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An analysis of Marine Corps service assignment at the United States Naval Academy

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THESIS

AN ANALYSIS OF MARINE CORPS SERVICE ASSIGNMENT AT THE UNITED STATES NAVAL ACADEMY

by

Scott W. Wadle

June 2004

Thesis Co-Advisors: Alice Crawford
J. Eric Fredland

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13. ABSTRACT (maximum 200 words)

This study examined individual Midshipman's First Class (Senior Year) leadership positions, academic and military grade point averages, course of study, prior- enlisted Marine status, family affiliation with the Marine Corps, and status as a Varsity Letter recipient as predictors of assignment to the United States Marine Corps upon graduation from the United States Naval Academy. A review of the Service Assignment process and Marine Corps selection criteria is provided as a historical background. Nine cohorts of subjects were studied from the period 1995-2003 to derive the most prevalent characteristics synonymous with Marine Corps selection. Results of a series of binary logistic regressions showed that the variables measuring Marine Corps enculturation (i.e., prior-enlisted Marine status and legacy status) serve as the best predictors of an assignment to the Marine Corps. For the population of Midshipmen that were neither prior-enlisted Marines nor legacies, the variables measuring leadership experience serve as the best predictors. This investigation also includes a synopsis of the Marine selection panel's proceedings to educate Naval Academy faculty, Company Officers, and Midshipmen who aspire to become Marine Corps officers as to the process the selection panel uses in selecting its Midshipmen.

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AN ANALYSIS OF MARINE CORPS SERVICE ASSIGNMENT AT THE UNITED STATES NAVAL ACADEMY

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This study examined individual Midshipman's First Class (Senior Year) leadership positions, academic and military grade point averages, course of study, prior-enlisted Marine status, family affiliation with the Marine Corps, and status as a Varsity Letter recipient as predictors of assignment to the United States Marine Corps upon graduation from the United States Naval Academy. A review of the Service Assignment process and Marine Corps selection criteria is provided as a historical background. Nine cohorts of subjects were studied from the period 1995-2003 to derive the most prevalent characteristics synonymous with Marine Corps selection. Results of a series of binary logistic regressions showed that the variables measuring Marine Corps enculturation (i.e., prior-enlisted Marine status and legacy status) serve as the best predictors of an assignment to the Marine Corps. For the population of Midshipmen that were neither prior-enlisted Marines nor legacies, the variables measuring leadership experience serve as the best predictors. This investigation also includes a synopsis of the Marine selection panel's proceedings to educate Naval Academy faculty, Company Officers, and Midshipmen who aspire to become Marine Corps officers as to the process the selection panel uses in selecting its Midshipmen.

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I. INTRODUCTION

A. BACKGROUND

When Midshipmen at the U.S. Naval Academy enter their First Class (senior) year, they begin a process known as Service Assignment. Through this process, they will request, interview for, and ultimately be assigned to a warfare community within the Department of the Navy that they will pursue after graduation and commissioning. Examples of these warfare communities include Submarine Officers, Aviation Officers, Surface Warfare Officers, and Marine Corps Officers.

The Marine Corps imposes a stringent "cap" or limit to accessions. Of the approximately 1,000 Midshipmen who graduate from the Naval Academy every year, a maximum of 16 2/3 percent, or approximately 165 Midshipmen, can be assigned to the United States Marine Corps upon graduation. Commissioning in the United States Marine Corps is voluntary. If a Midshipman does not desire to join the Marine Corps upon graduation, he or she will be assigned one of the warfare specialties in the Navy.

Despite the fact that service in the Marine Corps is voluntary and a stringent limit to accessions is in place, the Marine Corps is flooded with requests from graduating Midshipmen every year. As an example, the graduating class of 2004 recently submitted their requests for Service Assignment after graduation. Two hundred twenty-two (222) of its members listed the Marine Corps as their first choice, in the hopes of being selected for one of the 167 available quotas.

This disproportionate response is not an anomaly. In fact, every year since the Service Assignment process began in 1995, the Marine Corps has fielded more requests from First Class Midshipmen to receive a Marine Corps commission than the 16 2/3 percent cap has allowed. As a result, Marine Corps officers assigned to the Naval Academy sift through the pile of qualified applicants every year and employ their own selection criteria to choose the Midshipmen they feel are most qualified to wear the uniform of a United States Marine and who stand the best chance of succeeding in the Marine Corps.

B. PURPOSE

Leadership is one of the few areas that cannot be evaluated objectively. With the exception of leadership classes embedded in their academic curriculum, Midshipmen do not receive a leadership "grade." Instead, they are assigned leadership billets their First Class year as a result of their maturity, military performance, and leadership potential and are expected to glean leadership experience as a result of their duties and responsibilities. As a result, this investigation poses as its primary question, "Does the Marine Corps place a premium on leadership experience in selecting Midshipmen to become Marine Corps Officers after graduation from the Naval Academy?" Secondary research questions are as follows:

1. Does a Midshipman's experience as a "Striper" within the Brigade of Midshipmen have a significant association with assignment to the Marine Corps?
2. For those Midshipmen who were not "Stripers" their First Class year does experience as a Squad Leader or Platoon Commander at the company level have a significant association with assignment to the Marine Corps?
3. Does family affiliation with or prior-enlisted service in the Marine Corps have a significant association with assignment to the Marine Corps?
4. Does status as a Varsity Letter recipient have a significant association with assignment to the Marine Corps?

Given that the Marine Corps receives its choice of graduates from an overpopulated field, the results of this study identify those attributes most synonymous with an assignment to the Marine Corps upon graduation from the Naval Academy. This study can also serve to inform Naval Academy faculty, Company Officers, and Midshipmen who are interested in the process used by the selection panel as to the relative value the panel places on leadership in assigning Marines through the Service Assignment process.

C. SCOPE AND METHODOLOGY

This investigation includes: (1) a review of the Naval Academy's instructions that govern the Service Assignment process, (2) interviews with Marine Corps Officers conducting Service Assignment interviews and serving on the Marine Corps Service Assignment selection panel, and (3) an analysis of biographical and demographic information from Midshipman commissioned in the Marine Corps after graduation.

Using data from the Naval Academy's Office of Institutional Research, Planning, and Assessment, this investigation examines demographic information from Midshipmen in the graduating classes of 1995-2003, representing the entire population of Naval Academy graduates who have undergone the Service Assignment process, in an effort to highlight the attributes Marines most desire in the Midshipmen they select. The data set is limited to Midshipmen who have graduated and received a commission in either the Navy or Marine Corps. International Students and Midshipmen who failed to graduate, were found non-commissionable, or who cross-commissioned into another branch of the Armed Forces are not examined.

Using quantitative methodology, this investigation examines the ability of a series of independent variables that measure a Midshipman's leadership responsibilities as a First Class Midshipman, status as a Varsity Letter recipient, family affiliation with the Marine Corps, and prior-enlisted Marine experience to predict his or her assignment to the United States Marine Corps upon graduation from the Naval Academy. Additionally, this investigation contains qualitative information that describes the current philosophies and trends in Marine Corps selection.

D. ORGANIZATION

This paper is divided into six chapters. Chapter I provides background and organizational information regarding this study. Chapter II contains a review of the Service Assignment procedures at the United States Naval Academy, a description of the curriculum and Military Occupational Specialty (MOS) assignment process for Marine students at The Basic School, and an examination of prior studies that describe predictors of specific warfare communities in the Service Assignment process and predictors of success at The Basic School and in the Marine Corps. Chapter III describes the process used by the Marine Corps selection panel for the graduating class of 2004. Chapter IV describes the data set and methodology used in the quantitative portion of this study. Chapter V provides an analysis of the logistic regressions used, and Chapter VI presents conclusions and recommendations for future studies.

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II. BACKGROUND AND LITERATURE REVIEW

This chapter consists of three main sections. Part A describes the evolution and execution of the Service Assignment process and a description of the curriculum and grading requirements at The Basic School (TBS). Part B reviews prior theses dealing with specific Service Assignment selection variables and investigations that predict success at TBS and in the Marine Corps. Part C explains the research hypotheses generated and guides the quantitative portion of this study in an effort to meet its first goal – to highlight the strength of association between demographic information about Midshipmen in the graduating classes of 1995-2003 and their assignment to the Marine Corps by the Marine Corps selection panel.

A. BACKGROUND

1. Evaluation and Ranking of Midshipmen (Order of Merit)

Midshipmen at the United States Naval Academy are evaluated in every facet of their development. In addition to accumulating a Grade Point Average (GPA) in their academic studies, Midshipmen also accumulate a GPA in their professional endeavors. Military Performance, physical fitness events, and conduct are all evaluated and awarded a letter grade according to a predetermined set of metrics. When combined, these evaluations comprise a Midshipman's overall class standing, or Order of Merit (United States Naval Academy, 1996).

Order of Merit provides the basis for many decisions at the Naval Academy. A Midshipman's order and possible honors at graduation, assignment of leadership billets as a First Class, and assignment to a specific warfare community after graduation are all based, at least in part, on his or her Order of Merit (United States Naval Academy, 1996; Fox, 2003; United States Naval Academy, 2002).

Order of Merit is actually an algorithm. Although the proportionality of these elements constantly changes, historically the academic component contributes approximately 65 percent to a Midshipman's overall rank (United States Naval Academy, 1996). This proportionality has been a source of contention throughout the years.

Although the Naval Academy provides a newly commissioned officer with his or her undergraduate degree, many graduates feel the weights assigned in the Order of Merit system place too much emphasis on academics, and not enough of an emphasis on leadership and military performance.

2. Service Selection (Through 1994)

Midshipmen who graduated through the class of 1994 received their warfare community assignments through a process known as Service Selection. Through the Service Selection process, First Class Midshipmen were called to the Commandant's Office at the beginning of the Spring Semester to declare their desires for commissioning and warfare community upon graduation. With minor exceptions (i.e., Mini Basic Underwater Demolition School (MINIBUDS) training as a requirement to selecting SEALS) the only prerequisites were the successful completion of an aviation aptitude test to select Naval Aviation, and the physical requirements established for each warfare community.

Midshipmen were called in groups of 25 and were staged by their Order of Merit. The available quotas were posted and each time a Midshipman requested a community, he or she reduced the total number available. When all available quotas had been issued, that category was closed out and was no longer available to the awaiting Midshipmen (Finley, 2002).

Since warfare community assignments were made strictly as a function of Order of Merit, many Midshipmen viewed Service Selection as a reward for academic achievement at the expense of professional (leadership) achievement. Most upset were those who aspired to a certain warfare community but could not select it due to non-availability and their low class standing. As a result, many began to view a Junior Officer's initial fleet performance as either a validation or a refutation of this process. For the Marines, this meant performance at TBS.

3. The Basic School (TBS)

a) Introduction

TBS is the first challenge that awaits newly commissioned Lieutenants in the United States Marine Corps. The mission of TBS is to:

> Educate newly commissioned or appointed officers in the high standards of professional knowledge, esprit-de-corps, and leadership required to prepare them for duty as a company grade officer in the operating forces, with particular emphasis on the duties, responsibilities, and warfighting skills required of a rifle platoon commander (TBS Command Brief, TBS website, 2004).

As an institution, the Naval Academy provides the single, largest source of commissioned officers into the Marine Corps. Yet, as Table 1 depicts, its graduates only account for approximately 11 percent of the newly-commissioned officers every year (TBS Command Brief, TBS website, 2004). This, combined with the fact that Naval Academy graduates are the only officers who do not attend Marine Corps Officer Candidate School, leaves many officers with the impression that Naval Academy graduates are at a distinct disadvantage upon reporting to TBS (Finley, 2002).

Table 1. Annual Marine Officer Accessions.

Commissioning Source	**Percent (%) of Yearly Accessions**
Officer Candidate Course (OCC)	34.8
Platoon Leaders Class (PLC)	24.9
Naval Reserve Officer Training Corps (NROTC)	14.7
United States Naval Academy	10.7
Marine Corps Enlisted Commissioning Education Program (MECEP)	8.6
Enlisted Commissioning Program (ECP)/ Meritorious Commissioning Program (MCP)	6.3

(Adapted from TBS Command Brief, 2004).

Officer Candidate School (OCS) is considered a "right of passage." Just like Boot Camp for enlisted Marines, it is a life-altering experience for many candidates and provides their first impression of the Marine Corps. OCS provides 12 weeks of training and indoctrination in the physical, tactical, and leadership requirements inherent

to becoming an officer in the Marine Corps (United States Marine Corps, 2004). Additionally, OCS provides many of its graduates with a unifying experience. They make life-long friends at OCS and often attend TBS with their OCS cohort.

Naval Academy graduates do not benefit from this experience. Besides their interaction with Marine Corps Company Officers and faculty, Midshipmen at the Naval Academy receive little Marine Corps-specific training. They receive one week of obligatory Marine Corps training the summer before their Third Class (Sophomore) year and one week of training the summer before their Second Class (Junior) year (United States Naval Academy, Professional Development Website, 2004). Marine Corps-specific training the summer before a Midshipman's First Class (Senior) year has evolved several times in the last two decades. As later sections of this investigation will indicate, it has oscillated from no training to obligatory training to voluntary training and has only recently yielded a stable platform. As a result, Naval Academy graduates often lack a deep-seated cultural and tactical knowledge of the Marine Corps (Finley, 2002).

b) Course of Study

The TBS curriculum is 26 weeks long. It combines both an academic setting and a practical application of knowledge through extensive field training evolutions (TBS Command Brief, TBS website, 2004).

Lieutenants are evaluated in three major areas throughout their time at TBS: (1) Leadership, (2) Academics, and (3) Military Skills. The overall scores from these areas are weighted at 36 percent, 32 percent, and 32 percent, respectively, to determine a Lieutenant's class rank (TBS Command Brief, TBS website, 2004).

A Lieutenant's class rank at TBS plays a vital role in determining two important aspects of his or her professional career—the establishment of the "lineal number," or lineal rank amongst fellow officers within the same year group in the Marine Corps, and Military Occupational Specialty (MOS) selection for those officers who do not already possess an aviation guarantee. The class standings are updated each time an evaluated event is completed in one of the three areas above and are continually updated until graduation (D. Healey, personal communication, December 17, 2003; TBS Command Brief, TBS website, 2004).

c) Leadership

Two leadership evaluations are completed at TBS, one in week 12 of training and one in week 22 of training (TBS Command Brief, TBS website, 2004). Each Lieutenant is ranked by his peers (within his squad) and then by his Staff Platoon Commander (SPC), a Marine Captain who is administratively responsible for the Lieutenant. The grades are subjective and reflect both the peers' and the SPC's assessment of the Lieutenant's ability to motivate and inspire those around him and to ensure mission accomplishment. The weights assigned to these rankings are 10 percent and 90 percent, respectively, and are translated into a numerical grade (Basic School Order P5000.2D, 2001 as cited in Finley, 2002, p. 31).

d) Academics

Academics represent the Lieutenant's scores on standardized tests, which encompass a variety of Marine Corps-specific information. Areas of evaluation include knowledge of Marine Corps Fitness Reports, Artillery Calls for Fire, and Tactics (TBS Command Brief, TBS website, 2004).

e) Military Skills

Military skills encompass a variety of physical and practical application evaluations. Areas of evaluation include Physical Fitness tests, Land Navigation, and knowledge of various weapons systems (TBS Command Brief, TBS website, 2004).

f) MOS Assignment

MOS assignment occurs at approximately week 20 in the TBS training cycle. For those Lieutenants not in possession of an aviation guarantee, the available MOSs include such areas as Infantry, Artillery, Aviation Supply, Aviation Intelligence, Ground Intelligence, Logistics, and Motor Transport. Once the number of available quotas for each MOS is received from Headquarters, United States Marine Corps (HQMC), the staff of each TBS company divides them using the "Quality Spread" concept (TBS Command Brief, TBS website, 2004).

In applying the Quality Spread concept to the available MOS quotas, the company staff divides them into thirds. The Lieutenants are likewise divided into thirds based on their overall class rank. In this way, HQMC ensures that they receive a fair distribution of talent within each MOS. For example, in a company of approximately 240

students, the Lieutenants would be divided into three groups of 80 students each. Following the same example, if 30 Infantry quotas were granted to this company, 10 quotas would be selected from each group of 80 Lieutenants (D. Healey, personal communication, December 17, 2003).

The TBS Company staff, consisting of a Marine Major as the Company Commander and six Marine Captains as Staff Platoon Commanders (SPCs), assigns each Lieutenant his or her MOS under the guidance and supervision of HQMC representatives. They make their decisions based on their personal knowledge and evaluations of the Lieutenants under their care and the needs of the Marine Corps (D. Healey, personal communication, December 17, 2003). When the process is complete, the results are forwarded to the Commanding Officer, TBS, for review and are ultimately forwarded to HQMC for acceptance (TBS Command Brief, TBS website, 2004).

A Lieutenant's leadership ability plays a pivotal role in this process. While the company staff attempts to accommodate each Lieutenant's desires, they are bound by the needs of the Marine Corps. At times, several Lieutenants may be competing for a single quota. In such cases, "…the leadership grade is the tie-breaker. That makes the decision for the Marine Corps" (D. Healey, personal communication, December 17, 2003).

As is evident from the previous paragraphs, a Lieutenant's leadership abilities and application of Military Skills are essential to his or her success at TBS and in starting their professional reputation in the Marine Corps. Since MOSs are assigned before the second command leadership evaluation is completed, the first impression a Lieutenant leaves with his or her peers and their SPC, as well as his or her knowledge of Marine Corps tactical evolutions cannot be overstated (D. Healey, personal communication, December 17, 2003).

4. Officer Candidate School (1989-1992)

In 1988, then Secretary of the Navy James Webb (a Naval Academy Graduate, former Marine Corps Officer, and distinguished combat veteran of the Vietnam War) became concerned with Naval Academy graduates' apparently poor performance at TBS. At his direction, those Midshipmen who aspired to become Marine Corps Officers upon

graduation had to attend Marine Corps Officer Candidate School (OCS). This program, entitled "Bulldog," took place the summer before the Midshipman's First Class, or senior year at the Naval Academy and was considered a prerequisite for Marine Corps commissioning (Gannon, 2000).

Despite the fact that Bulldog attendees graduated with a relatively higher TBS class standing than other Naval Academy summer training programs, the program was terminated after the summer of 1991 (Finley, 2002). Although no definitive study has verified the finding, anecdotal information posits that the relatively low numbers of Midshipmen who became Marines after the installation of this program was directly attributable to their desire to avoid yet another "harassment package" and a fear of attrition. Still others have speculated that the Navy's senior leadership was afraid of receiving "Bulldog failures" in its ranks (Finley, 2002). Regardless, the program was terminated by then Commandant of the Marine Corps General Carl E. Mundy and the Naval Academy class of 1992 was the last graduating class to have Bulldog as a prerequisite to selecting the Marine Corps upon graduation (Gannon, 2000).

5. Leatherneck (1993-Present)

The class of 1993 had no formal Marine Corps training before graduation and commissioning (Finley, 2002). Beginning with the class of 1994, the Naval Academy instituted a voluntary Marine Corps training program called "Leatherneck" that is still in place today. Leatherneck takes place within the confines of TBS in Quantico, VA and is available to Midshipmen the summer before their First Class year. It offers the Midshipmen a condensed, four-week look into the structure of TBS and the life of a Marine Corps Second Lieutenant following graduation and commissioning. At the completion of Leatherneck, most Midshipmen are then offered the chance to spend approximately four weeks in the Fleet Marine Forces (FMF), or operational forces, trailing a Marine Lieutenant who has already graduated from TBS and is entrenched in his MOS (United States Naval Academy Professional Development Division Website, 2003).

Leatherneck was not then, nor is it now, considered a formal prerequisite for Marine Corps selection. Additionally, it was not created as a screening tool. Instead, it has been described as a familiarization tool. Midshipmen cannot fail Leatherneck.

However, if they perform poorly, they will be counseled as to their shortcomings and advised that they are not likely to be determined as "suitable" for the Marine Corps (Gannon, 2000).

Despite the fact that Leatherneck is not described as a formal prerequisite to Marine Corps selection, anecdotal evidence suggests that it has become an informal one. Midshipmen receive little Marine Corps-specific training throughout their time at the Naval Academy (Finley, 2002). As a result, the Marine Corps officers assigned to the Naval Academy believe voluntary Leatherneck attendance provides an outward manifestation of a Midshipman's interest in, and desire to join, the Marine Corps. Moreover, it provides the best preparation for the rigors and cultural changes that graduates will face when they attend TBS (P. Brown, personal communication, December 16, 2003; S. Cantrell, personal communication, December 16, 2003; M. Pallotta, personal communication, January 6, 2004).

6. Service Assignment (1995-Present)

a) Introduction

Beginning with the class of 1995, the Chief of Naval Operations directed that a new commissioning and warfare selection process be instituted at the Naval Academy. This new process, called "Service Assignment," attempted to alleviate the apparently-singular focus on academics. Instead, it required the institution to embrace the "whole person" concept and look at academics as only one predictor of success after graduation. In a Memorandum of Understanding between the Chief of Naval Operations and the Commandant of the Marine Corps, the Commandant of the Marine Corps agreed that Naval Academy graduates selected to join the Marine Corps would also undergo the Service Assignment process. Accordingly, he delegated the responsibility for Marine Corps selections to the Senior Marine at the Naval Academy (Finley, 2002).

b) General Service Assignment Procedures

The Service Assignment Process begins when Midshipmen submit their individual requests for warfare communities. After all submissions are gathered, a panel of commissioned officers verifies that the Midshipmen have selected warfare specialties for which they are physically qualified and for which they have met any necessary prerequisites. There is a mandatory aviation aptitude exam for those wishing to become

pilots or Naval Flight Officers (NFOs), and a mandatory interview with the Director of Naval Nuclear Propulsion for those who wish to become Submarine or Surface Warfare (Nuclear) Officers. No *formal* prerequisites exist for assignment as Marine Corps Officers, Surface Warfare Officers, and the remaining warfare communities within the Navy.

Once the requests are verified, they are disseminated to interview teams throughout the Naval Academy. These interview teams are comprised of three to four officers and are led by an officer who represents the warfare community to which the individual Midshipman aspires to join. Each team interviews approximately ten Midshipmen to determine their suitability for commissioning as well as their suitability for their desired warfare community (United States Naval Academy, 2002).

When the interviews are complete, the teams forward a written assessment of each Midshipman's performance and suitability to a selection panel led by the senior ranking officer of that warfare community at the Naval Academy. Here, the individual Midshipman's academic and military performance records are reviewed in conjunction with the results of their interview (United States Naval Academy, 2002). Although the Letter of Instruction for Service Assignment procedures describes the general methodology to be used by each selection board, the senior member of each board is allowed some latitude in the administration of his or her board, so long as he or she applies the same objectivity to all Midshipmen (K. Inman, personal communication, October 14, 2003).

Midshipmen are initially "ranked" within each community when their individual Service Assignment Multiples are calculated. The Service Assignment Multiple is a mathematical calculation that combines the Midshipman's Order of Merit and Service Assignment Interview score. For those Midshipmen who aspire to become Navy or Marine Corps Aviators, the Service Assignment Multiple also includes the Midshipman's Aviation Selection Test Battery (ASTB, or aviation aptitude exam) score (United States Naval Academy, 2002). Table 2, below, summarizes the relative weights assigned to each of these variables.

Table 2. Service Assignment Multiple Weights.

	Navy (Percent)	Marine Corps (Percent)
Aviation Community	Order of Merit 60 ASTB Score 30 Interview Score 10	Order of Merit 65 ASTB Score 25 Interview Score 10
Non-Aviation Community	Order of Merit 90 Interview Score 10	Order of Merit 90 Interview Score 10

(Adapted from "Interview Team Training" Division of Professional Development, United States Naval Academy, 2003).

The selection panel then votes whether or not to assign each Midshipman to their warfare community. Midshipmen who are not selected for their first choice are released from that warfare community's selection board and are turned over to the selection board of their second choice for consideration. This process continues until all Midshipmen have been assigned a warfare community (United States Naval Academy, 2002).

When the process is complete and all Midshipmen have been assigned a warfare community, the results are forwarded to the Superintendent for review. The Midshipmen are notified of their selections in January (United States Naval Academy, 2002).

c) USMC Service Assignment Philosophy

Marines at the Naval Academy feel that ranking Midshipmen by the Service Assignment Multiple and selecting them based on this criterion alone places too much emphasis on academic success or failures (K. Inman, personal communication, October 14, 2003). Said one Marine Officer of the selection process:

> We have always prided ourselves in saying, 'We don't care if you're the number one or number last guy in the class if you have the attributes we're looking for: self-discipline, maturity, and response to adversity.' Were

> you an athlete? Did you do anything that was warrior oriented? How involved were you with extracurricular activities? What were your battalion or company level billets? When it comes down to it, the board puts very little faith in Academic Order of Merit. It's just a guideline to break our briefs into blocks (P. Brown, personal communication, December 16, 2003).

They choose, instead, to search for the "intangibles" and "indicators of leadership potential above and beyond what their record says" (P. Brown, personal communication, December 16, 2003). The panel examines every aspect of the Midshipman's academic and military performance at the Naval Academy with an eye toward success at TBS and the ability to assume the duties and responsibilities of a Lieutenant of Marines.

The selection panel assesses each Midshipman's maturity and motivation for joining the Marine Corps as described in their Service Assignment Interview and they look for evidence of leadership ability and experience. The panel makes no distinction between Midshipmen who desire to become Marine Corps pilots or NFOs, and those who desire a ground MOS. In fact, this item is not briefed. So long as the Midshipman has attained a qualifying score on the ASTB, the board is most interested in his or her desire to become a Marine (P. Brown, personal communication, December 16, 2003; M. Pallotta, personal communication, January 6, 2004). The panel remains objective by applying the same briefing format and providing the same information about each Midshipman to each of its seven voting members (T. Ferry, personal communication, January 13, 2004).

d) USMC Service Assignment Multiple

In an attempt to quantify the attributes they desire, the Marine Corps selection panel recently experimented with the creation of a Marine Corps Service Assignment Multiple. Assigning varying weights to Academic and Military Quality Point Ratings (QPRs, or grade point averages), Leatherneck attendance and performance, performance on Physical Fitness Tests, Varsity athlete status, prior-enlisted Marine experience, legacy status, and leadership responsibilities, the selection panel decided that this was a redundant effort since these are the items that are briefed about every

Midshipman and taken into consideration by the voting members (T. Ferry, personal communication, January 13, 2004).

Additionally, the Marines felt it important that each of the seven voting members be afforded the opportunity to individually weigh each aspect of a Midshipman's performance and determine, for themselves, the Midshipman's suitability for a commission in the Marine Corps and likelihood of success at TBS. As a result, the Marine selection panel chose not to create its own Service Assignment Multiple. It elected, instead, to continue its process of briefing and voting on each Midshipman (T. Ferry, personal communication, January 13, 2004).

B. LITERATURE REVIEW

1. Service Assignment Literature

Recent studies by graduates of the Leadership, Education, and Development (LEAD) Program have investigated varying factors associated with the Naval Academy's Service Assignment process. These studies have evaluated the correlation between such variables as academic major (Arcement, 1998), scores of Myers-Briggs Type Indicator (MBTI) personality tests (Bowers, 2002), and the warfare specialty of a Midshipman's Company Officer (Gille, 2002) (i.e., Surface Warfare, SEALs, Navy Pilot, Marine Corps, etc.) with each of the possible warfare specialties in the Service Assignment process. While each of these studies has included a brief examination of the Marine Corps as a part of its methodology, no study has specifically examined the Marine Corps and the attributes most synonymous with its assignment. Moreover, no study has investigated the attributes selection panels seem to favor in their selection of Midshipmen.

The result of these studies is often a description of the propensities of Midshipmen instead of their selection for a specific warfare community. In fact, they seem to view Service Assignment as a self-selected item. Nonetheless, these studies provide interesting demographic comparisons and help to shape the hypotheses inherent to this investigation.

a) Arcement, 1998

Arcement (1998) examined the relationship between a Midshipman's academic major at the Naval Academy and his or her subsequent Service Assignment.

Describing a considerable amount of literature that analyzes the correlations between a college student's choice of academic major and his or her subsequent occupational field, Arcement noted a lack of literature that analyzes the college major of a military officer and his or her occupational field in the Armed Forces. Since virtually all military academy graduates pursue an occupational field in the Armed Forces following graduation, Arcement found considerable reason to investigate this relationship (Arcement, 1998).

Citing Roush's work with the MBTI results of Midshipmen (Roush, as cited in Arcement, 1998), Arcement hypothesized that a Midshipman's choice of academic major was a reflection of his or her personality and could therefore be used to predict his or her interest in occupational fields, or warfare communities, following graduation and commissioning. Utilizing data from the Naval Academy's Office of Institutional Research, Planning, and Assessment, Arcement examined the graduating classes of 1997 and 1998 and restricted his data set to those Midshipman who received their first choice through the Service Assignment process (N = 1666). He rationalized that since greater than 90 percent of Naval Academy graduates received their first choice of warfare communities in the year groups he examined, the warfare community a Midshipman received through the Service Assignment process was a function of self-selection (Arcement, 1998).

Arcement examined academic major, gender, Military Order of Merit (Military class rank), and Academic Order of Merit (Academic class rank) as predictors of an individual's Service Assignment. By dichotomizing the dependent variable, Service Assignment, he broke the data set into two larger groups, Navy and Marine Corps. Executing a logistic regression, he concluded that, "other things equal, Marines are more likely to originate from one of the group three [or humanities] majors (Arcement, 1998, p. 39)." Interestingly, he noted that, "the choice of naval service [was] not significantly related to Military Order of Merit (MOOM) or Academic Order of Merit (AOOM) (Arcement, 1998, p. 39-40)" for the year groups examined.

b) Bowers, 2002

Bowers (2002) examined the feasibility of predicting a Midshipman's ultimate warfare specialty as a function of his or her score on the MBTI assessment

administered during Plebe Summer. Employing a philosophy similar to Arcement, Bowers asserted that since greater than 90 percent of the Midshipmen received their first choice of warfare communities, Service Assignment was another indicator of individual desires.

Citing Roush and Atwater's 1992 study of the Naval Academy, she states that Naval Academy Midshipmen, "…predominantly display the personality type 'Extraverted, Sensing, Thinking, and Judging' (ESTJ) (Bowers, 2002)." Additionally, in her preliminary examination of demographic information, she noted that approximately 55 percent of the Marine graduates were extraverted (Bowers, 2002). As a result, she isolated the "E" (or Extravert) portion of the profile and used it, along with several other demographic variables, in a series of six regressions. She hypothesized that a Midshipman's temperament, or MBTI profile, could be used to predict his or her occupational field following graduation and commissioning.

Using discriminant function analyses, she examined the graduating classes of 1998-2001 and restricted her data set to those Midshipman who received their first choice in the Service Assignment process and who were assigned to one of the Navy's URL billets (i.e., Submarines, Aviation, or Surface Warfare) or to the Marine Corps (N = 3004). Her results, however, indicated that MBTI scores yielded only marginal results in predicting a Midshipman's warfare community via the Service Assignment process. In contradiction to Arcement, she concluded that, "[t]he best predictors were found to be primarily cognitive and demographic variables such as Order of Merit (OOM), gender, minority status, math [Scholastic Assessment Test] SAT results, and academic major (Bowers, 2002, p. 49)." Further, she stated that, "…Order of Merit's predominance was also not surprising given that a large part of the service assignment process is based on Order of Merit (Bowers, 2002, p. 51)." However, this conclusion is subject to two possible interpretations: either (1) Midshipmen truly are self-selecting their warfare communities and the Naval Academy hasn't advanced from the Service Selection process, or (2) the Service Assignment selection panels place a great emphasis on a Midshipman's OOM and are using it as their primary selection criterion.

c) Gille, 2002

Gille (2002) examined the influence of a Company Officer's warfare specialty on the Service Assignment of his or her Midshipmen. He examined the graduating classes of 1994, 1995, 1996, and 2001 representing year groups that had undergone the Service Selection and Service Assignment processes, as well as the first year group of Midshipmen affected by graduates of the LEAD program. In concert with his literature review, he hypothesized that Midshipmen seeking an occupational field after graduation would subscribe to that which they were most comfortable with and to which they had had the most exposure. In other words, they would most likely pursue the warfare community of the Company Officer to whom they had the most exposure (Gille, 2002).

Using Chi Square analysis, Gille restricted his data set to those graduates who were assigned to either a Navy URL billet or to the Marine Corps (N = 3300) and compared the number of semesters a Midshipman was exposed to each of the warfare communities with his or her ultimate assignment. Using a series of logistic regressions, he isolated each of the possible warfare communities and made them dependent variables. He then correlated each dependent variable with a series of independent variables that measured a Midshipman's exposure to each warfare community, and demographic information such as Military and Academic QPRs, academic major, and military family background (Gille, 2002).

Gille concluded that Midshipmen exposed to Marine Corps Company Officers asked for, and were subsequently assigned to, the Marine Corps at a rate higher than any other Warfare Community. Examining demographic information about the Midshipmen, he confirmed Arcement's findings and concluded that Marine Corps graduates tend to study one of the Group III, or Humanities and Social Science, academic majors. Additionally, he confirmed Bowers' assertion of a significant relationship between cognitive measures and assignment to the Marine Corps when he concluded that Marine graduates tend to possess below-average Academic QPRs and above-average Military QPRs. Finally, he found a positive correlation between a Midshipman's military family background and his or her subsequent assignment to the Marine Corps. He noted that Midshipmen who displayed a family affiliation with the Marine Corps through either

a parent or close sibling, "chose to become Marines 44.0% of the time upon graduation whereas the Midshipmen [with]…no Marine Corps experience in [their] immediate family chose to become Marines only 16.0% of the time (Gille, 2002, p. 70)."

2. Center for Naval Analyses (CNA) Studies

In the early 1990s, the Marine Corps was beset with public scrutiny regarding its perceived treatment of minorities and women. Responding to this criticism, the Marine Corps employed the services of the Center for Naval Analyses and requested that they investigate officer accessions, success/attrition rates at OCS and TBS, and factors contributing to officer promotion and retention. Although a large portion of these studies concentrates on the perceived rifts between whites and minorities and between males and females, they provide an insightful look at factors affecting success at TBS and in an officer's career and their conclusions highlight the best predictors of this success.

a) North and Smith, 1993

North and Smith examined the performance of Officer Candidates at Marine Corps OCS and their subsequent performance at TBS between 1988 and 1993. As the impetus for this study was the relatively high attrition rate experienced at OCS in the early 1990s, many of the results surround overall attrition rates and highlight the attrition rates of both minorities and females (North and Smith, 1993).

Despite its premise, the CNA study did present statistical predictors of success at OCS and TBS. Using a dichotomous dependent variable for OCS (i.e., 1 equaled completion and 0 equaled attrition) North and Smith examined a series of demographic and performance variables such as prior-enlisted experience, college size and population, SAT scores, and Physical Fitness Test (PFT) scores. They concluded that the best predictors of successfully completing OCS were prior-enlisted experience (measured as a binary variable), SAT scores (measured as a continuous variable), and Physical Fitness Test scores (measured as a continuous variable) (North and Smith, 1993). It should be noted that for the years in question (1988-1993), Naval Academy graduates attended OCS between 1989 and 1992.

In their examination of TBS, North and Smith employed a series of Ordinary Least Squares regressions. They converted a Lieutenant's class rank into a percentile to account for the differences in class sizes and examined the same

demographic and performance variables described in the OCS study. Sidestepping the issues of attrition and minority success rates, their results indicate that the variables positively correlated with higher class rank are prior-enlisted experience and college SAT scores (North and Smith, 1993).

Additionally, a detailed examination of the regression results indicates that for the years studied, Naval Academy graduates achieved higher average class ranks than many other commissioning sources. Specifically, an examination of Military Skills, Academic, and Leadership grades places Naval Academy graduates third out of eight commissioning sources (North and Smith, 1993).

b) North, Goldhaber, Lawler, and Suess, 1995

North (et al.) examined the augmentation, promotion, and voluntary continuation of Marine Corps officers in a 1995 study. Examining data from Fiscal Years (FY) 1987-1993, his group conducted a longitudinal study and merged data from the Headquarters Master File (HMF) and TBS (North, et al., 1995).

Examining the promotion rates of Marine Corps officers selected to the grade of Major (O-4), his group utilized accession data and the Officers' recorded class ranks/percentiles in Leadership, Academics, and Military Skills while students at TBS. They considered motivation, professionalism, and performance to be subjective and concentrated, instead, on the quantifiable variables listed above (North, et al., 1995).

Using a logistic regression with a dichotomous, dependent variable (i.e., 1 equaled selection and 0 equaled non-selection), the analysis of North (et al.) yielded some interesting results. Controlling for race, gender, and MOS, his group concluded that the best predictor of promotion to Major was an Officer's TBS leadership class rank. In fact, his group concluded that "…Officers finishing in the bottom of the class have a predicted promotion probability that is 35 percentage points lower than the predicted probability for those in the top of the class (North, et al., 1995, p. 43)." They went on to say, "…The dramatic differences by TBS leadership performance are surprising. We expected that, over time, performance at TBS would become a less significant factor in explaining promotion (North, et al., 1995, p. 43)."

This finding was repeated when North's group examined the promotion rates to Lieutenant Colonel (O-5). Here, the difference was nearly 32 percent from the bottom of the class to the top of the class. This caused North (et al.) to conclude that, "[Despite the fact that p]romotion to lieutenant colonel occurs over 15 years following commissioning…[w]hatever was measured at TBS is still an important determinant of promotion probability (North, et al., 1995, p.50)."

Additionally, North (et al.) determined that commissioning source now played a significant factor in predicting promotion. Whereas commissioning source had little effect on promotion to Captain and Major, the probability of being promoted to Lieutenant Colonel was significantly and positively correlated with an officer's commissioning source and officers from the Naval Academy and NROTC now possessed the highest probability of being promoted to Lieutenant Colonel (North, et al., 1995).

Finally, North (et al.) examined the Voluntary Survival rates of Marine Corps officers. Again, they used a longitudinal study and examined officer retention at the 7 Years Commissioned Service (YCS) mark, and again at the 11 YCS mark. This accounted for the expiration of both ground and aviation initial commitments (respectively) and controlled for those officers who had failed augmentation or had otherwise been forced out of the service (North, et al., 1995). In both cases, his group found TBS leadership performance to be the best predictor and concluded that, "…Those officers with good leadership skills, as measured at TBS, are voluntarily staying in the Marine Corps (North, et al., 1995, p. 52)."

3. Recent Officer Performance Studies

a) Finley, 2002

Finley examined the relationship between the type of Marine Corps-specific training a Naval Academy Midshipman received the summer before he graduated with his final class standing at TBS. He based his methodology on North and Smith's 1993 study described above.

Finley's primary hypothesis was that Midshipmen who had attended OCS/Bulldog would demonstrate the highest class standings at TBS (Finley, 2002). Secondary hypotheses suggested that Varsity Letter recipients, Midshipmen with Marine

enlisted experience, Midshipmen with Marine Corps veteran parents, and Midshipmen who had participated in both the Service Assignment and "Capstone" course taught by the Naval Academy's Division of Professional Development would be correlated with higher class standings (Finley, 2002). His hypotheses seemed to indicate a shift in philosophy from the previous studies in that Midshipmen who were assigned to the Marine Corps via the Service Assignment process had been "selected" and that this screening would yield tangible results at TBS.

Following North and Smith's methodology, Finley converted TBS class standings into percentiles to standardize for varying class sizes (Finley, 2002). He restricted his investigation to male officers and broke his data set (N = 1615) into four main groups: (1) Midshipmen in the graduating classes of 1989-1992 who attended OCS/Bulldog, (2) Midshipmen in the graduating classes of 1988 and 1993 who received no Marine Corps-specific training, (3) Midshipmen in the graduating classes of 1994 - 1999 who attended Leatherneck, and (4) Midshipmen in the graduating classes of 1995-1999 who attended both Leatherneck and the Marine Corps Capstone course (Finley, 2002).

Using the Ordinary Least Squares Estimate of TBS class standing, Finley proved his primary hypothesis. He concluded that Midshipmen who attended OCS/Bulldog achieved a higher class standing, on average, than Midshipmen who attended Leatherneck. Additionally, Midshipmen in the graduating classes of 1988 and 1993 who received no Marine Corps-specific training achieved the lowest average class standings.

Examining his secondary hypotheses, Finley found Varsity Letter winners and Midshipmen with Marine enlisted experience to be both positively and significantly correlated with TBS class standings. No statistical significance was found between Midshipmen with Marine veteran parents and TBS class standing. Finally, Service Selection was found to be negatively correlated with TBS class standing. In other words, Midshipmen who were <u>selected</u> to join the Marine Corps by the Service Assignment process achieved higher class standings at TBS than Midshipmen who self-selected the Marine Corps through Service Selection (Finley, 2002).

b) Ergun, 2003

Ergun (2003) completed an exhaustive examination of the performance, retention, and promotion of Marine Corps officers as a function of their commissioning source. Closely paralleling the 1995 CNA study above, he investigated an officer's overall TBS performance, retention to 10 YCS, and selection probabilities at both the Major and Lieutenant Colonel's selection boards.

Merging data from the Marine Corps Commissioned Officer Accession Career (MCCOAC) file, TBS, and the HMF, he investigated officers in the 1980-1999 accession cohorts (N = 27,529) (Ergun, 2003). Using Ordinary Least Squares estimates, he converted a Lieutenant's overall class rank into a percentile and correlated demographic data such as race/ethnicity, gender, age, prior-enlisted experience, General Classification Test (GCT) scores, and commissioning source with overall class rank. Using Naval Academy graduates as his basis for comparison, he determined that officers accessed from one of the enlisted-to-officer sources demonstrated a significantly positive correlation with higher average class ranks, when compared to USNA graduates. Officers accessed from either the Officer Candidate Course (OCC) or the Platoon Leaders Class (PLC) demonstrated the lowest average ranks, when compared to USNA graduates. Thus, he concluded that prior-enlisted experience was beneficial at TBS (Ergun, 2003).

Examining retention at 10 YCS and the promotion probabilities to Major and Lieutenant Colonel, Ergun utilized the same demographic variables described above and employed bivariate probit estimates with a dichotomous outcome (i.e., 1 equaled voluntary retention to 10 YCS, selection at the Major selection board, and selection at the Lieutenant Colonel selection board; 0 equaled attrition) (N = 13,222 for retention, 7,181 for Major selection, and 1,785 for Lieutenant Colonel selection). His results demonstrated that TBS performance was positively and significantly correlated with each of the aforementioned dependent variables. Interestingly, prior-enlisted experience was positively and significantly correlated with retention to 10 YCS and Major selection, but negatively correlated with Lieutenant Colonel selection. This was attributed to prior-enlisted Marines being eligible for retirement before their selection/promotion to Lieutenant Colonel (Ergun, 2003).

Finally, Ergun created a series of Performance Indices by assigning a numerical value to each of the letter "blocks" on an officer's Fitness Report (FitRep) and calculating a mean throughout the data set. Ergun admits that inflation in the "old" FitReps (i.e., FitReps utilized prior to 1999) and a lack of "new" FitReps (i.e., FitReps written under a revised performance evaluation system since 1999) restricted his examination. Nonetheless, using Naval Academy graduates as his basis for comparison once again, he concluded that prior-enlisted Marine officers yielded the highest average Performance Indices (Ergun, 2003).

As the thrust of Ergun's investigation was a comparison of accession sources, and since he used Naval Academy graduates as his basis for comparison, all results are presented in relation to Naval Academy graduates. Regardless, Ergun concludes that Naval Academy graduates are being out-performed at TBS by all three of the enlisted-to-officer accession sources and that his variable indicating USNA as an accession source is negatively correlated with Performance Indices for Second Lieutenants and First Lieutenants (O-1s and O-2s). Interestingly, though, he concludes that Naval Academy graduates achieved the highest Performance Indices of all accession sources at the O-3 and O-4 levels (Captain and Major, respectively), implying that Naval Academy graduates are getting off to a slow start in their Marine Corps careers (Ergun, 2003).

4. Foundations for Research

The LEAD studies reviewed in this investigation examined demographic information about Midshipmen in an attempt to highlight the strength of association between these variables and the Midshipman's ultimate warfare community assignment. In examining each of the warfare communities, they concluded that Marine graduates are likely to originate from one of the Group III, or Humanities and Social Science majors (Arcement, 1998; Bowers, 2002), and they tend to share a family affiliation with the Marine Corps (Gille, 2002). Additionally, they concluded that Marine graduates tend to possess below-average Academic QPRs and above-average Military QPRs (Gille, 2002).

Although they underscore interesting demographic data about the Midshipmen, these studies present conflicting views of the significance of cognitive variables (Arcement, 1998; Bowers, 2002; Gille, 2002). What's more, in noting that over 90

percent of the Midshipmen received their first choice of warfare communities (for the year groups studied) they portray Service Assignment as a self-selected item (Arcement, 1998; Bowers, 2002; Gille, 2003). This seems inconsistent with the Chief of Naval Operations' goal for the Service Assignment process and appears to diminish the decision-making ability of each warfare community's selection panel.

The Service Assignment process begins when a Midshipman states his or her request for a specific warfare community, but it ends when a panel of commissioned officers who represent that community vote to accept or reject the Midshipman based on his or her perceived qualifications and the panel's own selection criteria. The fact that not all Midshipmen receive their first choice of warfare communities indicates that these criteria are, in fact, being applied. Consider the data provided in Chapter I for the class of 2004: 222 Midshipmen listed the Marine Corps as their first choice in the hopes of acquiring one of the 167 available quotas. This equates to a 75 percent selection rate and is drastically different than the 90 percent "selection" rate described above. This fact, alone, demonstrates that the propensities of Midshipmen are not the determining factor in their selection and subsequent assignment to a warfare community.

If we accept the premise that Marine officers selecting Midshipmen to join their ranks after graduation examine each Midshipman's qualifications with an eye toward success at TBS and in the Marine Corps, then the results of the CNA studies, as well as those of Finley and Ergun bear particular relevance to this investigation. These studies conclude that prior-enlisted Marine experience, participation in Varsity athletics at the Naval Academy, and elevated PFT scores are all positively correlated with higher class standings at TBS (North and Smith, 1993; Finley, 2002). Having completed TBS, a Lieutenant's leadership ability and recorded class standing have a demonstrated impact on his or her retention and probability for future promotions (North, et al., 1995; Ergun, 2003).

C. RESEARCH HYPOTHESES

1. Introduction

Since the termination of Bulldog (i.e., participation in Marine Corps Officer Candidate School by aspiring Midshipmen) in 1991 and the advent of Leatherneck in 1993, the Naval Academy has fielded more requests from First Class Midshipmen to

receive a Marine Corps commission than the 16 2/3 percent cap has allowed. On average, nearly 300 Midshipmen participate in the Leatherneck program every summer. Of those, over 200 Midshipmen have competed for the approximately 165 Marine Corps commissions every year since 1993 (K. Inman, personal communication, June 6, 2003). Since the inception of the Service Assignment process in 1995, the Marine Corps has had its pick of these Midshipmen.

Clearly, the Marine selection panel examines factors beyond Leatherneck participation in selecting its Midshipmen every year. Given that the Marine Corps receives its choice of graduates from an overpopulated field, this study determines the strength of association between a series of independent variables that measure a Midshipman's leadership responsibilities as a First Class Midshipman, status as a Varsity Letter recipient, family affiliation with the Marine Corps, and prior-enlisted experience with assignment to the United States Marine Corps upon graduation as indicators of the selection panel's criteria.

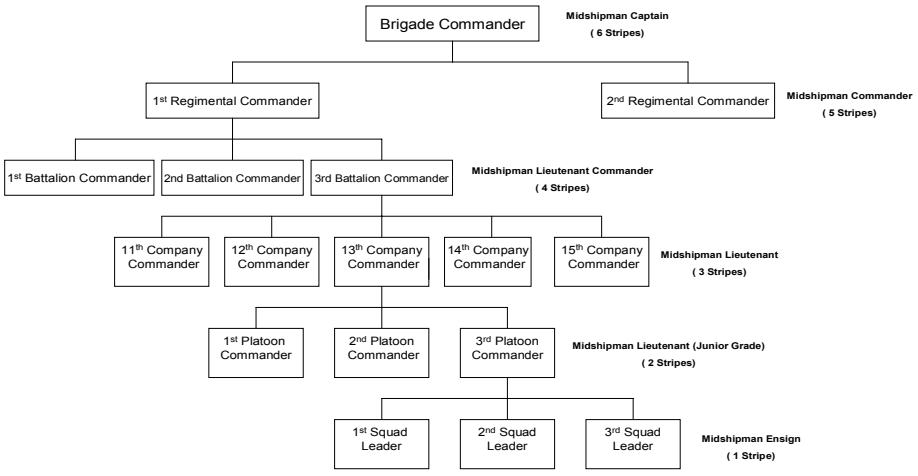
2. Midshipman Leadership Experience

Leadership constitutes a significant portion of a Lieutenant's class standing at TBS (TBS Command Brief, TBS website, 2004; D. Healey, personal communication, December 17, 2003). As has already been demonstrated, the Lieutenant's lineal standing within the Marine Corps as well as his or her chances of obtaining a desirable MOS are inextricably linked to this assessment. Additionally, TBS leadership grades have proven to be an accurate predictor of both retention and promotion (North, et al., 1995; Ergun, 2003). Since the Marine Corps selection panel's charter is to select the Midshipmen "most qualified" to serve as officers in the Marine Corps, and since the panel examines each Midshipman with an eye toward success at TBS and in the Marine Corps, the primary hypothesis of this investigation is that Marine Officers who comprise the Service Assignment selection panel place a premium on leadership experience at the Naval Academy in selecting Midshipmen for a Marine Corps commission and that they view it as one of the best predictors of success both at TBS and in the officer's career.

As Figure 1 displays, First Class Midshipmen are given varying leadership roles and responsibilities. The "rank" the Midshipman possesses is directly attributed to the billet, or job, held and is modeled on the Navy Officers' rank structure. For example, a

Squad Leader in charge of approximately 12 Midshipmen is a Midshipman Ensign and displays one stripe on his shoulder boards or collars. Conversely, the Brigade Commander, who is in command of over 4,000 Midshipmen is a Midshipman Captain and displays six stripes on his shoulder boards and collars. In Naval Academy terminology, the term "Stripers" is synonymous with Midshipmen in leadership roles. It is most often associated with Midshipmen who display three or more stripes as they are considered to be policy makers amongst their peers.

Figure 1. Midshipman Rank Structure.



Adapted from COMDTMIDNINST 1601.12A, of 6 Oct 03

Midshipmen are assigned these leadership billets primarily on the basis of their military performance and they hold their billet for one semester. This affords more Midshipmen the opportunity to experience leadership billets throughout the year. Squad Leaders, Platoon Commanders, and Company Commanders are assigned by Company Officers (Commissioned Officers who train and mentor Midshipmen at the company level). Battalion, Regimental, and Brigade Commanders and their staffs are screened by a panel of Commissioned Officers outside of the Midshipman's Company and are

assigned at the conclusion of an interview and separate selection process (Fox, 2003). Because the assignment of leadership billets is based largely on military performance (Fox, 2003), and because Marine Corps graduates historically possess higher than average Military QPRs (Gille, 2002), this investigation hypothesizes that the population of Midshipmen who receive an assignment to the Marine Corps contains a higher concentration of "Stripers" than those who receive an assignment to the Navy. Therefore, this investigation expects that the independent variable measuring Midshipman Striper Rank is positively correlated with the dependent variable, Marine Corps Service Assignment.

As discussed earlier, Marine Officers are looking for Midshipmen who display not only leadership potential, but documented leadership experience. However, due to the competitive process, as well as the limited number of striper billets available, not all Midshipmen are afforded the opportunity to experience a striper billet. In these cases, the Marines look to see that Midshipmen had billets on the Company level, such as Squad Leader and Platoon Commander, which necessitate both peer and subordinate leadership (S. Cantrell, personal communication, December 16, 2003; P. Brown, personal communication, December 16, 2003; M. Pallotta, personal communication, January 6, 2004; T. Ferry, personal communication, January 13, 2004). Therefore, this investigation expects that positive scores on the independent variables measuring Squad Leader and Platoon Commander experience are positively correlated with the Dependent Variable, Marine Corps Service Assignment.

3. Varsity Letter Recipients

Naval Academy Midshipmen who participate in Varsity athletics are competing in NCAA athletics. They are required to balance their athletic, academic, and professional workloads while pursuing their goal of becoming a Naval Officer. Due to the obvious physical requirements and additional workload involved, not all Midshipmen at the Naval Academy participate in Varsity athletics. Those who do not compete in Varsity athletics are required to participate in fall, winter, and spring intramural activities such as basketball and softball to maintain physical fitness and to foster sportsmanship.

Participation in Varsity athletics can sometimes be detrimental to a Midshipman's academic and professional advancement. Significant time away from academic and

professional requirements can result in lower grades and lower scores on a Midshipman's Military Performance evaluation (S. Cantrell, personal communication, December 16, 2003). But the Marines do not view this participation as a detriment. Instead, they view it as a benefit. Marines view participation in Varsity athletics as a manifestation of physical abilities and time-management skills, and another chance to display leadership potential. Achieving a Varsity Letter further exemplifies these attributes and demonstrates commitment, determination, and leadership on the fields of friendly strife (K. Inman, personal communication, October 14, 2003; S. Cantrell, personal communication, December 16, 2003; M. Pallotta, personal communication, January 6, 2003). Said one officer:

> I'm more concerned with the indicators of leadership potential. I'm more concerned with things that show me self-discipline. I would probably take a four-year athlete that is on the scout team for three years and finally makes it to the varsity team on his fourth year and has the persistency and the discipline to carry through even though he may not have the talent. That's what really makes a Marine Officer…somebody who's not afraid to fail...someone who won't quit (P. Brown, personal communication, December 16, 2003).

Physical Fitness Test (PFT) scores have proven to be statistically significant predictors of a candidate's success at OCS (North and Smith, 1993; Finles, 2002). At TBS, PFT scores and graded events such as the Obstacle Course, Endurance Course, and Combat Swimming qualifications constitute the majority of a Lieutenant's Military Skills rank (TBS Command Brief, TBS website, 2004). While the Military Skills grade does not carry as much weight as the Leadership evaluations, it constitutes nearly one-third of a Lieutenant's class rank and has a significant effect on lineal standing and MOS assignment (D. Healey, personal communication, December 17, 2003). As a result, this study hypothesizes that Marine Officers who comprise the Marine Corps selection panel view the achievement of a Varsity Letter as a predictor of success at TBS, and in the Marine Corps, because this achievement combines physical prowess with opportunities to display both leadership and determination. Therefore, this investigation expects that the variable measuring Varsity Letter recipients is positively correlated with the dependent variable, Marine Corps Service Assignment.

4. Relationship with the Marine Corps

The Marine Corps is the smallest of the services within the Department of Defense. Interestingly, though, its veterans and their families share an esprit de corps that is unlike any other service. The well-known phrase "Once a Marine, always a Marine" is indicative of this feeling and often creates a strong bond between the generations of a family that share the Marine Corps experience.

There are a large number of "legacies," or Marines who have followed the footsteps of a parent or sibling in joining the Marine Corps. This number appears disproportionate given the relatively small population of Marines in comparison to the other services (Gille, 2002). Additionally, anecdotal evidence suggests that the number of prior-enlisted Marines who return to the Marine Corps upon graduation from the Naval Academy is disproportionally high and is a further indication of this esprit de corps.

Although legacy status is not assigned any formal weight in the Marine Corps Service Assignment process, it is briefed about every Midshipman. While some officers state that it is simply "nice to know," others state that it does play a part in their decision-making process. Midshipmen are not penalized if they are not legacies, but those Midshipmen who are legacies are considered to have had more exposure to Marine Corps culture and a better awareness of the life that awaits them (S. Cantrell, personal communication, December 16, 2003; P. Brown, personal communication, December 16, 2003; M. Pallotta, personal communication, January 6, 2004). One officer stated:

> I think that if they were a dependent for a while or have had Marines around them, especially a close family member like a mother or father, they're going to learn that the Marine Corps is not an easy life. Knowing that…and yet they are still very eager to go to the Marine Corps to me says a lot (S. Cantrell, personal communication, December 16, 2003).

Although legacy status is not granted any formal weight in the Marine Corps Service Assignment process, prior-enlisted Marine Corps experience is. Prior-enlisted Marines constitute only a small minority at the Naval Academy, yet their performance at TBS and in the fleet has been demonstrably positive (North, et al., 1995; Finley, 2002; Ergun, 2003). As a result, their experience in, and desire to return to, the Marine Corps is considered invaluable by the Marine selection panel (K. Inman, personal communication,

October 14, 2003; P. Brown, personal communication, December 16, 2003; M. Pallotta, personal communication, January 6, 2003; S. Cantrell, personal communication, December 16, 2003; T. Ferry, personal communication, January 13, 2004). Therefore, this investigation expects that positive scores on the independent variables measuring family affiliation and prior-enlisted Marine status are positively correlated with the dependent variable, Marine Corps Service Assignment. To examine these relationships, this study utilizes a series of logit regressions.

III. SELECTION PROCEDURES FOR THE CLASS OF 2004

A. INTRODUCTION

The research hypotheses inherent to this investigation are designed to highlight the strength of association between certain demographic variables about Midshipmen and their assignment to the Marine Corps upon graduation. The results will yield the best predictors of an assignment to the Marine Corps as well as a statement of the selection criteria and desires of the Marine officers who comprise the Marine Corps selection panel. However, this analysis will be incomplete without a description of the actual process by which the Marines select their Midshipmen.

Before we examine the research hypotheses of this investigation we will pause, briefly, to meet the investigation's second goal – to educate Naval Academy faculty, Company Officers, and Midshipmen who aspire to become Marine Officers as to the process Marines use in selecting their Midshipmen and to highlight the increasing importance leadership experience, Leatherneck attendance, and Leatherneck performance seem to play in this decision. It should be noted that the procedures described in this chapter apply only to the selection of Midshipmen in the class of 2004 and are a synopsis of interviews with Marine Officers on the selection panel as well as observations of the panel's proceedings.

B. THE SELECTION PANEL

The Marine selection panel is comprised of seven voting members. It consists of the Senior Marine Officer at the Naval Academy (a Marine Colonel), a Lieutenant Colonel who currently serves as a Battalion Officer, four Majors who serve as Company Officers and academic instructors, and a Captain who is an academic instructor. Six of the members were male and one was female.

The panel also represented different MOSs and functional areas within the Marine Corps. Officers assigned to the panel represented the following MOSs: Air Support Control, Aviation, Artillery, Communications, Infantry, and Logistics.

C. THE SELECTION GROUPS

Prior to convening the selection panel, the Senior Marine tasked the Senior Briefer (a Marine Major who is responsible for the conduct of the proceedings as well as the formation of Midshipmen briefs) with partitioning the Midshipmen into categories. The selection panel made almost no use of the Service Assignment Multiple and chose instead to separate the Midshipmen based on its own criteria. This facilitated the briefing schedule and highlighted the differences in qualifications and accomplishments among Midshipmen (P. Brown, personal communication, December 16, 2003). Listed below are the categories of Midshipmen and the population of each.

1. The "P-List"

Midshipmen who comprised the P-List were Midshipmen who had prior-enlisted Marine Corps experience before attending the Naval Academy.

2. The "A-List"

Midshipmen who comprised the A-List were Midshipmen who met the following criteria:

a) AQPR >= 2.5

b) MQPR >= 3.0

c) Possessed one of the following leadership billets:

i) Club sport or team captain

ii) Varsity team captain

iii) Plebe detail Second Class Squad Leader or First Class Platoon Commander or higher

iv) Honor Board billet

v) Academic year unit commander (Company or higher)

d) No major Conduct Offenses reported within the past two years

e) No Honor Offenses reported

f) Attended Leatherneck and was ranked within the top half of his or her Leatherneck Platoon

g) Took the USMC Physical Fitness Test (PFT) and received a First Class score of >=245

h) Ran the USMC Obstacle Course with a time of two minutes or less

3. The "A-Minus List"

Midshipmen who comprised the A-Minus List were Midshipmen who were missing only one item from the A-List. This item could not be (d) or (e) above.

4. The "C-List"

Midshipmen who comprised the C-List were Midshipmen described by the following attributes:

a) AQPR or MQPR < 2.0

b) Committed an Honor Offense at the Naval Academy

c) Committed a Major Conduct Offense within the past two years

d) Not recommended for a Marine Corps commission by their SPC or Service Assignment Interview Team

e) Received a score of <225 on the USMC PFT

5. The "B-List"

Midshipmen who comprised the B-List were Midshipmen who did not fit into one of the aforementioned categories. As the following section indicates, this is the single, largest population of Midshipmen and the group from which the Marines had the most difficulty selecting. Table 3 summarizes the categories of Midshipmen and the population density of each.

Table 3. 2004 Midshipmen requesting the Marine Corps.

List	Number of Midshipmen comprising this List	Percentage(%) of Midshipmen
P	13	5.9
A	37	16.7
A-	48	21.6
B	72	32.4
C	52	23.4
Total	**222**	**100.0**

D. THE PROCEEDINGS

The selection panel met for four consecutive days to evaluate and select the Midshipmen they desired to be assigned to the Marine Corps upon graduation. In all, it evaluated 222 Midshipmen who had listed the Marine Corps as their first choice for Service Assignment with the goal of selecting 167 qualified candidates. As the panel proceeded and Midshipmen were released from other communities' selection panels, the panel also reviewed approximately 30 Midshipmen who listed the Marine Corps as their second or subsequent choice for assignment.

Subsequent to the conclusion of the 2004 selection panel, the Superintendent, U.S. Naval Academy proposed an alteration to the quotas for Marine Corps accessions to both the Chief of Naval Personnel and the Commandant of the Marine Corps. Realizing the growing number of Midshipmen who desired to be commissioned in the Marine Corps after graduation, the Superintendent asked for, and was allowed to grant, an additional 25 Marine Corps quotas raising the final selection number to 192. This agreement had no bearing on the selection criteria utilized by the selection panel and represents, in the eyes of the author, an anomaly.

The selection panel was run much like a promotion board. Since the selection panel is not considered a "statutory" board, its members were not charged with a series of precepts and were not required to be sworn in. Nonetheless, they were issued the Superintendent's guidance. His guidance, simply stated, required the voting members to apply the same objective criteria to each Midshipman and to recommend assignment to those Midshipmen considered "most qualified" for commissioning in the Marine Corps. Additionally, should they be voting on a Midshipman who was not accepted by the selection panel from his or her first choice, the panel had to consider the Midshipman without bias. They were to vote solely on the Midshipman's potential to be a Marine Corps Officer.

The Superintendent's guidance also required the members of the selection panel to focus only on information that was made available to them through the process. That is, no *pending* conduct or honor offenses could be considered. Only those offenses that had been adjudicated and recorded as a part of the Midshipman's permanent record could be considered. Finally, it was understood that both the conduct and the results of the proceedings would remain confidential until all Service Assignment Night when Midshipmen are formally notified of their assignments. (K. Inman, personal communication, January 13, 2004; P. Brown, personal communication, December 16, 2003; M. Pallotta, personal communication, January 6, 2004; T. Ferry, personal communication, January 13, 2004).

After communicating the Superintendent's guidance, the Senior Marine imparted his philosophy on the selection panel. He stated that each Midshipman who graduates from the Naval Academy is fully qualified to possess a commission in the Marine Corps. He concluded by stating that the purpose of the selection panel was to evaluate them and to select those Midshipman "most qualified" in the eyes of the panel to lead the Marine Corps of tomorrow (K. Inman, personal communication, January 13, 2004).

The selection panel began by investigating Midshipmen on the P-List, or prior-enlisted Marines. These Midshipmen were selected, by-exception. That is, unless a Midshipman on the P-List displayed a glaring deficiency while at the Naval Academy, such as a serious conduct offense, failure to attend Leatherneck, poor performance at

Leatherneck, or failure to maintain a First Class PFT score, the Midshipmen were selected for assignment to the Marine Corps without question (P. Brown, personal communication, December 16, 2003; T. Ferry, personal communication, January 13, 2004). P-List Midshipmen who displayed deficiencies deemed worthy of examination were reverted to B-List or C-List status, as appropriate, and were briefed amongst their peers. At this point, their P-List status was removed and they received no preferential treatment as a prior-enlisted Marine.

Next, the selection panel investigated the A and A-Minus Lists. Unless any glaring deficiencies were brought to light, the Midshipmen on the A-List were selected for assignment to the Marine Corps. Midshipmen on the A-Minus List were identified by what criteria kept them from joining the A-List and were briefed in detail only at the request of the voting members. Those not requiring a detailed brief were immediately accepted for assignment to the Marine Corps (P. Brown, personal communication, December 16, 2003).

The selection panel then reviewed the C-List Midshipmen. In the words of the senior briefer, they did this so that they could "calibrate themselves" (P. Brown, personal communication, December 16, 2003). Simply stated, the panel wanted to see the far extremes in qualifications before they tackled the group with the largest population and with whom they would have the most difficulty "breaking people out"-- the B-list Midshipmen (K. Inman, personal communication, October 14, 2003).

The Senior Marine required that every person on the B-List and C-List was briefed by a Marine Officer at the Naval Academy who had personal knowledge of these Midshipmen. Usually, this meant that the officer who served as the Midshipman's Leatherneck Staff Platoon Commander (SPC) briefed the Midshipman.

The SPC is administratively responsible for a Platoon of Midshipmen at Leatherneck and is charged with completing an evaluation on each Midshipman when Leatherneck is complete. This evaluation requires the SPC to rank each Midshipman within the platoon of approximately 40 Midshipmen and to provide a recommendation as to whether or not they should be commissioned in the Marine Corps.

For those Midshipmen who did not attend Leatherneck, the briefer was often an academic instructor who had the Midshipman in his or her class, or an Officer Representative to one of the Naval Academy's sports teams. In addition to describing each Midshipman's suitability for the Marine Corps, they were tasked with explaining why the Midshipman did not attend Leatherneck and what they had done to prepare themselves for TBS (P. Brown, personal communication, December 16, 2003; M. Pallotta, personal communication, January 6, 2004; S. Cantrell, personal communication, December 16, 2003; T. Ferry, personal communication, January 13, 2004).

The briefing format used by the Marines was the same for all Midshipmen. Appendix A displays the items briefed by each officer. Keeping in mind the Senior Marine's philosophy that all graduates are capable of possessing a Marine Corps commission, the briefers were advised to put a "positive spin on each Midshipman" (P. Brown, personal communication, December 16, 2003) and to allow the voting members to decide for themselves how competitive each Midshipman was in relation to his or her classmates.

While the officer relayed the content of his or her brief, the voting members were able to view the Midshipman's history at the Naval Academy through a multi-media display. On a series of screens at the front of the room, the briefing team displayed the Midshipman's photograph, the written assessment of his or her Service Assignment Interview, and the evaluation that was written on the Midshipman at the completion of Leatherneck. Additionally, the voting members were able to log-on to the Midshipmen Information System (MIDS), or informational data base, and review the Midshipman's trends in academics, performance, and conduct (M. Pallotta, personal communications, January 6, 2004).

When the brief was complete, each of the seven voting members recorded a score from 1 to 5 (with 1 representing the lowest suitability for a Marine Corps commission and 5 representing the greatest suitability for a Marine Corps commission) into a computer program. The votes were then tallied for each Midshipman and a scribe kept an electronic record of each Midshipman's "score" until all briefs were completed. When

all of the Midshipmen on the B and C Lists had been briefed, they were ranked according to the average score they received from the seven voting members (T. Ferry, personal communication, January 13, 2004).

At this point, the Marines overlaid the available quotas for the class of 2004. Removing the accepted members of the P-List and the A/A-Minus Lists from the 167 available quotas, the Midshipman on the B and C Lists (as well as Midshipmen dismissed by another community's board and briefed at this board) were assigned billets based on the average score they received from the voting members. When all 167 quotas had been assigned, the panel considered the remaining Midshipmen, in rank order, to be alternates to this list should any of the Midshipman already chosen fail to graduate or subsequently decide not to accept a commission in the Marine Corps.

When all quotas had been assigned, the Senior Marine instructed the Senior Briefer to re-brief the Midshipmen on the selection list whose average score fell between 2.0 and 2.9 and to re-vote them. Roughly, this equated to selection numbers 155 through 187 and represented the last 10 Midshipmen on the selection list and the first 20 Midshipmen who missed the cut-off and would be considered alternates. Additionally, he allowed members of the panel or briefers at large to re-brief any other Midshipmen who fell below this range if they felt strongly that these Midshipmen should be awarded a Marine Corps commission. Due to only minor differences in GPAs, PFT scores, Leatherneck platoon rankings, and average scores from the voting members, he felt it necessary to evaluate these Midshipmen and to re-affirm that "these were the Midshipmen they wanted" (P. Brown, personal communication, December 16, 2003) and that someone who deserved strong consideration wasn't being left behind.

E. CONCLUSIONS

The Marine selection panel remains objective by applying the same criteria to each Midshipman evaluated. Partitioning Midshipmen into the P, A, A-Minus, B, and C Lists not only facilitates the selection process, but it defines the criteria Marines view as necessary for success at TBS and in the Marine Corps. P-List status indicates that a Midshipman has Marine Corps experience, desires to return to this culture, and has

upheld the Marine Corps' standards while attending the Naval Academy. A-List status indicates that a Midshipman can manage multiple tasks well, upholds the highest physical standards, can lead both peers and subordinates, and performs well when immersed in Marine Corps Culture.

B-List and C-List status seem to indicate that a Midshipman is lacking in at least one of the areas described above, namely leadership experience and Marine Corps exposure via Leatherneck. While the Senior Marine believes that each Naval Academy graduate is capable of possessing a Marine Corps commission, his requirement that each Midshipman on the B or C List be individually briefed indicates that their record warrants a more serious scrutiny and that the lack of leadership experience and/or Leatherneck experience could be detrimental to his or her performance at TBS and in the Marine Corps.

The Marine Corps selection panel also includes a subjective component in that each of the voting members is allowed to assess, for themselves, a Midshipman's suitability for commissioning in the Marine Corps. Additionally, the Senior Marine's requirement that the bottom 20 Midshipmen be re-briefed and his willingness to re-consider Midshipmen who fell outside the initial cut-off indicate a desire to highlight the "intangibles."

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IV. DATA SET AND METHODOLOGY

This chapter provides a description of both the data set and the methodology employed to examine the hypotheses of this investigation. Part A describes the data that were obtained and the number of cases utilized. Part B provides a description of the theoretical model that guides this investigation, as well as a description of each of the variables acquired in the data collection phase and the process by which they were transformed into useable variables for subsequent regression analyses. Part C presents a preliminary analysis of each of the variables, and Part D provides a summary of this chapter's findings.

A. DATA SET DESCRIPTION

Nine graduating classes of Naval Academy Midshipmen from the years 1995-2003 are examined in this study. After eliminating foreign nationals and those who did not graduate, the remaining number of cases was 8,357. Further eliminating Midshipmen who cross-commissioned into the Army or Air Force after graduation (37), failed to receive a commission (1), or were deemed "Not Physically Qualified" to be commissioned after graduation (19), the final number of cases is 8,300. All biographical and professional information regarding the subjects was obtained from the Office of Institutional Research, Planning, and Assessment at the United States Naval Academy.

B. METHODOLOGY

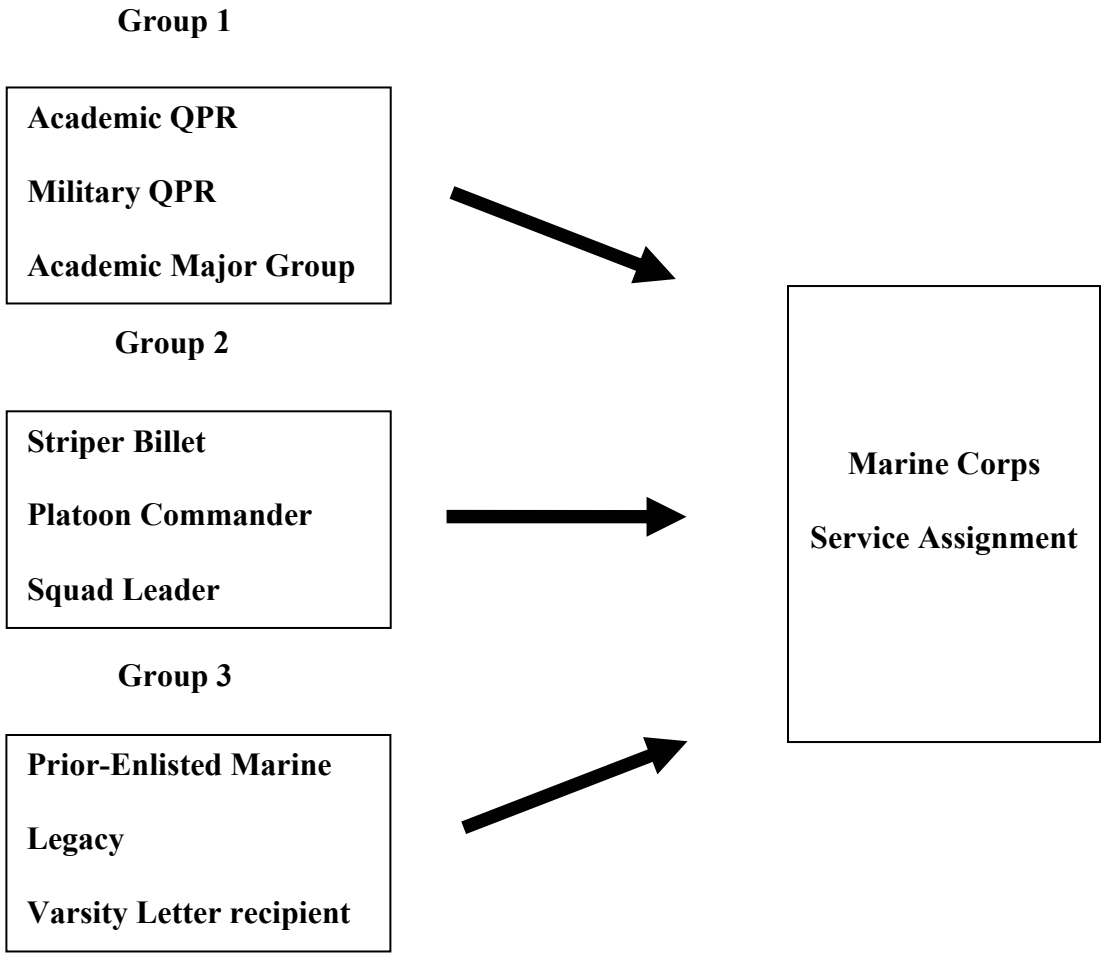
1. Theoretical Model

The model used in this investigation correlates several demographic, cognitive, and leadership variables with the dependent variable, Marine Corps Service Assignment. It consolidates the independent variables into three groups. Group 1 variables serve to substantiate the conclusions of prior research (Arcement, 1998; Bowers, 2002; Gille, 2002). Specifically, they measure the strength of association between a Midshipman's Academic QPR, Military QPR, and Academic Major group with his or her assignment to the Marine Corps.

Group 2 variables underscore the correlation between a Midshipman's leadership billet and his or her assignment to the Marine Corps. Here, we examine the strength of association between Midshipmen "Stripers," Platoon Commanders, and Squad Leaders and the dependent variable.

Finally, Group 3 variables examine the correlations between variables that measure physical prowess and Marine Corps enculturation and an assignment to the Marine Corps. That is, they measure the strength of association between variables measuring prior-enlisted Marine Corps experience, "legacy" status, and status as a Varsity Letter recipient with the dependent variable. Figure 2 summarizes the theoretical model.

Figure 2. Theoretical Model.



2. Original Variable Descriptions

This section lists the original variables, as provided by the Office of Institutional Research, used to measure information about the Midshipmen in this investigation. The definitions below are derived from the Office of Institutional Research's Data Dictionary (2004).

a) Commissioning Code (comm_c).

Comm_C is a nominal variable and represents the branch of the Armed Forces in which a Midshipman was commissioned following graduation. Commissioning Code was recorded as a string value of "NA" if the Midshipman was commissioned in the Navy or "MC" if the Midshipman was commissioned in the Marine Corps.

b) Cumulative Academic QPR (caqpr).

CAQPR is a continuous, ratio variable that measures a Midshipman's Academic Grade Point Average. Its range is 2.0 (the minimum acceptable GPA for graduation) to 4.0.

c) Cumulative Military QPR (cmqpr).

CMQPR is a continuous, ratio variable that measures a Midshipman's Military Grade Point Average. Its range is 0 to 4.0.

d) Major Group (maj_grp).

Maj_Grp is a nominal variable and is coded as an integer from 1 to 3 representing one of the three "groups" housing the Midshipman's academic major. At the United States Naval Academy, Group I Majors include the engineering majors, Group II Majors include the pure sciences, and Group III Majors include the Humanities and Social Sciences.

e) Midshipman Rank (rank1).

Rank1 is a nominal variable and measures the "rank" assigned to a Midshipman as a function of the job, or billet, held each semester of First Class year. It is coded as a string value of "MIR" for Midshipman in Ranks, "ENS" for Midshipman Ensign, "LTJG" for Midshipman Lieutenant (Junior Grade), "LT" for Midshipman Lieutenant, "LCDR" for Midshipman Lieutenant Commander, "CDR" for Midshipman Commander, and "CAPT" for Midshipman Captain.

f) Midshipman Leadership Billet (billet).

Billet is a nominal variable and measures the leadership position a Midshipman possessed each semester of First Class year. It is coded as a string value and lists such billets as "Squad Leader," "Platoon Commander," "Company Commander," and "Brigade Commander."

g) Prior Enlisted Member (prior).

Prior is a nominal variable and measures whether or not a Midshipman had prior-enlisted experience before attending the Naval Academy. It is coded as a string value of "Y" (for "Yes") if the Midshipman was prior-enlisted or "N" (for "No") if the Midshipman was not prior-enlisted.

h) Military Service of Midshipman (mil_mid).

Mil_Mid is a nominal variable and measures the branch of service a Midshipman served in before attending the Naval Academy. It is coded as a string value of "A" if the Midshipman served in the Army, "N" if the Midshipman served in the Navy, "MC" if the Midshipman served in the Marine Corps, "CG" if the Midshipman served in the Coast Guard, "AF" if the Midshipman served in the Air Force, and is left blank if the Midshipman had no prior military experience.

i) Military Father (mil_fath).

Mil_Fath is a nominal variable and represents the branch of service a Midshipman's father served in. It is coded as a string value of "A" if the Midshipman's father served in the Army, "MC" if the father served in the Marine Corps, "N" if the father served in the Navy, "CG" if the father served in the Coast Guard, "AF" if the father served in the Air Force, and is left blank if the father had no military experience.

j) Varsity Letter Recipient (varsity).

Varsity is a nominal variable and measures the achievement of a Varsity Letter while participating in Varsity athletics at the Naval Academy. It is coded as a string value of "Y" (for "Yes") if the Midshipman was awarded a Varsity Letter, or "N" (for "No") if the Midshipman was not awarded a Varsity Letter.

3. New Variable Descriptions

This section describes the procedures used to transform the original variables, provided by the Office of Institutional Research, into useable variables for the subsequent

quantitative analyses. Cumulative Academic QPR (**CAQPR**) and Cumulative Military QPR (**CMQPR**) are used in their original forms.

Using the descriptive statistics functions of the software Statistical Package for the Social Sciences (SPSS), all data were screened for erroneous and missing scores. The Dependent Variable, Commissioning Code (comm_c) was dichotomized and resaved under the new variable name **MARINE**. Those Midshipmen who were assigned to the Marine Corps and went on to graduate and receive a Marine Corps commission were dummy-coded as 1. All Midshipmen who were assigned to the Navy and went on to graduate and receive a Navy commission were coded as 0.

Nine, new Independent Variables were then created. Academic Major Group (maj_grp) was a nominal variable. It was dichotomized and resaved as **MAJ_GRP2** where Group III Majors were dummy-coded as 1 and Group I and II Majors were coded as 0.

The variable Midshipman Rank (rank1), which measured a Midshipman's "rank" as a function of his or her billet, was a nominal variable. It was resaved as the ordinal variable, **STRIPES**, and was coded as an integer from 0 to 6 representing the number of stripes the Midshipman possessed as a function of his or her leadership billets First Class year. Since leadership billets only last one semester, each Midshipman originally possessed two possible scores under this variable. Midshipmen were given credit for the higher of the two values, resulting in one final score. Table 4 summarizes the possible values for **STRIPES**.

Table 4. STRIPES Values.

rank1 Value	STRIPES Value
Midshipman in Ranks (MIR)	0
Midshipman ENS	1
Midshipman LTJG	2
Midshipman LT	3
Midshipman LCDR	4
Midshipman CDR	5
Midshipman CAPT	6

Additionally, the variable rank1 was dichotomized and resaved as the variable **STRIPERS**. Since Midshipmen who wear three or more stripes are considered to be decision makers amongst their peers and are often termed "Stripers," Midshipmen who scored 3 or higher on the variable STRIPES were dummy-coded as 1 and Midshipmen who scored 2 or lower on stripes were coded as 0.

The variable Midshipman Leadership Billet (billet) was examined for Midshipmen who possessed one or two stripes. As was mentioned in the recoding of **STRIPES**, each Midshipman initially possessed two possible scores. In the event of a tie (e.g., both scores were a 1 for Midshipman Ensign), Midshipmen were given credit for a billet that necessitated both peer and subordinate leadership. Specifically, they were given credit for Squad Leader and/or Platoon Commander billets. As a result, **billet** was dichotomized and resaved as **PLT_CDR**. Midshipmen whose highest STRIPES score was 2 and who served as a Platoon Commander were coded as 1, whereas Midshipmen whose highest STRIPES score was 2 but did not serve as a Platoon Commander were coded as 0. The same logic was applied in creating the variable **SQD_LDR**. Midshipmen whose highest STRIPES score was 1 and who served as a Squad Leader

were coded as 1, and Midshipmen whose highest STRIPES score was 1 but did not serve as a Squad Leader were coded as 0.

The variable Prior Enlisted Member (prior), which indicates if a Midshipman was enlisted prior to attending the Naval Academy, was a nominal variable. It was dichotomized and resaved as **PRIOR2**, where Midshipmen who were prior-enlisted were dummy-coded as 1 and Midshipmen who were not prior-enlisted were coded as 0. Additionally, the variable Military Service of Midshipman (mil_mid) was a nominal variable. It was dichotomized and resaved as **PRIOR3**, where Midshipmen who had served in the Marine Corps prior to attending the Naval Academy were dummy-coded as 1, and all other scores were coded as 0.

The variable Military Father (mil_fath), which indicated whether a Midshipman's father had served or currently is serving in any of the Armed Forces, was a nominal variable. It was dichotomized and resaved as **MILFATHM**. Midshipmen whose fathers had served in the Marine Corps were coded as 1 and all other scores were coded as 0.

Finally, the variable Varsity Letter recipient (varsity) was a nominal variable. It was dichotomized and resaved as **VARSITY2** where Midshipmen who were awarded a Varsity Letter in their four years at the Naval Academy were dummy-coded as 1 and Midshipmen who were not awarded a Varsity Letter were coded as 0. Table 5 summarizes the Variables used in this investigation.

Table 5. Summary of Variables.

Variable Name	Description	Purpose	Range of Scores
MARINE	Assigned to the Marine Corps and received a Marine Corps Commission	Dependent Variable	1 = Marine, 0 = Navy
CAQPR	Cumulative Academic QPR	Independent Variable	Continuous (2.0 - 4.0)
CMQPR	Cumulative Military QPR	Independent Variable	Continuous (0.0 – 4.0)
MAJ_GRP2	Group III, or Humanities and Social Science, Academic Major	Independent Variable	1 = Group III, 0 = Group I or II
STRIPES	Highest number of stripes achieved while a Midshipman	Independent Variable	0 - 6 (See Table 4)
STRIPER	Served in a billet which awarded 3 or more stripes	Independent Variable	1 = Striper, 0 = Not a Striper
PLT_CDR	Served as a Platoon Cdr while wearing 2 stripes	Independent Variable	1 = Platoon Cdr, 0 = Not a Platoon Cdr
SQD_LDR	Served as a Squad Leader while wearing 1 stripe	Independent Variable	1 = Squad Leader, 0 = Not a Squad Leader
PRIOR2	Served as an enlisted member of the Armed Forces before attending the Naval Academy	Independent Variable	1 = Prior-Enlisted, 0 = Not Prior-Enlisted
PRIOR3	Served as an enlisted Marine before attending the Naval Academy	Independent Variable	1 = Prior Enlisted Marine, 0 = Not a Prior Marine
MILFATHM	Father served in the United States Marine Corps	Independent Variable	1 = Marine Father, 0 = Other
VARSITY2	Awarded a Varsity Letter while at the Naval Academy	Independent Variable	1 = Awarded a Varsity Letter, 0 = Not awarded a Leteter

C. PRELIMINARY RESULTS

This section provides an initial examination of each of the variables used in this investigation. A summary of means, crosstabs, and bivariate correlation statistics for each is provided below.

Table 6. Summary of Variable Means.

	MARINE	Academic CQPR	Military CQPR	MAJ_ GRP2	MIL FATHM	VARSITY 2	PRIOR 2	PRIOR 3	STRIPES	STRIPERS	PLT_ CDR	SQD_ LDR
N Valid	8300	8300	8300	8300	8300	8300	8300	8300	8300	8300	8300	8300
Miss	0	0	0	0	0	0	0	0	0	0	0	0
Mean	.17	2.9352	3.1707	.39	.06	.31	.14	.01	1.83	.19	.23	.36
Median	.00	2.9000	3.1800	.00	.00	.00	.00	.00	2.00	.00	.00	.00
Mode	0	2.96	3.17	0	0	0	0	0	2	0	0	0
Std. Dev.	.373	.47489	.31528	.488	.234	.461	.350	.118	.917	.391	.418	.480
Min	0	2.00	2.13	0	0	0	0	0	0	0	0	0
Max	1	4.00	3.99	1	1	1	1	1	6	1	1	1

1. Distribution of Navy and Marine Corps Graduates

As noted in Chapter II, the Letter of Agreement (LOA) between the Commandant of the Marine Corps and the Chief of Naval Operations regarding the number of Marine graduates at the Naval Academy has been in place over thirty years. Since this LOA places a 16 2/3 percent cap on Marine graduates, we expect that this will be reflected in the distribution of graduates. Table 7 demonstrates that this agreement is being rigidly enforced.

Table 7. Distribution of Graduates.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Navy Graduate	6918	83.3	83.3	83.3
	Marine Graduate	1382	16.7	16.7	100.0
	Total	8300	100.0	100.0	

2. Distribution of AQPRs within Data Set

Figure 3 displays the distribution of AQPRs within the data set. Since the minimum acceptable AQPR for graduation is a 2.0, the range is restricted to 2.0 – 4.0. Table 8 indicates that the mean for the entire data set is 2.94.

Figure 3. Distribution of AQPRs within Data Set.

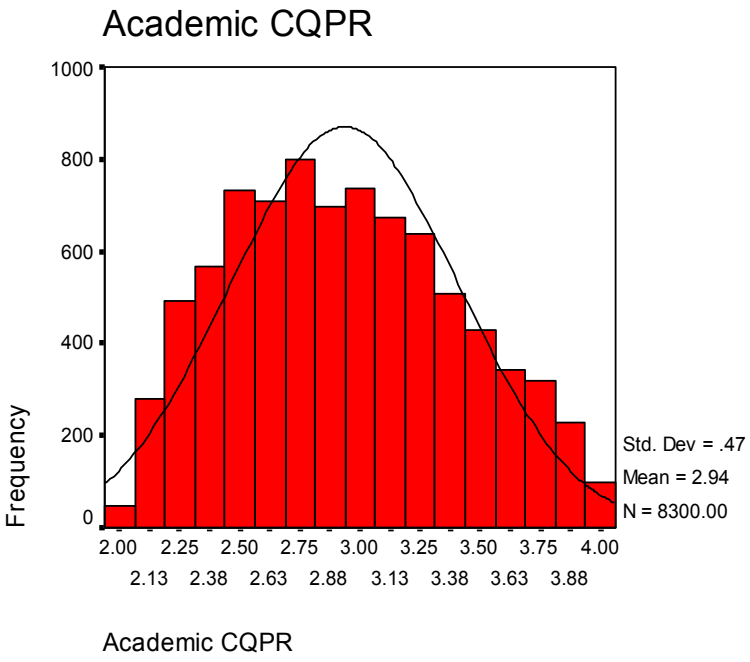


Table 8. Analysis of AQPRs in Data Set.

N	Valid	8300
	Missing	0
Mean		2.9352
Median		2.9000
Mode		2.96
Std. Deviation		.47489
Variance		.22552
Skewness		.225
Std. Error of Skewness		.027
Kurtosis		-.805
Std. Error of Kurtosis		.054
Range		2.00
Minimum		2.00
Maximum		4.00

3. Distribution of AQPRs within Marine Corps Graduates

The literature review indicates that Marine graduates tend to accumulate a lower-than-average AQPR at the Naval Academy. As a result, this investigation expects the Marine graduates' mean to be lower than that of the aggregate data set. Figure 4 displays the distribution of Marine AQPRs and Table 9 indicates that their mean is, in fact, lower at 2.86.

Figure 4. Distribution of Marine AQPRs.

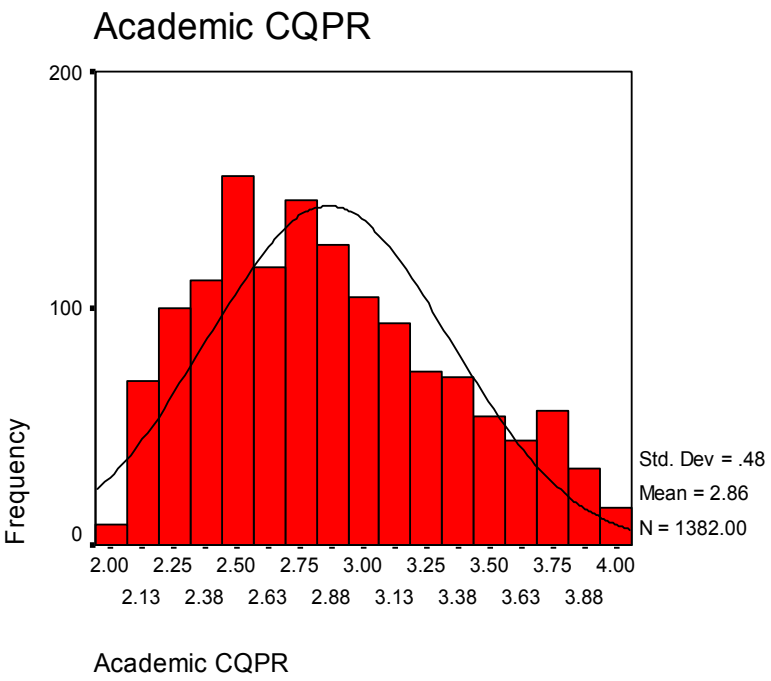


Table 9. Analysis of Marine AQPRs.

N	Valid	1382
	Missing	0
Mean		2.8618
Median		2.8000
Mode		2.87
Std. Deviation		.48016
Variance		.23056
Skewness		.429
Std. Error of Skewness		.066
Kurtosis		-.685
Std. Error of Kurtosis		.132
Range		1.99
Minimum		2.01
Maximum		4.00

4. Distribution of MQPRs within Data Set

Figure 5 displays the distribution of MQPRs within the data set. Table 10 shows that the mean for the entire data set is 3.17.

Figure 5. Distribution of MQPRs within the Data Set.

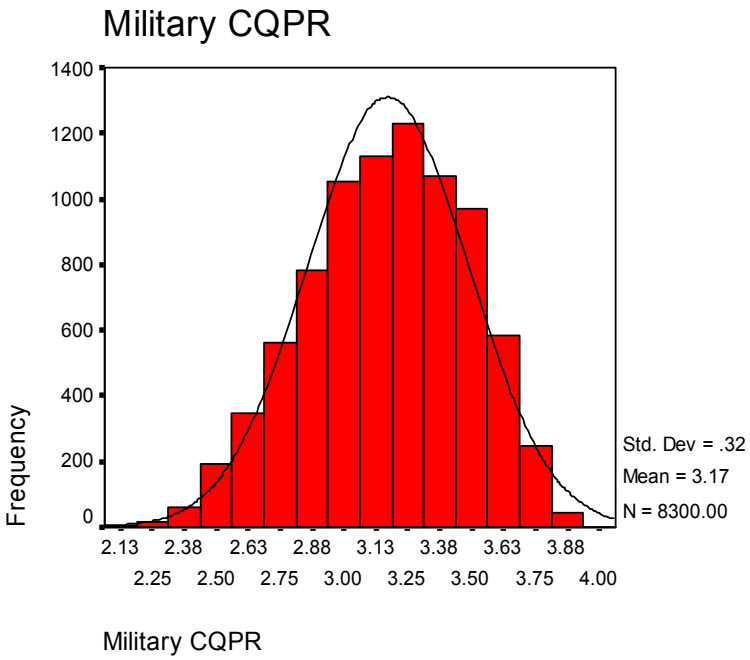


Table 10. Analysis of MQPRs in Data Set.

N	Valid	8300
	Missing	0
Mean		3.1707
Median		3.1800
Mode		3.17
Std. Deviation		.31528
Variance		.09940
Skewness		-.243
Std. Error of Skewness		.027
Kurtosis		-.458
Std. Error of Kurtosis		.054
Range		1.86
Minimum		2.13
Maximum		3.99

5. Distribution of MQPRs within Marine Corps Graduates

The literature review indicates that Marine graduates tend to accumulate a higher-than-average MQPR at the Naval Academy. As a result, this investigation expects the Marine graduates' mean to be higher than that of the aggregate data set. Figure 6 displays the distribution of Marine MQPRs and Table 11 indicates that their mean is, in fact, higher at 3.23.

Figure 6. Distribution of Marine MQPRs.

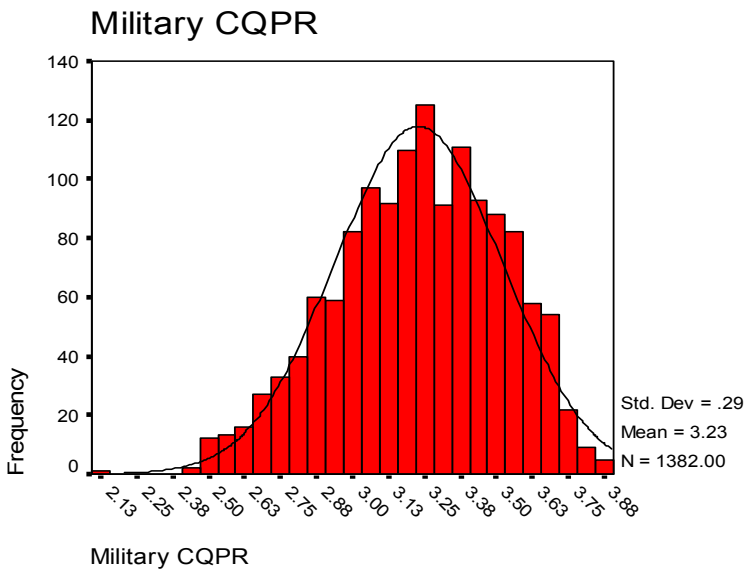


Table 11. Analysis of Marine MQPRs.

N	Valid	1382
	Missing	0
Mean		3.2289
Median		3.2400
Mode		3.21
Std. Deviation		.29192
Variance		.08522
Skewness		-.287
Std. Error of Skewness		.066
Kurtosis		-.391
Std. Error of Kurtosis		.132
Range		1.76
Minimum		2.14
Maximum		3.90

6. Distribution of Major Groups within Marine Corps Graduates

The literature review indicates that Marine graduates tend to originate from one of the Group III, or Humanities and Social Science, academic majors. As a result, this investigation expects to see a disproportionate number of Marine Graduates in the Group III Majors. Figure 7 and Table 12 show that this is indeed the case.

Figure 7. Distribution of Marine Academic Majors.

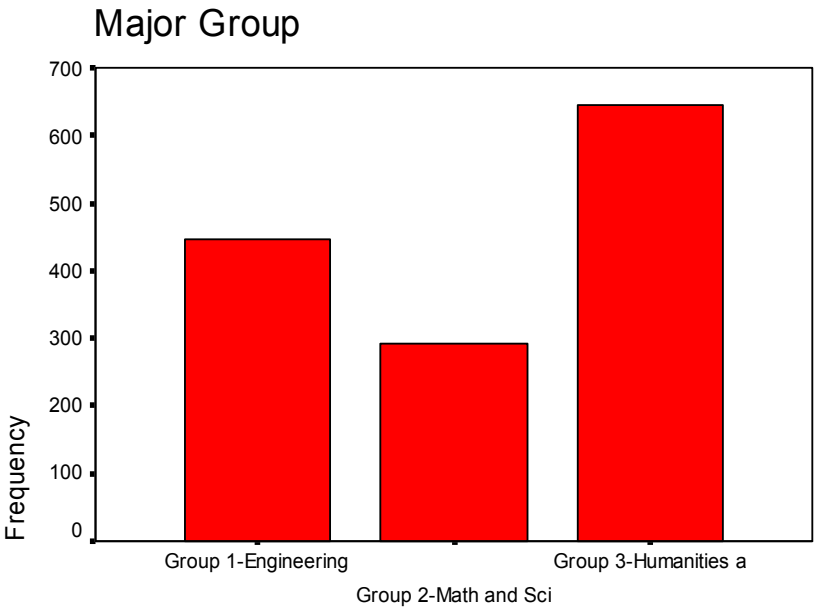


Table 12. Analysis of Marine Academic Majors.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Group 1-Engineering	447	32.3	32.3	32.3
	Group 2-Math and Science	291	21.1	21.1	53.4
	Group 3-Humanities and Social Science	644	46.6	46.6	100.0
	Total	1382	100.0	100.0	

Noting the disproportionate number of Marine graduates who studied one of the Group III Majors, a cross-tabulation was completed to examine the significance of this variable. Table 13 displays the results of this cross-tabulation. Table 14 depicts the results of the subsequent Chi-Square analysis and demonstrates that these findings are statistically significant. That is, there is a distinct correlation between Marine graduates and Group III Majors. It should be noted, however, that this finding is more a measure of the propensity of Midshipmen in Group III Majors to request and subsequently be assigned to the Marine Corps than it is a measure of a selection variable, as a Midshipman's academic major is not a basis for selection in the Marine Corps.

Table 13. MAJ_GRP2 Cross-Tabulation.

			MAJ_GRP2		
			Group I or II Major	Group III Major	Total
MARINE	Navy Graduate	Count	4326	2592	6918
		% within MAJ_GRP2	85.4%	80.1%	83.3%
	Marine Graduate	Count	738	644	1382
		% within MAJ_GRP2	14.6%	19.9%	16.7%
Total		Count	5064	3236	8300
		% within MAJ_GRP2	100.0%	100.0%	100.0%

Table 14. Chi-Square Analysis of MAJ_GRP2.

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	40.380(b)	1	.000		
Continuity Correction(a)	39.997	1	.000		
Likelihood Ratio	39.776	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	40.375	1	.000		
N of Valid Cases	8300				

a Computed only for a 2x2 table
b 0 cells (.0%) have expected count less than 5. The minimum expected count is 538.81.

7. Distribution of Striper Ranks within Data Set

The primary hypothesis of this investigation is that the officers who comprise the Marine Corps selection panel place a premium on leadership experience in selecting Midshipmen to join the Marine Corps following graduation. As a result, this investigation expects to find a disproportionate number of Marine graduates who scored three or higher on the variable **STRIPES** (i.e., achieved the rank of Midshipman Lieutenant or higher). Table 15 displays the results of the cross-tabulation between **MARINE** and **STRIPES** and illustrates that Marine graduates are over-represented in the ranks of Midshipman Lieutenant through Midshipman Captain.

Table 15. Distribution of Striper Ranks within Data Set.

			STRIPES							Total
			MIR	MIDN ENS	MIDN LTJG	MIDN LT	MIDN LCDR	MIDN CDR	MIDN CAPT	
MARINE	Navy Graduate	Count	137	2811	2804	869	216	71	10	6918
		% within STRIPES	90.1%	88.9%	81.9%	74.5%	77.4%	73.2%	55.6%	83.3%
	Marine Graduate	Count	15	351	621	298	63	26	8	1382
		% within STRIPES	9.9%	11.1%	18.1%	25.5%	22.6%	26.8%	44.4%	16.7%
Total		Count	152	3162	3425	1167	279	97	18	8300
		% within STRIPES	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 16 displays the cross-tabulation between the variables **STRIPERS** and **MARINE**. Table 17 displays the Chi-Square analysis of **STRIPERS** and demonstrates that the correlation between Midshipmen "Stripers" and Marine graduates is statistically significant.

Table 16. STRIPERS Cross-Tabulation.

			STRIPERS		
			Not a Striper	Striper	Total
MARINE	Navy Graduate	Count	5752	1166	6918
		% within STRIPERS	85.4%	74.7%	83.3%
	Marine Graduate	Count	987	395	1382
		% within STRIPERS	14.6%	25.3%	16.7%
Total		Count	6739	1561	8300
		% within STRIPERS	100.0%	100.0%	100.0%

Table 17. Chi-Square Analysis of STRIPERS.

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	103.742(b)	1	.000		
Continuity Correction(a)	102.976	1	.000		
Likelihood Ratio	95.186	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	103.730	1	.000		
N of Valid Cases	8300				

a Computed only for a 2x2 table
b 0 cells (.0%) have expected count less than 5. The minimum expected count is 259.92.

8. Distribution of Platoon Commander Billets within Data Set

Due to the limited number of Striper billets, as well as the competitive selection process undertaken, not all Midshipmen have the opportunity to gain experience in one of these billets. As a result, a secondary hypothesis of this investigation is that in examining Midshipmen who did not possess a Striper billet, the officers who comprise the Marine selection panel select Midshipmen who have had billets on the Company level, such as Squad Leader and Platoon Commander, that necessitate both peer and subordinate leadership. Accordingly, this investigation expects to find a disproportionate number of Marine graduates who served as Platoon Commanders.

By partitioning the data set and restricting it to Midshipmen who scored a two or lower on the variable **STRIPES** (N = 6739), a cross-tabulation was completed to examine the correlation between Marine graduates and Midshipmen who served as Platoon Commanders. Table 18 displays the results of this cross-tabulation. Table 19 displays the subsequent Chi-Square analysis and finds that the relationship is statistically significant.

Table 18. PLT_CDR Cross-Tabulation.

			PLT_CDR		
			Not a Platoon Commander	Platoon Commander	Total
MARINE	Navy Graduate	Count	4254	1498	5752
		% within PLT_CDR	87.4%	80.0%	85.4%
	Marine Graduate	Count	613	374	987
		% within PLT_CDR	12.6%	20.0%	14.6%
Total		Count	4867	1872	6739
		% within PLT_CDR	100.0%	100.0%	100.0%

Table 19. Chi-Square Analysis of PLT_CDR.

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	58.961(b)	1	.000		
Continuity Correction(a)	58.372	1	.000		
Likelihood Ratio	56.029	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	58.952	1	.000		
N of Valid Cases	6739				

a Computed only for a 2x2 table
b 0 cells (.0%) have expected count less than 5. The minimum expected count is 274.17.

9. Distribution of Squad Leader Billets within Data Set

Employing the same rationale, the data set was once again partitioned and restricted to those Midshipmen whose score on the variable **STRIPES** was one or zero (N = 3314). A cross-tabulation was completed to examine the correlation between Marine graduates and Midshipmen who served as Squad Leaders. Table 20 displays the results of this cross-tabulation. Table 21 depicts the Chi-Square analysis of **SQD_LDR** and finds that the relationship is not statistically significant. These results are not surprising because nearly every Midshipman whose highest striper rank was one stripe served as a Squad Leader First Class year.

Table 20. SQD_LDR Cross-Tabulation.

			SQD_LDR		
			Not a Squad Leader	Squad Leader	Total
MARINE	Navy Graduate	Count	306	2642	2948
		% within SQD_LDR	91.3%	88.7%	89.0%
	Marine Graduate	Count	29	337	366
		% within SQD_LDR	8.7%	11.3%	11.0%
Total		Count	335	2979	3314
		% within SQD_LDR	100.0%	100.0%	100.0%

Table 21. Chi-Square Analysis of SQD_LDR.

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.162(b)	1	.141		
Continuity Correction(a)	1.900	1	.168		
Likelihood Ratio	2.299	1	.129		
Fisher's Exact Test				.167	.081
Linear-by-Linear Association	2.161	1	.142		
N of Valid Cases	3314				

a Computed only for a 2x2 table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 37.00.

10. Distribution of Prior Enlisted Marines within Data Set

This investigation hypothesizes that the officers who comprise the Marine selection panel place value in prior-enlisted Marine experience and select Midshipmen to join the Marine Corps on this basis. Accordingly, this investigation expects to find a disproportionate number of prior-enlisted Marines who returned to the Marine Corps following graduation. Table 22 depicts the results of the cross-tabulation between **MARINE** and **PRIOR3**. Table 23 displays the results of this Chi-Square analysis and finds that this relationship is statistically significant.

Table 22. PRIOR3 Cross-Tabulation.

			PRIOR3		
			Not a Marine	Prior Enlisted Marine	Total
MARINE	Navy Graduate	Count	6869	49	6918
		% within PRIOR3	83.9%	41.9%	83.3%
	Marine Graduate	Count	1314	68	1382
		% within PRIOR3	16.1%	58.1%	16.7%
Total		Count	8183	117	8300
		% within PRIOR3	100.0%	100.0%	100.0%

Table 23. Chi-Square Analysis of PRIOR3.

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	147.051(b)	1	.000		
Continuity Correction(a)	144.036	1	.000		
Likelihood Ratio	104.655	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	147.033	1	.000		
N of Valid Cases	8300				

a Computed only for a 2x2 table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 19.48.

11. Distribution of Marine Legacies within Data Set

This investigation hypothesizes that the officers who comprise the Marine selection panel place value in "legacy" status and view this exposure to the Marine Corps' culture as beneficial. Accordingly, this investigation expects to find a disproportionate number of Marine graduates who are legacies. Table 24 displays the results of the cross-tabulation between **MILFATHM** and **MARINE**. Table 25 displays the results of this Chi-Square analysis and finds that this relationship is statistically significant.

Table 24. MILFATHM Cross-Tabulation.

			MILFATHM		
			Father not a Marine	Marine Father	Total
MARINE	Navy Graduate	Count	6595	323	6918
		% within MILFATHM	84.4%	67.0%	83.3%
	Marine Graduate	Count	1223	159	1382
		% within MILFATHM	15.6%	33.0%	16.7%
Total		Count	7818	482	8300
		% within MILFATHM	100.0%	100.0%	100.0%

Table 25. Chi-Square Analysis of MILFATHM.

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	98.410(b)	1	.000		
Continuity Correction(a)	97.164	1	.000		
Likelihood Ratio	82.288	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	98.398	1	.000		
N of Valid Cases	8300				

a Computed only for a 2x2 table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 80.26.

12. Distribution of Varsity Letter Recipients within Data Set

This investigation hypothesizes that the officers who comprise the Marine selection panel view participation in Varsity athletics as a preparation for the rigors of TBS and that the achievement of a Varsity Letter demonstrates determination and leadership experience. As a result, this investigation expects to find a disproportionate number of Marine graduates who achieved Varsity Letters at the Naval Academy. Table 26 depicts the cross-tabulation between **VARSITY2** and **MARINE**. Table 27 displays the results of this Chi-Square analysis and finds that this relationship is marginally significant.

Table 26. VARSITY2 Cross-Tabulation.

			VARSITY2		
			Not a Varsity Athlete	Varsity Athlete	Total
MARINE	Navy Graduate	Count	4823	2095	6918
		% within VARSITY2	83.9%	82.2%	83.3%
	Marine Graduate	Count	928	454	1382
		% within VARSITY2	16.1%	17.8%	16.7%
Total		Count	5751	2549	8300
		% within VARSITY2	100.0%	100.0%	100.0%

Table 27. Chi-Square Analysis of VARSITY2.

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.569(b)	1	.059		
Continuity Correction(a)	3.449	1	.063		
Likelihood Ratio	3.534	1	.060		
Fisher's Exact Test				.060	.032
Linear-by-Linear Association	3.568	1	.059		
N of Valid Cases	8300				

a Computed only for a 2x2 table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 424.42.

13. Bivariate Correlation Statistics

Tables 28, 29, and 30 provide a summary of the bivariate correlation statistics for the variables utilized in this investigation. Table 28 highlights the strength of association between **STRIPERS** and **MARINE** when the entire data set is examined (N = 8,300). Table 29 highlights the strength of association between **PLT_CDR** and **MARINE** when the data set is restricted to Midshipmen who possessed two or fewer stripes (N = 6,739). Finally, Table 30 displays the strength of association between Group 1 and Group 3 IVs and **MARINE** when the data set is restricted to Midshipmen who possessed one stripe or zero stripes (N = 3314). Note that **SQD_LDR** has been removed since it is statistically insignificant in a bivariate setting and nearly all Midshipmen whose highest rank was Midshipman Ensign served as a Squad Leader.

Table 28. Bivariate Correlations (N = 8,300).

		MARINE	Academic CQPR	Military CQPR	MAJ_ GRP2	STRIPERS	PRIOR3	MIL FATHM	VARSITY 2
MARINE	Pearson Correlation	1							
	Sig. (2-tailed)	.							
	N	8300							
Academic CQPR	Pearson Correlation	-.069(**)	1						
	Sig. (2-tailed)	.000	.						
	N	8300	8300						
Military CQPR	Pearson Correlation	.082(**)	.680(**)	1					
	Sig. (2-tailed)	.000	.000	.					
	N	8300	8300	8300					
MAJ_ GRP2	Pearson Correlation	.070(**)	-.144(**)	-.161(**)	1				
	Sig. (2-tailed)	.000	.000	.000	.				
	N	8300	8300	8300	8300				
STRIPERS	Pearson Correlation	.112(**)	.255(**)	.407(**)	-.023(*)	1			
	Sig. (2-tailed)	.000	.000	.000	.035	.			
	N	8300	8300	8300	8300	8300			
PRIOR3	Pearson Correlation	.133(**)	-.041(**)	-.001	.011	.034(**)	1		
	Sig. (2-tailed)	.000	.000	.926	.304	.002	.		
	N	8300	8300	8300	8300	8300	8300		
MILFATHM	Pearson Correlation	.109(**)	-.034(**)	-.010	.021	-.013	.014	1	
	Sig. (2-tailed)	.000	.002	.343	.053	.246	.202	.	
	N	8300	8300	8300	8300	8300	8300	8300	
VARSITY2	Pearson Correlation	.021	-.103(**)	.036(**)	.065(**)	-.042(**)	-.046(**)	-.001	1
	Sig. (2-tailed)	.059	.000	.001	.000	.000	.000	.917	.
	N	8300	8300	8300	8300	8300	8300	8300	8300

** Correlation is significant at the 0.01 level (2-tailed).
Correlation is significant at the 0.05 level (2-tailed).

Table 29. Bivariate Correlations (N = 6,739).

		MARINE	Academic CQPR	Military CQPR	MAJ_ GRP2	PLT_ CDR	PRIOR3	MIL FATHM	VARSITY 2
MARINE	Pearson Correlation	1							
	Sig. (2-tailed)	.							
	N	6739							
Academic CQPR	Pearson Correlation	-.086(**)	1						
	Sig. (2-tailed)	.000	.						
	N	6739	6739						
Military CQPR	Pearson Correlation	.056(**)	.659(**)	1					
	Sig. (2-tailed)	.000	.000	.					
	N	6739	6739	6739					
MAJ_GRP2	Pearson Correlation	.069(**)	-.144(**)	-.166(**)	1				
	Sig. (2-tailed)	.000	.000	.000	.				
	N	6739	6739	6739	6739				
PLT_CDR	Pearson Correlation	.094(**)	.048(**)	.171(**)	-.026(*)	1			
	Sig. (2-tailed)	.000	.000	.000	.030	.			
	N	6739	6739	6739	6739	6739			
PRIOR3	Pearson Correlation	.111(**)	-.029(*)	-.005	.010	-.002	1		
	Sig. (2-tailed)	.000	.018	.674	.415	.847	.		
	N	6739	6739	6739	6739	6739	6739		
MILFATHM	Pearson Correlation	.110(**)	-.029(*)	-.004	.016	.029(*)	.018	1	
	Sig. (2-tailed)	.000	.018	.733	.189	.018	.143	.	
	N	6739	6739	6739	6739	6739	6739	6739	
VARSITY2	Pearson Correlation	.039(**)	-.111(**)	.045(**)	.076(**)	-.076(**)	-.043(**)	-.001	1
	Sig. (2-tailed)	.002	.000	.000	.000	.000	.000	.924	.
	N	6739	6739	6739	6739	6739	6739	6739	6739

** Correlation is significant at the 0.01 level (2-tailed).
Correlation is significant at the 0.05 level (2-tailed).

Table 30. Bivariate Correlations (N = 3,314).

		MARINE	Academic CQPR	Military CQPR	MAJ_ GRP2	PRIOR3	MIL FATHM	VARSITY 2
MARINE	Pearson Correlation	1						
	Sig. (2-tailed)	.						
	N	3314						
Academic CQPR	Pearson Correlation	-.078(**)	1					
	Sig. (2-tailed)	.000	.					
	N	3314	3314					
Military CQPR	Pearson Correlation	.059(**)	.649(**)	1				
	Sig. (2-tailed)	.001	.000	.				
	N	3314	3314	3314				
MAJ_GRP2	Pearson Correlation	.092(**)	-.139(**)	-.167(**)	1			
	Sig. (2-tailed)	.000	.000	.000	.			
	N	3314	3314	3314	3314			
PRIOR3	Pearson Correlation	.118(**)	-.021	.007	.010	1		
	Sig. (2-tailed)	.000	.228	.689	.562	.		
	N	3314	3314	3314	3314	3314		
MILFATHM	Pearson Correlation	.081(**)	-.021	-.019	.006	.001	1	
	Sig. (2-tailed)	.000	.221	.283	.731	.966	.	
	N	3314	3314	3314	3314	3314	3314	
VARSITY2	Pearson Correlation	.066(**)	-.100(**)	.114(**)	.074(**)	-.040(*)	.004	1
	Sig. (2-tailed)	.000	.000	.000	.000	.021	.812	.
	N	3314	3314	3314	3314	3314	3314	3314

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

D. SUMMARY

The preliminary analyses conducted in this chapter tend to support the information provided in the Literature Review and the research hypotheses of this investigation. A review of the signs and absolute values of the bivariate correlation statistics displayed in Table 28 indicates that a positive and statistically significant relationship exists between **MQPR**, **MAJ_GRP2**, **STRIPERS**, **PRIOR3**, and **MILFATHM** and **MARINE**. A negative relationship exists between **AQPR** and **MARINE**, and the relationship between **VARSITY2** and **MARINE** is marginally significant.

In Table 29, where the data set is restricted to Midshipmen who possessed two or fewer stripes, we see that the relationship between **AQPR** and **MARINE** remains negative but the relationship between **PLT_CDR** and **MARINE** is positive. Interestingly, we find that the relationship between **VARSITY2** and **MARINE** is now statistically significant. This pattern is repeated in Table 30 when we examine Midshipmen who possessed one stripe or were MIRs.

When we examine these results in the context of the theoretical model, we find that Group 1 variables, examining the propensities of Midshipmen, indicate that Marine graduates tend to originate from one of the Group III Academic Majors and tend to possess above-average Military QPRs. Additionally, they indicate that Marines tend to possess below-average Academic QPRs. However, this finding tends to substantiate the statements of Marine Corps selection committee members that little emphasis is placed on Academic prowess. In other words, so long as a Midshipman has the requisite AQPR to graduate from the Naval Academy, the Marines appear willing to look past his or her AQPR in the pursuit of other "intangibles."

Group 2 variables, examining the relationship between a Midshipman's leadership responsibilities and his or her assignment to the Marine Corps, indicate that Marine graduates appear to be selected based upon their experience as Stripers and Platoon Commanders. Because nearly all Midshipmen whose highest rank was Midshipman Ensign served as Squad Leaders, we cannot conclude from the data that Marines select Midshipmen for an assignment to the Marine Corps based on Squad Leader experience.

Finally, examining Group 3 variables shows a positive and significant correlation between Marine Corps enculturation, as measured by prior service or family background, and assignment to the Marine Corps. This finding is consistent with statements of Marine Corps selection committee members that legacy status and prior-enlisted Marine experience are factors strongly considered. However, the selection of Marine graduates does not appear to be based upon Varsity Letter recipient status when we examine "Stripers." That is, the relationship between **VARSITY2** and **MARINE** is only statistically significant when we examine Midshipmen who possessed two or fewer stripes.

Chapter V will examine each of the independent variables in a multivariate setting. Using a series of binary logistic regressions, we will highlight the strength of association between each of the independent variables and the dependent variable, Marine Corps Service Assignment, when the independent variables interact with one another.

V. DATA ANALYSIS

A. INTRODUCTION

This chapter examines each of the independent variables in a multivariate setting. The data are analyzed and reported in a series of binary logistic regressions that center on the Group 2 independent variables. Following the pattern on bivariate correlations and data sets reported in Chapter IV, the regressions reported below examine the relationships among Group 1 and Group 3 independent variables, each of the leadership variables, and the dependent variable within the applicable data set (N).

B. ANALYSIS

1. Regression 1

The first regression examines the independent variables that Marine selection committee members claim to consider in their selection of Midshipmen. Using **STRIPERS** as the leadership variable, the model places them in a multivariate setting to determine the strength of association between each of these variables and the dependent variable, Marine Corps Service Assignment, when the entire data set is examined (N = 8,300). Thus, in consonance with the statements of selection committee members and the results of Chapter IV, this model includes **CMQPR**, **STRIPERS**, **PRIOR3**, **MILFATHM**, and **VARSITY2**.

The objective of this model is to overlay the desires of the Marine Corps selection committee on the entire population of Midshipmen should the Marines have their choice of Midshipmen. Table 31 shows that the Nagelkerke R Square value of this model is .06 and Table 32 displays that this model correctly classifies 41.2 percent of the Marine graduates. Note that the cut value for this regression was set to .17 to coincide with the mean value of **MARINE** as reported in Table 6.

Table 31. Regression 1 Model Summary.

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	7172.557	.036	.060

Table 32. Regression 1 Classification Table.

Observed			Predicted		
			MARINE		
			Navy Graduate	Marine Graduate	Percentage Correct
Step 1	MARINE	Navy Graduate	5312	1606	76.8
		Marine Graduate	813	569	41.2
	Overall Percentage				70.9

a The cut value is .170

Table 33 highlights the interrelationship between the five independent variables and **MARINE**. Examining the Beta weights and odds ratios, we see that each of the independent variables is both positively and significantly correlated with **MARINE**. The variables measuring Marine Corps enculturation, **PRIOR3** and **MILFATHM**, serve as the best predictors of an assignment to the Marine Corps in this model. The leadership variable **STRIPERS** is next, followed by **CMQPR** and **VARSITY2**.

Table 33. Regression 1 Results.

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	CMQPR	.423	.108	15.371	1	.000	1.527
	STRIPERS	.557	.077	52.432	1	.000	1.746
	PRIOR3	1.993	.194	105.515	1	.000	7.336
	MILFATHM	1.015	.104	95.359	1	.000	2.758
	VARSITY2	.173	.065	7.172	1	.007	1.189
	Constant	-3.262	.340	92.037	1	.000	.038

a Variable(s) entered on step 1: CMQPR, STRIPERS, PRIOR3, MILFATHM, VARSITY2.

By examining the results of Regression 1 and comparing them with the criteria established for inclusion on the "A-List" in Chapter III, we see that "Stripers" who ask to be assigned to the Marine Corps are almost always selected. Accordingly, we partitioned the data set and restricted it to Midshipmen who received a positive score on the variable **STRIPERS** (N = 1,561). Interestingly, when we re-ran the regression with this reduced data set, the model attempted to classify 100 percent of the Midshipmen as Marine graduates.

2. Regression 2

Noting that only 19 percent of the Midshipmen achieved three or more stripes, we use the second regression to examine the remaining 81 percent of the population. Employing the model used in the first regression, Regression 2 placed the same Group 1 and Group 3 independent variables with **PLT_CDR** and restricted the data set to Midshipmen who scored two or less on the variable **STRIPES** (N = 6,739). Of this group, 15 percent in fact became Marines, so the cut score is reduced to .15. Table 34 shows that the Nagelkerke R Square value for this model is .053 and Table 35 displays that this model correctly classifies 48.9 percent of the Marine graduates.

Table 34. Regression 2 Model Summary.

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	5407.483	.030	.053

Table 35. Regression 2 Classification Table.

Observed			Predicted		
			MARINE		
			Navy Graduate	Marine Graduate	Percentage Correct
Step 1	MARINE	Navy Graduate	3888	1864	67.6
		Marine Graduate	504	483	48.9
	Overall Percentage				64.9

a The cut value is .150

Mirroring the results of Regression 1, the five remaining variables were both positively and significantly correlated with **MARINE**. Table 36 illustrates that the best predictor of an assignment to the Marine Corps in this model is **PRIOR3**, followed by **MILFATHM**, the leadership variable **PLT_CDR**, **CMQPR**, and finally **VARSITY2**.

Table 36. Regression 2 Results.

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	CMQPR	.407	.121	11.276	1	.001	1.503
	PLT_CDR	.528	.075	49.838	1	.000	1.695
	PRIOR3	1.891	.229	68.014	1	.000	6.623
	MILFATHM	.987	.117	71.010	1	.000	2.682
	VARSITY2	.299	.074	16.300	1	.000	1.349
	Constant	-3.420	.379	81.229	1	.000	.033

a Variable(s) entered on step 1: CMQPR, PLT_CDR, PRIOR3, MILFATHM, VARSITY2.

3. Regression 3

Some 40 percent of the Midshipmen achieved only zero or one stripe. Thus, the data set was once again partitioned and restricted to Midshipmen who scored one or zero on the variable **STRIPES** (N = 3,314). The third regression highlights the strength of association between each of the Group 1 and Group 3 independent variables described above and **MARINE** in a multivariate setting. As was mentioned in Chapter IV, the variable **SQD_LDR** was removed because nearly all Midshipmen who achieved one stripe served as Squad Leaders First Class Year. Table 37 displays that the Nagelkerke R Square value for this model is .043 and Table 38 shows that the percentage of correct classifications was 50.8 percent. Only 11 percent of this subgroup in fact became Marines, so the cut value was set to .11.

Table 37. Regression 3 Model Summary.

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	2230.077	.022	.043

Table 38. Regression 3 Classification Table.

Observed			Predicted		
			MARINE		
			Navy Graduate	Marine Graduate	Percentage Correct
Step 1	MARINE	Navy Graduate	1905	1043	64.6
		Marine Graduate	180	186	50.8
	Overall Percentage				63.1

a The cut value is .110

The results of Regression 3 illustrate that a predictable pattern is emerging. Table 39 shows that the four remaining variables are both positively and significantly correlated with **MARINE** in this model. As in Regressions 1 and 2, the best predictor of an assignment to the Marine Corps is **PRIOR3**, followed by **MILFATHM**, **CMQPR**, and finally **VARSITY2**.

Table 39. Regression 3 Results.

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	CMQPR	.577	.191	9.141	1	.002	1.781
	PRIOR3	2.081	.342	37.089	1	.000	8.011
	MILFATHM	.901	.196	21.158	1	.000	2.462
	VARSITY2	.423	.114	13.687	1	.000	1.526
	Constant	-4.112	.581	50.040	1	.000	.016

a Variable(s) entered on step 1: CMQPR, PRIOR3, MILFATHM, VARSITY2.

4. Regression 4

The fourth regression isolates the population of Midshipmen who were neither prior-enlisted Marines nor legacies. The objective of this model is to examine the independent variables over which a Midshipman has personal control and to reduce the possible effects of self-selection bias by previously enculturated Midshipmen. Accordingly, the original data set (N = 8,300) was partitioned and Midshipmen who scored positively on the variables **PRIOR3** or **MILFATHM** were eliminated (N = 7,711). The model used in Regression 4 employs the same independent variables used in

Regression 1, but of course eliminates **PRIOR3** and **MILFATHM**. Table 40 displays that the Nagelkerke R Square value of this model is .021 and Table 41 indicates that this model correctly classifies 40.0 percent of the Marine graduates. The cut value is set at .15 reflecting the proportion of this subgroup that became Marines.

Table 40. Regression 4 Model Summary.

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	6442.761	.012	.021

Table 41. Regression 4 Classification Table.

Observed			Predicted		
			MARINE		
			Navy Graduate	Marine Graduate	Percentage Correct
Step 1	MARINE	Navy Graduate	4681	1868	71.5
		Marine Graduate	697	465	40.0
	Overall Percentage				66.7

a The cut value is .150

Table 42 illustrates that a primary hypothesis of this investigation is upheld. That is, when we remove prior-enlisted Marines and/or legacies, the independent variables remain both positively and significantly correlated with **MARINE.** The leadership variable **STRIPERS** serves as the best predictor of an assignment to the Marine Corps, followed by **CMQPR** and **VARSITY2**.

Table 42. Regression 4 Results.

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	CMQPR	.366	.115	10.184	1	.001	1.441
	STRIPERS	.552	.082	45.741	1	.000	1.737
	VARSITY2	.166	.068	5.950	1	.015	1.181
	Constant	-3.074	.360	72.819	1	.000	.046

a Variable(s) entered on step 1: CMQPR, STRIPERS, VARSITY2.

The results of Regression 4 were repeated when we examined the effect of the leadership variable **PLT_CDR**. Having already omitted the prior-enlisted Marines and legacies, the data set was further partitioned and restricted to Midshipmen who scored two or less on the variables **STRIPES** (N = 6,264). The Nagelkerke R Square value for this model was .020 and the percentage of correct classifications was 55.2 percent. However, the three independent variables were still positively and significantly correlated with **MARINE** and the leadership variable **PLT_CDR** served as the best predictor of an assignment to the Marine Corps.

5. Regression 5

The fifth regression places all of the Group 1 and Group 3 independent variables with **STRIPERS** in a multivariate setting to determine the strength of association between each of these variables and the dependent variable when the entire data set is examined (N = 8,300). Additionally, Regression 5 serves to validate prior research which indicates that Marine graduates tend to possess below-average Academic QPRs and tend to originate from one of the Group III Academic Majors. Table 43 shows that the Nagelkerke R Square value for this model is .109. Table 44 displays that this model correctly classified 58.4 percent of the Marine graduates when the entire data set was examined.

Table 43. Regression 5 Model Summary.

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	6919.980	.065	.109

Table 44. Regression 5 Classification Table.

Observed			Predicted		
			MARINE		
			Navy Graduate	Marine Graduate	Percentage Correct
Step 1	MARINE	Navy Graduate	4691	2227	67.8
		Marine Graduate	575	807	58.4
	Overall Percentage				66.2

a The cut value is .170

Finally, Table 45 displays the strength of association between each of the independent variables and the dependent variable. Examining the Beta weights and odds ratios of each, we see that a negative correlation exists between **CAQPR** and **MARINE** and the relationship between **VARSITY2** and **MARINE** is now both negative and insignificant. For the five remaining variables in this model, we see that the best predictors of an assignment to the Marine Corps are (in order): **CMQPR**, **PRIOR3**, **MILFATHM**, **STRIPERS**, and finally **MAJ_GRP2**. Thus, Regression 5 validates the prior research and supports the finding that Marine graduates are correlated with below-average Academic QPRs and are positively correlated with Group III Academic Majors (Arcement, 1998; Bowers, 2002; Gille, 2002).

Table 45. Regression 5 Results.

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	CAQPR	-1.289	.092	195.809	1	.000	.276
	CMQPR	1.932	.150	164.873	1	.000	6.904
	MAJ_GRP2	.419	.063	44.509	1	.000	1.521
	STRIPERS	.490	.078	39.007	1	.000	1.632
	PRIOR3	1.839	.202	83.016	1	.000	6.290
	MILFATHM	.961	.107	81.260	1	.000	2.615
	VARSITY2	-.020	.067	.093	1	.761	.980
	Constant	-4.427	.369	143.959	1	.000	.012

a Variable(s) entered on step 1: CAQPR, CMQPR, MAJ_GRP2, STRIPERS, PRIOR3, MILFATHM, VARSITY2.

Interesting, too, is the fact that when we examine the interrelationship between all of the Group 1 and Group 3 independent variables, **STRIPERS**, and **MARINE**, we see that the addition of **CAQPR** causes the correlation between **VARSITY2** and **MARINE** to become negative and insignificant. Thus, the negative bivariate correlation between **CAQPR** and **VARSITY2** illustrated in Chapter IV appears to manifest itself again in this multivariate model.

These results were repeated when we re-ran Regression 5 and restricted the data set to Midshipmen who scored two or less on the variable **STRIPES** (N = 6,739). All Group 1 and Group 3 variables were examined, as well as the leadership variable **PLT_CDR**, and the results mirrored those above.

Ironically, the statements of Marine Selection committee members indicate that they pay little attention to Academic QPRs so long as the Midshipman has attained the requisite QPR for graduation. Moreover, committee members indicate that a Midshipman's Academic Major plays no role in their decision-making process. Accordingly, the significant relationships between the independent variables **AQPR** and **MAJ_GRP2**, and the dependent variable, **MARINE**, warrant some discussion and are addressed in this chapter's summary.

C. SUMMARY

The bivariate correlations reported in Chapter IV demonstrate the strength of association between each of the independent variables and the dependent variable when they are considered in isolation. The logistic regressions reported in this chapter demonstrate the interaction of these variables and represent the different components of a Midshipman's record that are considered simultaneously by the members of the Marine Corps selection committee. In other words, the combination of independent variables depicted above represents that portion of the "whole person" that can be measured by the selection committee.

The objective of Regression 1 is to examine the independent variables the Marines say they actually consider. Put another way, the results of this regression display the correlation, significance, and precedence of the independent variables when the

desires of the Marine selection committee are overlaid upon the entire population of Midshipmen. Thus, Academic QPR and Academic Major Group were eliminated. What is interesting is the fact that the two variables measuring Marine Corps enculturation display the strongest correlations with an assignment to the Marine Corps and the variable measuring Striper billets was third.

Regression 2 further investigates this relationship by examining the effect of Platoon Commander billets on an assignment to the Marine Corps when the same independent variables are considered in a reduced data set, excluding Stripers. Interestingly, a predictable pattern began to emerge. Regression 2 yielded the same results of Regression 1. That is, the leadership variable Platoon Commander was positively and significantly correlated with an assignment to the Marine Corps, but it placed third in precedence behind the variables measuring prior-enlisted Marine and legacy status.

When we partitioned the data set and restricted it to Midshipmen who achieved one stripe or less in Regression 3, the pattern repeated itself. The variables measuring Marine Corps enculturation demonstrated the strongest correlation with an assignment to the Marine Corps and were followed by Military QPR and Varsity Letter recipients.

Regression 4 excludes Midshipmen who were prior-enlisted Marines or legacies; two groups who are particularly likely to become Marines. Obviously, we reduced the R Square value and the percentage of correct classifications. However, the results of this model support the primary hypothesis and demonstrate that leadership experience, as measured by the variable **STRIPERS**, displays the strongest correlation with an assignment to the Marine Corps. Partitioning the data set and restricting it to Midshipmen who achieved two or fewer stripes yielded the same results when we examined the effect of the leadership variable **PLT_CDR**.

Regression 5, like Regression 1, examines the independent variables the Marines claim to consider, but it also adds the Midshipman's Academic QPR and Academic Major Group. The objective of Regression 5 is two-fold. First, by examining all of the Group 1 and Group 3 independent variables, **STRIPERS**, and **MARINE**, we validated the prior research and confirmed the negative correlation between Academic QPR and an

assignment to the Marine Corps. Additionally, we confirmed the positive and significant correlation between Group III Academic Majors and Marine graduates.

Second, we begin to more closely examine the selection panel's decision-making process. While the addition of **CAQPR** and **MAJ_GRP2** certainly does not account for all of the information presented to the panel, these variables do provide examples of information that the panel processes and either looks past or subconsciously values in their selection of Midshipmen.

The relationship between **CAQPR** and **MARINE** is negative, indicating that Marine graduates tend to possess below-average Academic QPRs. Additionally, when we review Figure 4 in Chapter IV, we notice a sizeable concentration of Marine graduates with Cumulative Academic QPRs below 2.5 (the cut-off for inclusion on the A-list). However, statements made by selection panel members indicate that a Midshipman's Academic QPR is not considered in his or her selection so long as the Midshipman has the requisite QPR for graduation. Thus, the concentration of Midshipmen with cumulative Academic QPRs below 2.5 seems to indicate that the Marines are willing to look past a Midshipman's lack of academic abilities, or that the Midshipman possesses some other attribute not measured in this model.

The relationship between **MAJ_GRP2** and **MARINE** is positive, indicating that Marine graduates tend to originate from one of the Group III, or Humanities and Social Science, Academic Majors. Yet, statements made by selection panel members indicate that a Midshipman's Academic Major is not considered in his or her selection. This leads us to speculate that either the members of the selection panel actually value Humanities and Social Science Majors, or that the members of the selection panel are indifferent to a Midshipman's Academic Major and the Midshipmen who study Group III Majors are potentially self-selecting the Marine Corps.

In either case, the addition of **CAQPR** and **MAJ_GRP2** in Regression 5 does not account for an appreciable increase in the variability of **MARINE**. As noted above, the addition of these variables provided a correct classification rate of 58.4 percent and a pseudo R Square value of .109. If these variables do not account for the selection criteria, then which ones do?

Consider the results of Regression 3. With the data set reduced to Midshipmen who possessed one or zero stripes, there was no leadership variable to use. The independent variables, **CMQPR**, **PRIOR3**, **MILFATHM**, and **VARSITY2**, examined in this regression correctly identified 186 Midshipmen, yielding a correct classification rate of 50.8 percent. However, a review of the Striper distributions in Table 15 indicates that 366 Midshipmen who possessed one or zero stripes were selected for a commission in the Marine Corps. So how do we explain the selection of the remaining Marines?

One explanation is the absence of performance data from Leatherneck. This variable was not examined because it was unavailable. However, if we review the contents of Chapter III and examine the criteria established for inclusion on the "A-List," we see that a Midshipman must be ranked in the top half of his or her Leatherneck Platoon and receive a positive recommendation by his or her Leatherneck SPC to be eligible for this status. While Midshipmen on the B-List or C-List likely will not have held a Striper billet, they may benefit from a strong Leatherneck ranking.

Yet another explanation might be the absence of independent variables that measure "the intangibles." As was demonstrated in Chapter II, the results of the Service Assignment Interview and the recommendation of the selection team contribute 10 percent to the Service Assignment Multiple. Although the Marines do not use the Service Assignment Multiple in their consideration of Midshipmen, they do examine the synopsis of the interview to ascertain the Midshipman's maturity and motivation for joining the Marine Corps.

Still another area of interest may be a Midshipman's participation in Extracurricular Activities (ECAs). While participation in Marine Corps-oriented ECAs like the Semper Fi Society provides a logical avenue for investigation, how do we determine which ECAs are considered beneficial and which ones are considered detrimental to a Midshipman's selection? Without this data or any further quantifiable measures, much of the variability of **MARINE** is left to the "intangibles."

Chapter VI presents a summary of this investigation's findings and presents recommendations for information dissemination and for future research.

VI. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter is divided into three sections. Section A provides a summary of this investigation's findings. Section B draws conclusions from these findings and Section C provides recommendations for both policy implementation and for future research.

A. SUMMARY

This investigation had two objectives—to highlight the strength of association between independent variables reflecting the hypothesized desires of the Marine Corps selection panel and an assignment to the Marine Corps, and to educate Naval Academy faculty, Company Officers, and Midshipmen who aspire to become Marine Corps officers as to the process the Marine Corps selection panel uses in selecting its Midshipmen. The first objective was accomplished by a series of binary logistic regressions in Chapter V and the second objective was accomplished by a synopsis of the Marine Corps selection panel's proceedings in Chapter III.

This investigation hypothesized that the officers who comprise the Marine Corps selection panel place a premium on leadership experience in selecting Midshipmen to join the Marine Corps after graduation. Secondary hypotheses examined the relationship between such things as prior-enlisted Marine experience, "legacy" status, and status as a Varsity Letter recipient and an assignment to the Marine Corps.

The results of binary logistic regressions indicate that the variables measuring Marine Corps enculturation (i.e., prior-enlisted Marine experience and legacy status) serve as the best predictors of an assignment to the Marine Corps. When we control for these variables to reduce the potential for self-selection bias on the part of previously enculturated Midshipmen, the variables measuring leadership experience (i.e., Midshipmen "Striper" billets and Platoon Commander billets) serve as the best predictors of an assignment to the Marine Corps for their respective data sets. The variable measuring Varsity Letter recipient status was positively and significantly correlated with an assignment to the Marine Corps, but only in the population of Midshipmen who achieved two or fewer stripes.

B. CONCLUSIONS

1. Marines on the selection panel value Marine Corps enculturation.

Of the independent variables examined in this investigation, the strongest correlations lie within the relationship between prior-enlisted Marines and legacies and an assignment to the Marine Corps. Given the creation of a separate, prior-enlisted Marine category by the selection panel, the strength of association between prior-enlisted Marines and Marine graduates is easily explained.

The importance of legacy status remains a personal decision for each of the panel's seven voting members. The fact that the variable measuring legacy status places second in precedence leads us to speculate that most voting members do value legacy status and that they value Marine Corps enculturation, in general, perhaps as a means of compensating for the Naval Academy's lack of Marine Corps-specific training.

2. Leatherneck attendance and Leatherneck performance have a significant impact on a Midshipman's selection for assignment to the Marine Corps.

Although a variable was not present to measure this impact in the statistical analyses, the contents of Chapter III indicate that, in addition to meeting the other requirements promulgated for inclusion on the "A-List," a Midshipman must attend Leatherneck and be ranked in the top half of his or her platoon to be immediately accepted for assignment to the Marine Corps. Failing to attend Leatherneck or being ranked in the bottom half of his or her platoon necessitates a thorough record review and a subsequent vote by each of the seven members of the selection panel regardless of the Midshipman's other accomplishments.

3. Leadership experience is particularly important in selecting Midshipmen who are neither prior-enlisted Marines nor legacies.

Prior-enlisted Marine status and legacy status were found to be the best predictors of an assignment to the Marine Corps. However, when we isolated the population of Midshipmen that were neither prior-enlisted Marines nor legacies, we found that leadership experience is particularly important in selection for assignment to the Marine Corps if one is not a legacy or prior-enlisted Marine.

The importance of Leatherneck attendance/performance has already been discussed. Its relevance, as well as the relevance of variables that the author deemed under the "control" of a Midshipman (e.g., Leadership billets, Military QPR, and Varsity athletic participation/Varsity Letter recipient status) cannot be overstated. Positive scores on these variables were positively and significantly correlated with an assignment to the Marine Corps and demonstrate the selection panel's adherence to its own criteria.

4. Marines place relatively little weight on academic status or academic achievement in selection for assignment to the Marine Corps.

The Marines make almost no use of the Service Assignment Multiple in their deliberations because of its reliance on Order of Merit and the importance that a Midshipman's Academic QPR plays in this calculation. Additionally, the negative relationship established between Academic QPR and Varsity Letter recipient status in this investigation leads us to speculate that (1) Marines understand the potentially negative relationship between participation in Varsity athletics and academic achievement, (2) that they view participation in Varsity athletics and the achievement of a Varsity Letter as a "bonus" when considering Midshipmen Stripers or members of the "A-List," and (3) that they strongly consider participation in Varsity athletics and the achievement of a Varsity Letter when evaluating Midshipmen who attained two or fewer stripes or are members of the "B" or "C-Lists."

5. The selection criteria established by the Marine selection panel are more important than self-selection in determining assignment to the Marine Corps.

This study acknowledges the potential for self-selection bias. That is, disproportionate numbers of Midshipmen with the characteristics hypothesized to be associated with assignment to the Marine Corps may request commissioning in the Marine Corps. If that is so, this study recognizes that it is difficult to determine, statistically, whether the Marine selection panel specifically selects Midshipmen with those characteristics, or whether the Midshipmen have, in effect, selected themselves.

However, interviews with Marine officers involved in the process, coupled with observations of the selection panel's proceedings in Chapter III, provide valuable insight regarding these hypotheses and demonstrate that the results of the selection panel are

more representative of a selection process than one of self-selection. Thus, while self-selection bias may complicate the interpretation of regression analyses presented in this investigation, the information provided to Naval Academy faculty, Company Officers, and Midshipmen who aspire to join the Marine Corps serves to better educate them of the desires of the Marine Corps selection panel and the increasing importance that Leatherneck participation, Leatherneck performance, and leadership experience play in this decision.

6. Company Officers are doing a respectable job of ensuring that all Midshipmen experience leadership billets.

Forty percent of the Midshipmen examined in this investigation achieved zero or one stripe their First Class Year. Of those, 90 percent served as a Squad Leader at least one semester. This demonstrates that Company Officers are monitoring and ensuring that nearly all Midshipmen have had billets which necessitate both peer and subordinate leadership prior to graduation and commissioning.

C. RECOMMENDATIONS

Five recommendations are made in this section. The first three deal with Naval Academy policies and the last two provide recommendations for future research.

1. Policy Recommendations

a) Education

The Naval Academy should educate its Midshipmen on the procedures that each warfare community's selection panel uses as a part of the Service Assignment process. As described in the previous sections, the 75 percent selection rate witnessed by aspiring Marine officers in the class of 2004 indicates that an assignment to the Marine Corps is hardly a certainty for those who desire it. While most Midshipmen recognize that Leatherneck attendance is an informal prerequisite, few understand the additional criteria on which they are evaluated. The fact that the Marines (and potentially other warfare communities) do not employ the Service Assignment Multiple because of its reliance on Order of Merit necessitates a description of both the subjective and objective attributes on which Midshipmen are being evaluated.

b) Information Dissemination

The selection criteria established by the Marine selection panel should be disseminated to all Second Class Midshipmen. The Senior Marine at the United States Naval Academy and the Director, Professional Development have granted the author permission to describe the Marine Corps selection panel's proceedings in an effort to bolster education of the Service Assignment process. Disseminating this information to Second Class Midshipmen in the Spring semester will allow them to adequately prepare for the summer before their First Class year and have a full understanding of the importance of Leatherneck attendance and Leatherneck performance should they desire a Marine Corps commission. Further, this information should be re-addressed when the returning First Class Midshipmen attend Career Information Programs, or warfare community-specific informational meetings, in the fall so they can measure themselves against the selection criteria and consider all possible options.

c) Archiving Leatherneck Data

The Naval Academy should archive performance data from Leatherneck. The importance that this data plays in the Marine selection panel's decision-making has already been demonstrated. Unfortunately, the Office of Institutional Research, Planning, and Assessment does not have this information and attempts to display its relevance to the selection of Marine graduates remain anecdotal.

2. Recommendations for Further Research

a) Longitudinal Study

Should the Naval Academy accept and incorporate the third recommendation, above, a recommendation for future research is to conduct a longitudinal study of Marine graduates to assess the relationship between Leatherneck rankings and TBS class standings and promotion/retention rates.

a) Investigation of Midshipmen who Failed Selection

A second recommendation for future research is to investigate the 25 percent of Midshipmen who requested an assignment to the Marine Corps but were rejected by the selection panel. An analysis of this population would provide further insight into the selection process, the importance of Leatherneck performance, and the desires of the selection panel.

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APPENDIX

2004 USMC Service Selection Board
Recorder Briefing Template

Name:_____ Category:_____

SAM (Service Assignment Multiple):_____Major:_____

OOM (Overall Order of Merit):_____ CQPR:_____Trend:_____

MOM (Military Order of Merit):_____ MQPR:_____Trend:_____

PFT Score:_____ O'Course:_____MAM:_____

Conduct: (Latest grade/performance trend(Demerits) /Major offenses [conduct or honor]/ Explain major offenses)

Performance: (Latest grade/performance trend)

Striper Billets: _____
_____

Athletic Participation: (Intramural Sports is just yes or no. List Varsity Sports)

ECA Participation: _____
_____

Prior Marine? (Yes/No) Rank:_____Term:_____
Legacy Marine? (Yes/No)
Rank:_____Relation:_____

Additional Comments as Required (MAPR Coments/Letter of Rec)

LEATHERNECK

1. Quartile and Service Selection Recommendation:

2. Platoon Ranking:

3. Summary of FITREP comments:

4. Physical Performance(at LN):

PFT score: _____
O-Course: _____
E-Course: _____

5. Additional comments as required.

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