**
Desire for civilian job	**0□ 1□ 2□ 3□ 4□**
Did not enjoy billet/job	**0□ 1□ 2□ 3□ 4□**
Did not enjoy specific military community	**0□ 1□ 2□ 3□ 4□**
The military leadership structure	**0□ 1□ 2□ 3□ 4□**
Limited promotion opportunity	**0□ 1□ 2□ 3□ 4□**
Spouse's employment/career	**0□ 1□ 2□ 3□ 4□**
Other	**0□ 1□ 2□ 3□ 4□**

24. What do you think was the most useful experience from USNA to make you competitive in the Civilian World?

Please rank the significance of each on a scale of 0-4:
(0-doesn't apply, 1-Not important; 2-Somewhat important; 3-Important; 4-Very important)

Academy leadership opportunities	**0□ 1□ 2□ 3□ 4□**
Academy academics	**0□ 1□ 2□ 3□ 4□**
Academy athletics	**0□ 1□ 2□ 3□ 4□**
ECAs	**0□ 1□ 2□ 3□ 4□**
Graduate school while in military	**0□ 1□ 2□ 3□ 4□**
Graduate school after military	**0□ 1□ 2□ 3□ 4□**
Overall military experience	**0□ 1□ 2□ 3□ 4□**
Other	**0□ 1□ 2□ 3□ 4□**

25. How has your overall military training affected your job performance in the civilian world?

Please rank the significance of each on a scale of 0-4:
(0-doesn't apply, 1-Not important; 2-Somewhat important; 3-Important; 4-Very important)

Work ethic	**0□ 1□ 2□ 3□ 4□**
Patience with trivial matters	**0□ 1□ 2□ 3□ 4□**
Handling responsibilities	**0□ 1□ 2□ 3□ 4□**
Dealing with people	**0□ 1□ 2□ 3□ 4□**
Leadership	**0□ 1□ 2□ 3□ 4□**
Delegation	**0□ 1□ 2□ 3□ 4□**
Business skills (accounting/HR/marketing, etc.)	**0□ 1□ 2□ 3□ 4□**
Multi-tasking	**0□ 1□ 2□ 3□ 4□**
Other	**0□ 1□ 2□ 3□ 4□**

26. I believe I am ahead of my civilian counterparts because of my time in the military.

□Strongly disagree
□Disagree
□Neither agree nor disagree
□Agree
□Strongly Agree
□No opinion

27. While you were on active duty, what preparation did you make for a civilian career? (Check all that apply)

□Nothing
□I attended graduate school
□Networking

□Sought employment counseling
□Joined a professional association
□Sent out resumes
□Attended lectures/conferences in the chosen civilian field
□Other

28. When you left active service, did you need additional education/training to qualify for the kind of work you had in mind? (Check all that apply.)
□No
□Undergraduate classes
□Graduate school
□Technical school
□Other

29. If you attended graduate school, when did you attend?
□I attended after separating and I attended full-time.
□I attended after separating and I attended part-time.
□I attended after separating and I attended weekends/nights.
□I attended after separating and I pursued online courses.
□I completed my graduate degree while on active duty.
□I did not pursue a graduate degree.

30. If yes, which graduate school degree did you pursue?
□Business administration, including logistics, HR, marketing and related disciplines
□Engineering
□Education
□Math or science
□Humanities/social science
□Health sciences, including public health, medicine, and related disciplines
□Law (JD)
□Public administration, including national security or public policy
□Other

31. How much prestige does an ex-military officer have in the civilian community?
□Very much below average
□Below average
□Average
□Above average
□Very much above average
□Not sure

32. After leaving the service, how easy was it to find a desirable civilian job?
□Very difficult
□Fairly difficult
□Fairly easy
□Easy
□I did not seek a civilian job.
□I did not find a desirable civilian job.

33. Years since leaving the military?
□1-2
□3-4
□5-6
□7+

Part IV: The following questions concern your current employment status.

34. Are you currently: (Please check all that apply.)
□Working full/part-time in a civilian job
□Self-employed
□Unemployed
□In School
□Retired from civilian job
□Other

35. What is your current career field?
□Finance, insurance, real estate, and related occupations
□Business, management, or operations research
□Public administration, public policy and related government occupations
□Hospitality services
□Creative and performing arts
□Transportation
□Engineer, architect
□Education, librarian, counselor, education administration
□Computers, information technology, and related occupations
□Law, politics, law enforcement, and related judicial careers
□Health services, medicine, and related occupations
□Other

36. How many people are employed with your current organization?
□Small (less than 50 employees)
□Medium (about 50-200 employees)
□Medium large (between 200-1,000 employees)
□Large (more than 1,000 employees)

37. What was the salary range from your first civilian job after the Academy?
□Less than $20,000
□$20,001- 40,000
□$40,001-60,000
□$60,001-80,000
□$80,001-100,000
□$100,001-125,000
□$125,001-150,000
□$150,000+

38. How many times have you changed jobs since you separated from active service?
□None – I am still with the same employer
□1-3
□4-6
□More than 6 times

39. How long have you been with your current employer?
□0-2 years
□3-5 years
□6-8 years
□9+ years

40. What is your current salary range?
□Less than $20,000
□$20,001- 40,000
□$40,001-60,000
□$60,001-80,000
□$80,001-100,000
□$100,001-125,000
□$125,001-150,000
□$150,000+

41. Compared to other workers with college degree and similar age, how do you believe your current salary compares?
□Significantly higher
□Somewhat higher
□About same
□Somewhat lower
□Significantly lower
□Don't Know

42. Considering everything, how satisfied are you with your current civilian situation?
□Very dissatisfied
□Dissatisfied
□Neither dissatisfied nor satisfied
□Satisfied
□Very satisfied

43. As a civilian, what are some of your significant accomplishments? (Please do not be humble!)
(Blank area for fill-in here.)

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APPENDIX B. QUALITATIVE CATEGORIZATION OF INFLUENTIAL USNA EXPERIENCES

Ethics	Ethics & Values	5	2441	1347	730	439	439	417				
Ethics	Honor Code/Concept	10	1334	1382	919	738	73	1872	1936	824	825	484
Ethics	Honesty	1	1067									
Ethics	Honor/Integrity	19	1834	2178	2024	40	561	207	541	2257	1402	758
			1945	698	737	1473	527	2626	2218	1258	2517	
Ethics	Honor Council	4	874	2519	1505	493						
Ethics	Honor Violations	3	861	1921	1830							
Ethics	Moral Courage/Doing the right thing	3	991	243	583							
Ethics	High Standards	1	964									
Ethics	Character Building	4	1901	2693	93	1903						
Ethics	Religious	2	1314	615								
Category Total		52										
Personal Skills	Self-Discipline	38	1186	1186	2616	691	2302	1984	315	2651	469	1462
			1216	695	1751	12	2245	11	1209	1250	821	1932
			113	2446	700	1	1722	32	102	1732	2172	1059
Personal Skills			2627	756	186	2730	2719	2066	1371	2719	1100	
Personal Skills	Stress Management	25	2630	1380	2390	1568	2283	400	2063	94	413	309
			1469	180	604	1240	719	673	963	1389	2726	837
			101	1516	346	298	1026					
Personal Skills	Time Management	80	1467	611	643	672	1286	1385	2032	2085	2480	1006
			2387	1101	1348	911	295	2742	883	907	169	2167
			173	1835	2376	1483	2083	1229	2110	2690	2386	215
			2612	2022	1375	976	367	480	2702	2187	2165	1939
			2330	90	359	718	522	1003	1827	1398	457	2058
			35	2217	1749	1109	382	902	1478	2018	261	2363
			131	1351	726	2145	1355	2492	1842	228	1290	86
			2468	2248	547	1930	697	1497	832	985	262	509
Personal Skills	Prioritizing	15	1716	1992	2069	826	1767	2639	882	1977	1825	1044
			1492	945	136	2080	2150					
Personal Skills	Organization	9	1927	1805	176	1165	2017	142	1595	103	1164	
Personal Skills	Attention to Detail	10	2139	1211	2557	350	398	1182	2151	979	2393	574
Personal Skills	Focus	1	98									
Personal Skills	Communication /Public Speaking	4	1699	971	477	2062						
Personal Skills	Confidence	14	1388	205	1633	1700	1685	787	2124	1168	1441	1019
			2226	954	415	1484						

Personal Skills	Diversity / Tolerance	11	1443	150	922	1327	1870	2364	95	518	1907	1379
			1137									
Personal Skills	Adaptability	4	336	1019	1831	2114						
Personal Skills	Ability to multi-task	29	2490	2361	773	1088	2543	1807	449	155	2221	218
			2720	179	2724	2643	814	1267	2406	2251	2332	1704
			1619	2008	589	2349	2395	1022	1705	1418	595	
Personal Skills	Responsibility / Accountability	15	802	1383	7	2122	1336	1415	1850	2463	1584	2527
			2736	600	89	1427	2429					
Personal Skills	Endurance/Handle high task loading	32	2015	1888	646	1341	2123	2220	2169	2209	157	957
			679	2500	1244	292	83	2647	344	1935	319	347
			501	1232	670	1839	584	399	1403	229	760	780
			1490	944								
Personal Skills	Learning Max Capacity	8	2499	2271	1546	1486	970	1298	1340	1265		
Personal Skills	Work Ethic	13	194	332	77	2244	443	1420	1647	1954	227	1010
			1247	418	1434							
Personal Skills	Problem Solving	11	2603	366	877	1986	1814	329	1574	521	2420	1338
			1951									
Personal Skills	Personal Conflicts	1	2202									
Personal Skills	Overcome Difficulty	10	1858	1114	1596	324	1519	2368	388	1540	609	1455
Personal Skills	Lessons Learned	1	1049									
Personal Skills	Achievement	6	899	1270	2126	2449	66	2377				
Personal Skills	Motivation	1	1654									
Category Total		338										
Leadership	General	173	757	2273	2129	2199	2007	409	1998	1423	1824	1313
			2000	1865	1080	2142	14	1242	1924	5	743	1400
			1855	2600	1085	949	2156	222	1419	885	2410	1237
			2625	2621	1179	1007	725	15	1965	1581	534	2366
			1797	2026	2109	2735	2470	2668	132	304	189	1655
			554	2537	327	1449	1740	2550	2658	1664	1848	1809
			2300	2471	2427	97	865	1255	2681	1206	1091	1971
			2346	166	1666	1110	2243	579	1224	2247	2398	272
			1008	1599	8	140	2359	1279	1292	128	339	2448
			2725	2560	2005	1217	2618	1259	200	694	548	663
			1550	2196	114	116	1594	2162	2136	1122	507	2010
			937	402	1539	568	2198	1188	1521	1894	1031	2321
			1563	2238	912	1096	2048	133	2343	2443	910	762
			317	2442	489	2041	1376	291	1303	2298	2484	2378
			118	473	1822	2428	1488	1342	331	1504	2267	990
			1928	504	1373	606	1124	753	1886	184	2646	1851
			497	2561	1335	119	190	440	30	1780	2304	709

			260	1459	141							
Leadership	Practical	43	419	1035	552	2536	2240	2255	1033	1077	2113	812
Leadership	Leadership		724	1268	896	2489	2431	1289	859	1957	2295	1612
Leadership	Experience / Billets		761	839	1112	2371	1073	146	393	1823	1317	61
			2732	2447	959	2573	3	391	1041	714	256	2369
			818	2653	2407							
Leadership	Message to Garcia	10	1000	566	2235	1220	857	1429	1837	109	2093	1416
Leadership	Teamwork (non-athletic specific)	15	1278	1944	115	1435	2530	790	46	1413	1458	2741
			253	1273	224	2504	804					
Leadership	Decision-making	3	88	1499	448							
Leadership	Motivation of others	4	833	2518	2034	1775						
Leadership	Leadership by example	2	878	202								
Leadership	Negative Examples	2	2577	2204								
Leadership	Leadership by example	4	1215	844	1985	1787						
Leadership	Leadership in ECAs	2	1319	1353								
Category Total		258										
Professional	General	10	2231	198	424	727	2089	239	767	717	1757	2042
Professional	USMC	6	2474	2100	1659	2703	2551	420				
Professional	Summer Cruise / Experience (not Plebe)	12	621	306	701	755	1052	655	408	923	563	625
			297	875								
Professional	Internship	2	210	1605								
Professional	Interaction w/ Military Personnel	7	1510	777	254	2127	1107	254	958			
Professional	Foreign Exchange	3	645	575	601							
Professional	War Gaming	1	845									
Professional	Knowledge of DOD	1	1149									
Category Total		42										
Academic	General	34	1002	690	1266	2563	1477	451	2275	1604	2206	2309
			1391	1475	1318	1953	1988	1995	105	1973	43	1321
			966	395	2306	2099	1171	1226	1248	669	2607	2029
			686	671	796	581						
Academic	Quality	3	1311	1291	2149							
Academic	Rigor	4	225	1812	2423	1324						
Academic	Challenge	5	840	1439	2131	2290	1509					
Academic	Problem Solving (Classroom)	5	1295	206	2064	1087	1157					

Academic	Major	7	1706	2678	2662	2614	1079	2203	1121					
Academic	Major / Class: (specific)													
Academic	Econ	10	1016	203	2233	1522	806	436	233	2687	195	1384		
Academic	Engineering	46	255	587	226	897	490	1276	1921	864	145	1830		
			599	2404	1360	498	2287	377	1369	181	1818	2381		
			2182	464	906	2117	580	163	742	570	1538	1996		
			1307	1381	1999	167	1961	52	390	75	2254	220		
			2654	1856	1938	1028	1218	2188						
Academic	Math	1	641											
Academic	Science	6	1975	2594	1075	2301	2234	2179						
Academic	English	4	1343	1370	2320	1125								
Academic	Language	1	2528											
Academic	History	4	1979	453	1354	2352								
Academic	Political Science	4	952	925	1282	2258								
Academic	Science/Technical Background	6	1821	476	496	2531	2493	1285						
Academic	Naval/Defense Background	5	2515	1426	1997	1432	696							
Academic	Computer Science	12	2734	1094	1457	998	771	2440	2288	276	161	125		
			1573	2016										
Academic	Increasing Mental Capabilities	2	699	819										
Academic	Meet Deadlines/ Schedule	7	460	138	1362	1941	26	274	2146					
Academic	Writing	3	2629	27	2229									
Academic	Academic Board/Probation	4	2043	2068	2669	447								
Academic	Grad Education	3	1982	2335	1937									
Academic	(Independent) Research	6	828	2738	2532	1130	1917	1665						
Academic	Graduation/Degree	22	294	296	338	1976	2270	2592	487	2615	2520	711		
			2256	1670	1745	2331	1755	618	1158	1197	1401	535		
			2324	803										
Category Total		204												
Social	ECA	11	2581	2405	1015	1470	798	10	289	1053	2375	1800		
			1196											
Social	Group Dynamics	2	1919	1330										
Social	Friends	14	2128	2208	1252	2347	247	1219	2078	1993	1095	2260		
			1875	303	706	2426								
Social	Business/ Networking	12	2699	2584	456	2081	2115	982	2709	973	747	545		
			1055	1511										
Social	Camraderie / Relationships	7	9	2091	1061	340	680	1933	2634					

Social	Meeting People (Personal)	8	1374	188	1132	1970	1833	2713	2153	2002			
Category Total		54											
Athletic	Sports	19	795	6	2467	139	631	1283	967	847	2374	231	
Athletic			474	1895	1498	2362	1246	259	1583	2316	853		
Athletic	Team Experience Sports	6	569	1815	1048	585	422	710					
Athletic	Varsity	21	2570	2415	1943	1363	647	933	1392	70	1542	768	
Athletic			2464	1430	364	1204	2103	627	2597	1689	2597	84	
Athletic			1208										
Athletic	Competition	4	537	994	1257	1018							
Athletic	Leadership (Sports)	11	1200	1337	693	112	1817	705	559	1620	308	199	
Athletic			1083										
Category Total		61											
Other		7	723	1414	2659	2655	143	1940	1060				
Other	Negative	6	127	452	1066	120	1194	1952					
Other	Come-arounds	1	1447										
Other	NPQ	2	2533	2185									
Other	Post-Graduation	1	1893										
Other	Benefits of having a USNA diploma?	2	2656	178									
Other	Chow Calls	1	1819										
Other	3 Basic Responses	1	988										
Category Total		21											
Plebe	Summer	21	1753	2013	2186	652	2508	1193	1518	159	2513	2587	
Plebe			2402	392	2289	2051	2350	1177	763	214	2727	191	
Plebe			310										
Plebe	Year	45	2585	815	2582	677	2211	427	1651	1496	152	536	
Plebe			2414	2141	827	185	517	1103	271	122	2160	2250	
Plebe			1161	2555	1524	540	523	269	2601	1904	124	56	
Plebe			712	425	2558	2227	1466	665	2434	2722	2215	948	
Plebe			2223	733	2112	805	1945						
Plebe	Detail	13	2553	2119	2158	1756	2342	1502	1967	880	1876	2318	
	Training Plebes		2276	1662	2541								
Category Total		79											
None		15	1387	147	471	557	2556	2707	783	1029	2631	2275	
None			54	640	43	648	326						
Category Total		15											
Overall	General	22	1737	2559	2657	1931	1189	1471	1827	1176	2525	144	
			1913	1361	2542	374	2418	660	2230	785	491	766	
			468	2046									
Overall	Nothing Specific	51	2274	633	2351	2201	1056	1163	1947	168	930	428	
Overall	and No Single		2339	99	1260	1713	2511	1668	92	2072	404	479	
Overall	Experience		1407	811	450	468	2087	2037	2152	873	2549	245	
			2263	2413	10	2031	96	2181	658	234	223	37	

			481	1606	1598	1878	876	2632	135	407	1350	1372		
			2604											
Category Total		73												
Not under-standable	Incomplete	8	577	354	2660	81	731	1776	71	1331				
Category Total		8												
N/A / Don't Know		5	1813	59	1092	1406	946							
Category Total		5												
Blank		186	4	2	13	58	68	87	100	129	171	244		
			251	316	342	358	376	406	411	414	416	445		
			465	472	532	551	576	629	630	634	636	688		
			704	736	769	858	915	929	935	947	978	980		
			997	1039	1054	1064	1081	1150	1253	1256	1277	1293		
			1300	1325	1345	1357	1405	1452	1456	1476	1485	1493		
			1559	1631	1645	1695	1763	1765	1860	1911	1948	1958		
			1960	1962	1981	2009	2011	2040	2086	2090	2143	2197		
			2207	2213	2272	2278	2279	2312	2315	2323	2328	2354		
			2370	2430	2436	2437	2439	2444	2460	2469	2475	2478		
			2486	2506	2509	2539	2545	2548	2566	2568	2583	2596		
			2605	2623	2624	2637	2640	2686	2716	2743	31	39		
			57	117	172	389	432	650	685	720	751	754		
			1134	1148	1155	1210	1914	1946	2373	2419	2611	34		
			60	134	241	282	299	687	927	1040	1076	1099		
			1448	1472	1474	1572	1652	1863	2050	2205	2385	369		
			483	586	593	692	856	872	891	905	1349	1366		
			1495	2047	2456	2706	323	564	689	934	1806	1881		
			2060	2191	2214	2487	2510	2664						
Category Total		186												
Grand Total		1396												

APPENDIX C. SIGNIFICANT CIVILIAN EXPERIENCES BY EXTREME SATISFACTION LEVELS

VERY DISSATISFIED

Category	Subcategory	Count	Corresponding Survey Identification Numbers
Spiritual		1	766
Family		4	1883 134 766 2597 1107 481 1229
Category Total		4	
Personal Attributes	Leader	2	691 1883
	Successful	1	1291
Category Total		3	
Personal/ Professional Mix	Awards	2	181 812
	Published	2	1883 259
Entrepreneurial	Own Company / Business	4	885 2406 2413 481
	Start-up Company	2	1988 134
Category Total		10	
Professional Accomplishments	Top Sales	2	1484 1336
	Promotions	4	1478 766 319 2406
	Behind the Curve	1	1469
	Disgruntled	1	2406
	Positional (V/P)	1	766
	Management	5	1149 756 2413 2551 2406
	Pilot/Aviation Career	2	406 220
	Low job sat.	1	1291
	Satisfaction with Work No other Specifics	1	2017
	Work for Top Business	5	1484 1336 1478 1469 2413 1149
	Government Related Jobs	4	220 1434 1947 1253
	Public Service	1	2364
	Reserves	0	
Category Total		28	
Academic / Education		3	1883 1478 2364
Category Total		3	

Community	2	1883	1149									
Category Total	2											
Athletic												
Category Total	0											
Blank	10	100	215	404	445	483	1040	1474	2051	2439	2458	
None	0											
Other	1	409										
Grand Total	61											

VERY SATISFIED

Category	Subcategory	Count	Corresponding Survey Identification Numbers									
Spiritual		17	2414	1125	1015	1361	1384	490	11	747	1124	2630
			1053	737	583	827	166	203	930			
Category Total		17										
Family		82	135	1076	2178	2415	1137	1913	1176	2630	724	1232
			128	105	541	1449	447	1967	1053	737	1839	1130
			1355	509	1876	254	52	2343	2561	853	773	2664
			1389	2243	94	719	586	2543	1563	93	698	1059
			1919	919	2490	1596	1872	1574	1158	600	1931	876
			143	1850	1705	1907	35	1416	1827	1817	652	757
			1662	1439	837	1842	2634	747	795	125	882	1048
			583	176	771	224	2644	577	768	2240	1015	1361
			2119	166								
	Home School Teacher	(3)	1355	757	1662			Repeated in Family				
Category Total		82										
Personal Attributes	Honor/Integrity	3	821	2248	1914							
	Leader	29	959	2081	806	129	1700	1258	771	11	1797	982
			331	536	1206	2368	912	1331	2735	935	1255	1957
			487	1402	1066	2469	813	1459	2005	815	2441	
	Financial Success	17	84	844	125	189	2393	455	1048	1817	652	2276
			1258	2735	1767	2442	2260	566	2181			
	Desirable (Professionally)	4	2300	727	455	1196						
	Improver/ Innovative	35	1331	392	223	811	2026	1539	2169	496	119	1855
			2145	1505	1091	1385	2627	1171	1620	1381	125	2393
			1705	109	650	1904	1196	2115	1033	191	875	2191
			798	203	161	102	6					
Category Total		88										
Personal/ Professional Mix	Published	10	274	858	767	1215	255	32	569	1209	706	1967

	Public Speaker	1	706												
	Subject Matter Expert	2	1215	1237											
	Awards	50	98	369	2470	2570	2418	2499	112	1295	1633	1654			
			1435	1842	569	1209	527	998	2188	1619	2167	832			
			1462	768	2530	587	30	2442	1960	32	440	847			
			114	493	2202	95	146	34	2186	1952	982	1937			
			1331	806	1540	1850	143	2726	1449	2343	705	615			
Category Total		63													
Personal/ Professional Mix (Entrepreneurial)	Business Starter/ Self Employed	54	2553	422	2078	189	75	882	796	418	1921	90			
			1353	2563	1664	89	207	1048	184	1060	2510	31			
			2146	2267	2208	1132	1197	743	1340	790	51	2736			
			706	9	326	1606	1685	2172	2726	1812	2251	1455			
			2188	11	1416	390	1827	1817	652	773	844	496			
			119	1033	767	1384									
	Patents	11	581	390	2625	261	1193	1402	1066	1732	1705	2625			
			1655												
Subcategory Total		65													
Category Total		128													
Professional (Accomplish-ments)	Fortune #' Company or other Top Business	32	693	1992	408	1775	440	1825	1392	1255	2447	2037			
			1369	988	566	2707	2141	1631	324	1659	455	1858			
			274	540	231	2029	2186	1176	806	432	194	2233			
			1327	490											
	Top Sales	28	1336	2398	647	1067	731	2500	2321	2537	295	1676			
			535	2114	1737	191	1164	2443	980	2119	875	166			
			1110	527	1858	184	84	377	1327	1268					
	Promotions	44	1619	2393	1568	1875	957	1087	97	915	633	2071			
			1022	2530	587	2240	827	30	2442	1196	2115	1033			
			2270	935	417	1960	2233	1327	2149	310	971	1026			
			584	833	627	1237	1858	2664	9	509	566	2037			
			1369	980	2119	2007									
	Certification(s) (Non-Aviation)	19	2089	2066	2203	1381	1732	627	1237	11	1008	747			
			1179	1341	1654	451	1540	1496	89	1655	118				
Category Total		123													
Professional Positional Power	CEO/ Chairman	7	118	2611	896	1985	1303	2611	896						
	President	7	2611	896	768	2647	2660	1850	2443						

	Partner	5	131	1595	2735	575	34							
	COO	7	1985	8	125	982	1516	982	1516					
	CFO	3	896	2634	2048									
	Vice President	18	2273	366	1704	847	1957	2181	2191	798	203	1459		
			1268	1985	420	432	1904	1516	184	875				
	Other Positions	15	377	1088	1965	424	347	109	650	2332	1767	118		
			447	2644	2647	1384	2448							
Category Total		62												
Professional (Management)	Project Manager	17	2456	1996	1292	2592	615	1655	2274	577	2295	1985		
			451	261	1193	1876	2332	833	1164					
	More General	29	1343	210	658	2287	73	54	625	2644	1224	1986		
			705	194	1540	2371	231	2029	1511	627	1237	706		
			254	52	1855	1022	417	1960	2233	1327	2447			
Category Total		46												
Professional (Specified Fields)	Pilot/Aviation Career	14	2656	1893	2354	787	2361	1414	2346	228	2658	1834		
			136	697	2046	840								
	Engineering	9	2304	1079	2091	1496	261	1193	2203	254	52			
	Lawyer/ Attorney	11	1406	34	27	925	1598	176	167	1153	146	35		
			1392											
	Doctor	7	239	480	1106	1812	579	883	95					
Category Total		41												
Professional (Government Related Jobs)	Government Related Jobs	18	2573	340	2493	2276	2238	1993	2662	2603	2113	1954		
			1475	1800	88	2600	583	198	958	2531				
	Intelligence	11	199	574	155	1490	906	2041	2062	105	198	587		
			2270											
	DoD	22	2742	897	1713	395	2288	407	2596	388	1895	1360		
			226	1165	224	2251	795	1210	755	998	2630	496		
			2295	2149										
Category Total		51												
Professional (Public Service)	General	1	1516											
	Law Enforcement	15	755	754	144	2350	1787	1824	460	1509	2681	1933		
			2489	1348	1094	541	1825							
	Teacher	10	727	1246	1282	2402	1937	2558	686	1455	274	853		
Category Total		26												
Professional (Satisfaction with Work /		22	946	1041	139	1594	709	2127	413	1924	2201	178		

No other Specifics)			1499	780	2064	2275	1706	1486	1307	2624	1244	339
			593	2209								
Subcategory Total		22										
Professional (Reserves)		19	1357	1124	75	1979	2136	490	1008	724	420	2664
			1839	1130	958	224	858	767	1215	988	930	
Category Total		19										
Professional Total		390										
Academic / Education		105	2553	2707	274	417	575	755	1361	1971	1331	261
			579	548	184	930	540	75	173	1176	1928	806
			480	1106	1540	189	1379	952	455	114	2186	724
			2141	46	2202	959	135	1370	2371	1110	2167	1357
			1631	858	2561	2653	768	493	865	2178	1179	136
			1406	751	324	2048	2081	2415	2248	432	1124	146
			1125	420	35	1865	34	2647	832	81	30	2270
			422	1598	1462	1913	2	1341	883	1137	1858	1076
			1829	2270	10	2043	1767	2078	1066	1435	2573	585
			95	2471	2393	340	1659	308	2304	1193	2664	1907
			2274	207	1967	84	347					
Category Total		105										
Community	USNA Alumni Association/ Blue & Gold Officer	21	308	1952	9	490	1400	1797	982	2660	166	1737
			451	878	1435	1913	1110	1705	128	1965	2240	827
			32									
Subcategory Total		21										
Athletic	Sports	2	883	1088								
Physical Fitness	Marathons	3	2043	837	451							
Category Total		5										
N/A or **None**		10	1888	751	2151	902	469	350	710	1188	2330	489
Category Total		10										
Blank		109	12	70	96	117	168	195	205	206	214	218
			227	244	299	354	359	411	414	457	474	477
			497	551	568	621	641	673	720	725	730	769
			819	824	825	864	872	891	929	934	967	970
			973	978	997	1016	1029	1054	1112	1150	1189	1216
			1220	1252	1276	1290	1300	1330	1388	1415	1427	1452
			1666	1458	1472	1477	1485	1497	1504	1542	1581	1599
			1765	1886	1932	1940	1948	1962	1981	1984	1995	2011
			2050	2204	2214	2272	2283	2298	2315	2323	2324	2362
			2369	2370	2373	2419	2437	2444	2464	2484	2486	2520
			2539	2550	2594	2605	2632	2640	2669	2727	1092	
Category Total		109										
Grand Total		955										

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   United States Naval Academy
   Annapolis, Maryland

6. William R. Bowman
   United States Naval Academy
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