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ENLISTED
PERSONNEL
MANAGEMENT

A Historical Perspective

SHEILA NATARAJ KIRBY
HARRY J. THIE

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PREFACE

The Director of Officer and Enlisted Personnel Management asked the National Defense Research Institute (NDRI) to study enlisted force management to:

- Assess how future enlisted requirements will continue to evolve; and
- Identify management changes that would provide a more effective and efficient match between future career enlisted inventories and requirements.

This report represents the first phase of the larger study. It presents a historical view of enlisted force management, and it does so from two perspectives. First, it provides a chronological account of how external influences have shaped enlisted force management and the evolution of enlisted management practices. Second, it describes some recurring themes that run through the history of the enlisted force. Five themes recur:

- Quality;
- Specialization;
- Integration;
- Separation; and
- Compensation.

The purpose of this approach is twofold: It establishes the foundation for subsequent research, and it provides policymakers with a

historical catalogue of enlisted force management that they can use as a ready reference. This report should be of interest to analysts and policymakers alike.

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ENLISTED FORCE MANAGEMENT: WHAT IT DOES

Enlisted force management is concerned with meeting national military manpower requirements with the nation's citizens. It attempts to balance the demand for enlisted personnel as determined by the requirements process with the supply of enlisted personnel in a cost-effective manner. As such, it addresses issues such as the size of the force and its composition in terms of grade, skills, experience level, and cost. It is also the process through which the enlisted force is trained and assigned.

Management of the enlisted force has ostensibly been going on since the late 1700s when the nation first established permanent forces. However, for much of this 200-year period, the concept of consciously managing a force—planning, organizing, and controlling the functions of accessing, developing, promoting, and transitioning—to achieve objectives simply did not exist. Instead, forces happened as a result of events and reactions to events. For good reason, enlisted force management before the 1950s has been labeled “free flow.” Only with the advent of large standing forces after World War II were attempts made to manage the enlisted force systematically.

EMERGENCE OF MANAGEMENT POLICIES: AN OVERVIEW

For most of the military history of the United States, the answers to the classic questions of how many soldiers, sailors, marines, and (after the 1920s) airmen in what skills and with how much experience

were needed depended largely on external events. When the nation needed to increase the size of the military, it enlisted or conscripted recruits from the general population; when the need abated, these recruits were separated equally quickly.

Military personnel policies tend to result from two influences: military needs or societal concerns including domestic politics. Examples of the former include 20-year retirements and reenlistment bonuses. The Truman Executive Order in the late 1940s to integrate the force racially illustrates the latter. However, it was not until the late 1960s and early 1970s that the modern era of enlisted personnel management began.

The adoption of the all-volunteer force in 1973 was perhaps the most significant event of the last 50 years. Since then, all the military services have had to compete for qualified people as in the marketplace and thus the services and the Office of the Secretary of Defense (OSD) have had to take enlisted force management more seriously. By removing the “free good” element in military manpower, Pentagon managers were challenged to pay more attention to efficiency issues and to the notion of tradeoff analyses. For example, the growing costs of attracting volunteers forced a reassessment of the youth versus experience issue, which eventually led to changes in the ratio of inexperienced to experienced personnel (often referred to as first-term/career ratio). The OSD as the central body responsible for force management began to establish objectives for smoothing the “profiles”—the numbers of people in various years of service in each of the military services. The objective was to avoid “humps” and “valleys” in force management. Changes in policy to aid recruitment and retention to smooth the transition to an all-volunteer force were made in 1973 and 1974, with enlistment bonuses and selective reenlistment bonuses becoming available and replacing older programs. In the late 1970s, concerns about low personnel quality and the “hollow force” prompted managers to deal with issues such as personnel turbulence, the size of the first-term and career forces, and assignment policy. The Armed Services Vocational Aptitude Battery (ASVAB) enlistment test became official in 1976, but misnorming of the test led the services to be staffed unwittingly with lower-quality personnel in the late 1970s.

The early 1980s saw growth in the size of the force and significant increases in compensation. The quality of the force increased dramatically and was transformed from the worst in modern history to the best. An increased emphasis on family matters began in 1981 with the creation of family policy offices. Retirement reform and changes in tour lengths were enacted in 1986. The following year saw the enactment of the Montgomery GI Bill and the implementation of the Women in the Military study (DoD, 1983), which had important implications for the future of women recruits. In the late 1980s, the Department of Defense (DoD) began to structure its recruiting to be gender-neutral and began to consider early-release programs to reduce the size of the force. In the 1990s, tremendous changes in tenure, promotion practice, and voluntary incentives to leave were needed to accommodate the drawdown, and these changes led to renewed debate about how to manage an enlisted force.

DETERMINING REQUIREMENTS: A COMPLEX EXERCISE

A basic tension has always existed between personnel management (faces) and manpower management (spaces). The military services, the DoD, and the Congress have traditionally put more emphasis on the former with periodic, but not long-lasting, emphasis on the latter. What emerges is an enlisted force that has been shaped by many forces including external events, societal concerns, missions, organization, technology, budget, and personnel management concerns.

Determining requirements for the enlisted force has two broad dimensions. The first pertains to the numbers and skills of enlisted personnel needed. The second relates to their distribution by grade and experience.

Size and Skills

Determining needed numbers and skills has always been difficult. This process of determining programmed manpower—the number of billets required by a military service to staff its units and orga-

nizations¹—has frequently been criticized for its subjectivity. Requirements for manpower are largely shaped by the nature of how the military mission is accomplished in the various military services, by organization (e.g., active-reserve tradeoffs), by technology (e.g., capital-labor tradeoffs) and by how the concept of defense “job” (e.g., civilian, officer, enlisted) has evolved historically. Personnel policies (e.g., rotation policies to meet development needs) can also increase or decrease manpower requirements.

Ultimately, though, the answer to the question about how many people are needed appears to rest largely (but not exclusively) on the need for forces, a need that, in turn, is driven by changes in military missions and by external events (e.g., conflict or the end of conflict). Such events are not easily predicted. The answer to the question about what skills are needed appears most related to organization and technology. Technology drives change in products and processes—military weapons systems and organizations—and as a result certain jobs disappear and new ones emerge. Over long periods of time, one can demonstrate significant shifts in how the work of the military is accomplished. Some of these job shifts affect the size of the enlisted force (e.g., active to reserve or military to civilian). Other job shifts occur that can affect the enlisted skill distribution (e.g., enlisted to officer; officer to enlisted; enlisted to contractor). Such effects and shifts from these strong underlying forces must be accounted for in determining future skill needs.

How Much Experience? What Grades?

Determining numbers and skills appears to be a rigorous science compared to the art of determining experience and grade needs. Each service has detailed task-level occupational databases that are used to categorize tasks into jobs that can then be categorized into either the service or the DoD occupational coding system. However, the methods for determining grade requirements are less precise and

¹In addition to the manpower requirement in units and organizations, the services allocate 8–16 percent of total manpower as “individuals,” which accounts for people who are transients (e.g., between unit assignments), trainees, patients, prisoners, cadets, or students.

frequently suffer from subjective determinations. Also, methods for determining experience needs largely do not exist.

ACTUAL EXPERIENCE AND GRADES, 1953–1994

Despite overt attempts by OSD and the services to manage/control grade and experience levels, the actual experience/grade distribution often appears to be simply an outcome of a closed personnel management system and disparate rates of movements and flows through the system. This is clearly seen in Figure S.1, which shows experience levels for the enlisted force over the last 40 years. These data show a force that has become more experienced over time, especially since the advent of the volunteer era in 1973. Although many military people continue to believe that a youthful force is needed, the reality is that an experienced force has emerged by the middle 1990s, which other military people believe is best.

Moreover, the relationship between grade and experience can also be seen over time. Not surprisingly, as experience began to increase, pressures for increases in grade levels did also, as people moved

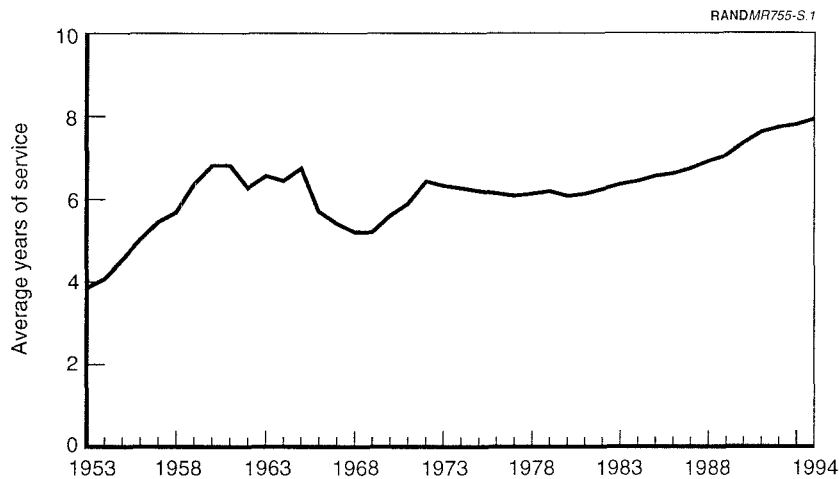


Figure S.1—Average Years of Service, DoD, 1953–1994

through year of service points at which promotion typically occurred. In all the services, the average grade has risen over time as shown in Figure S.2.

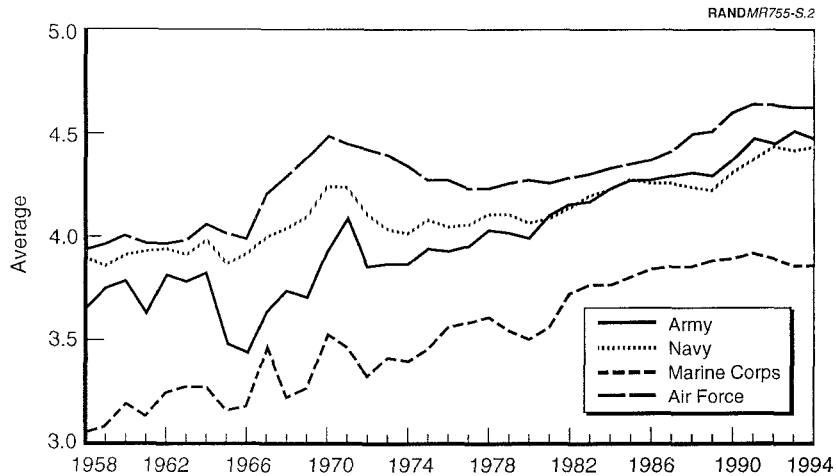


Figure S.2—Average Enlisted Grade for Each Service, 1958–1994

DoD POLICIES, 1954–1994

What policy initiatives occurred during this period? An early DoD directive (DoD, 1954) provided guidance for manpower programs. Such programs should:

- Correlate job requirements and personnel qualifications;
- Maintain the grade requirement of each space consistent with its responsibility;
- Maximize stability of assignments and minimize rotation or turnover consistent with requirements of training, readiness, and morale; and
- Encourage voluntary enlistment and reenlistment to increase the level of training, experience, and combat readiness and minimize involuntary induction.

These management objectives and programs from 1954 still seem applicable today. In particular, it is apparent that reenlistment was the perceived key to increased experience and readiness.

The grade question emerged as a significant policy issue in the late 1950s, and since then, OSD has attempted periodically to control either the TOP 6 (E4 to E9) or TOP 5 (E5 to E9) grades. DoD first placed formal grade controls on the E4 and above strengths of the services in 1958. The reasons for these ceilings, which were established as a percentage of enlisted strength, were “budgetary economy” and inflationary trends in grade authorizations (“grade creep”). (A consistent theme began to play out: Grades are more a function of budget considerations than personnel management considerations.) The ceilings were arbitrary and were close to the actual E4 to E9 strength in each service.

Congress also got involved with enlisted force management during this period. A special house subcommittee stated in 1968 that grade distribution procedures and promotion opportunities were inadequate, not responsive to the services’ needs, and that DoD based grade ceilings on arbitrary budget considerations. Following the guidance provided by the House Subcommittee on Enlisted Promotion Policy Review, OSD once again adopted percentage ceilings for the TOP 6 grades and, in addition, sought to establish a minimum time in service for these grades. These criteria would form the basis for all future grade progression. This direction was part of overall enlisted force management guidance to the services that prescribed long-range systems aimed at helping the services attain enlisted management goals.

In 1974, OSD established a requirement (DoD, 1974) that each service develop enlisted personnel management systems that would allow them to avoid the peaks and valleys in their experience profiles. A key provision of the directive required that each service develop an objective force profile—a target distribution by years of service and pay grade for each occupational grouping in the force and for the enlisted force as a whole. The objective force profile was to serve as the basis for service force management actions and policies aimed at achieving them. Although these profiles are now used to show the effect of policy changes on experience, they were initially developed primarily to control personnel costs.

By the late 1980s, there was increasing concern that the enlisted force was becoming too senior and that current policies did not adequately link the seniority (grade) demand across occupations to supply (retention behavior). An early 1988 study on “Managing Enlisted Seniority” (DoD, 1988a) argued that the principal problem was the absence of a common view among OSD, the services, and the Congress regarding

the correct balance among experience levels, grade patterns, and their implied resources. Until that common view . . . is established, imbalances will persist. Promotion patterns will be similarly unstable.

In essence, if these measures were the right ones by which to manage an enlisted force, nothing much had been accomplished since the first management directives in the 1950s. There does not appear to be a clear consensus regarding either the objectives for enlisted force management or the means to attain them.

RECURRENT THEMES IN ENLISTED PERSONNEL MANAGEMENT

Although much of the enlisted personnel management history was clearly event-driven, five themes—quality, specialization, integration, separation, and compensation—recur frequently in discussions about enlisted force management.

Quality

A crucial issue is the quality of the force and questions still remain about how best to measure quality and how much quality is really needed or affordable, given the fiscal constraints facing the military. At one time, when manpower needs were weighted heavily toward brawn rather than brain, height was judged the best predictor of quality. In times of lowered manpower needs, the force got taller, reflecting greater “quality.” In times of conflict and greater manpower needs, the force got shorter. As weapons became more complex, the emphasis shifted to trainability. During the draft era, quality (as measured by trainability) tended to be lower than it has been during the modern volunteer era. Some of the earliest central per-

sonnel management policies in the Department of Defense dealt with sharing the quality pool among the services. This ongoing concern with the quality of the enlisted force was very much in evidence during the 1970s and early 1980s as Pentagon planners struggled with questions of whether the force needed smarter weapons, smarter people, or both. The quality of the current enlisted force and its new entrants is—by any measure—the highest it has ever been, and the force is generally perceived to be able to meet or exceed the technological demands of knowledge-based warfare.

Specialization

The skill composition of the force became increasingly important as the military transitioned from a force using general military skills to one that needed more specialized skills as technology became dominant on the battlefield. There has been a precipitous decline in the number of jobs classified as general military, accompanied by a marked increase in technical occupations and craftsmen.

Integration

Racial integration of the force was mandated by the Truman Executive Order, but major concerns about racial integration reemerged during the 1960s and 1970s. In the 1970s and 1980s, integration of women came to the forefront, and in the 1990s the sexual orientation of military personnel became a concern.

Separation

Harsh disciplinary measures were long used to enforce good order and control of the enlisted force. Historically, a very low quality force rife with problems was recruited (or otherwise obtained) and was a fact for all the militaries of the world. Desertion was a significant problem. Desertion tended to vary with pay and with the weather—when pay was low or the weather was good, desertion was higher than when pay was high or the weather was bad. Desertion was a continuing problem through the 1950s, averaging about 15 percent annually (Hayes, 1982). In time, it became obvious that if enlisted personnel who did not wish to remain in the military were allowed to

leave or were separated from the force, the desertion rate would decrease. After such policies were adopted, the services began to measure attrition, which was more akin to voluntary quit rates. Attrition of individuals before the end of their enlisted term continues to be a concern today.

Compensation

Compensation—including special pays, retirement, family benefits, and comparability with the civilian sector—has always been and still remains on the forefront of personnel management issues and, at the direction of Congress, is reviewed every four years.

CHARACTERISTICS OF THE CURRENT ENLISTED PERSONNEL MANAGEMENT SYSTEM

The preceding sections have described the history of enlisted personnel management, chronicling the influence of external forces and the military's various management programs. This section summarizes the characteristics of that management system.

Our review of history and analysis of personnel practices of the services suggest certain defining characteristics of the current enlisted system that describe its members and reflect the current management processes. We have organized them around requirements determination, management principles, and personnel functions: accessing, developing, promoting, and transitioning.

Requirements Determination

- Requirements are determined by services.
- Change in requirements is slow and independent of changes in personnel.

Management Principles

- Mix of uniformity and flexibility in policy.

Accessing

- Primarily entry at year 0 for those meeting enlistment screens.
- Fixed contract periods.
- Acculturation and initial skill training of all entrants.
- Emphasis on quality at entrance.

Developing

- Rank in person.
- Top five ranks and/or those with greater than four years of service constitute the career force.
- Family focused.
- Experienced and mature.
- Retraining as needed.

Promoting

- Promotion based on combination of need and budget.
- Compensation for seniority.
- Military outcomes based on team performance; rewards based on individual performance.

Transitioning

- Selective entry but high turnover.
- Retention controls.
- Most careerists serve 20 years.

CONCLUSIONS

The content, absolute and relative, of careerists in the total active enlisted force has been one of the most important measures of force

management over the last 40 years. Intuitively, a relatively more experienced force seems to be a desired good, but this is not always true. Because of the arduous nature of many of the skills in the services, or because of the low skill content of some occupations in the services, or because of the greater costs associated with careerists, less-experienced (but well-trained) individuals may be preferable. Each service ostensibly strives for that balance of experience that best suits its manpower needs. In some eras, the career force was managed to achieve greatest effectiveness and in other eras was controlled for cost reasons. If these are the right objectives, it is not clear that policies were ever as instrumental as events, e.g., rapid increases and decreases in force size, at achieving either. The case could be made that the career force just happens. It is strength-driven rather than policy-driven and subject to the ups and downs of national security needs. Open questions are whether a more orderly enlisted management process would be in the nation's best interest for matching human capital to national security needs and whether such a system can be defined.

Although experience levels (career content) are more important from the effectiveness standpoint, grade has been a key variable from the aspect of cost control. In the aggregate force, grades are the result of requirements tied to traditional service expectations for performance at specific levels and tempered by personnel management considerations such as promotion flow. Grades result from requirements for people at certain levels of responsibility, decisions on career force size (experience levels), decisions on promotion policy (opportunity and timing), and the status of the existing personnel inventory. Although grade content is an outcome of the enlisted management system, it is also an important lever by which the entire personnel management system and the cost of that system can be arbitrarily controlled. Decisionmakers can restrict grade content by fiat. This artifice leads to cheaper but not necessarily more (or less) effective forces. Moreover, it can change retention over time and can artificially induce Noncommissioned Officer (NCO)/petty officer shortages if requirements do not change when either inventory or authorizations do.

Each service has a unique enlisted promotion system. Some services keep selection opportunity nearly equal for all skills; some do not. OSD uses promotion timing (desired and minimum time-in-service

requirements to each grade) as a policy variable. A rationale for promotion policy guidance is to foster uniform application of the equal pay for equal work concept across the services, to provide a fair and equitable relationship between military and civilian compensation for comparable work, to provide sufficient promotion opportunity to attract and retain the kind and number of people required, and to ensure efficient allocation of DoD resources to support service missions.

But total uniformity among service promotion programs is not a stated objective. The objective is to achieve reasonable similarity, taking into consideration differences in service missions and conditions. A waiver zone was established to motivate personnel by rewarding outstanding performance, to provide flexibility to meet operational needs and service differences, and to enhance retention in shortage specialties by allowing limited early promotion.

Research and exit and retention surveys show that the rate of promotion has a significant effect on the decision to stay in the service. This implies accelerating the point at which a person is promoted to increase retention. However, a promotion system that is designed to provide personnel of an expected level of experience at certain grades mandates stability in timing for promotion. Since the promotion rate affects retention, promotion policy has been used in an effort to induce greater retention or to cause more separations when that is needed.

Grade management appears straightforward: Determine requirements for experience and responsibility levels, provide for traditional service promotion policy, and provide resources for the grade content of the effective force that results. It is not clear, however, that any of these are practiced consistently over time or across services. Thus the specter of percentage or absolute grade controls mandated by fiat remains as an alternative to control of experience levels and promotions through personnel management policy.

In all fairness, we should point out, however, that some of these trends are mirrored in the private sector. It is an open question as to whether part or all of the trend toward higher grade, more quality, and higher education is being driven by structural changes in the economy and ways of doing business rather than inefficiency or lack

of management. For example, studies in the private sector show similar effects of technology on jobs—redistribution rather than reduction, leading to a higher proportion of more highly skilled management jobs. Other organizational changes that affect the size and composition of the enlisted force include: switch to professional military; units of smaller size; more command and control; weapons of mass destruction (officers controlling—technology issue); and support specialization, including growth of the medical corps. Over time, enlisted jobs have shifted to higher skills, to higher grades, to longer required tenures. As in the private sector, jobs have gotten “better,” which requires that entrants into and members of the workforce have greater ability and motivation.

FUTURE ISSUES

Today the world environment is changing—and it is changing very rapidly in ways that could have a significant effect on the future military operating environment and the enlisted force. For most of the past 50 years, the world was dominated by two major world powers. There was considerable uncertainty during this period, but there was also a relatively high degree of predictability and stability in the military operating environment. The military knew its likely adversary and the inherent risks and could manage people accordingly.

In looking to the future—into the early 21st century—the uncertainty remains, but now it is coupled with less stability and a greater variety of risks. These dynamic changes—and emerging risks—are having a significant effect on defining (and redefining) U.S. national interests and the future military operating environment. As a result, the enlisted force of the 21st century will have significantly different roles and responsibilities. Therefore, military managers face several critical questions.

One of the most important is forecasting manpower requirements. Determining manpower requirements—required numbers of people, of skills, of experience, and of grades (given likely changes in external events, societal concerns, mission, organization, technology, and budget)—will be a complex and difficult exercise, yet one that needs to be done with a high degree of accuracy. In addition, changes in the capital-labor, civilian-military, reserve-active, and enlisted-officer tradeoffs will need to be factored into the calculations. These

changing requirements will create new challenges in the area of enlisted force management.

Given requirements, enlisted force managers need to seriously consider the objectives that a future management system must achieve and whether today's management system will be effective in meeting them. What kind of military personnel do we want? How should they be trained? Do we need smart soldiers or merely smarter weapons (Binkin, 1986)? What will be the quality and composition of the future youth population? As the youth population becomes increasingly ethnically diverse, how will recruiting be affected? What will be the cost of obtaining smart and motivated enlistees? Is the compensation system currently in place the correct one for the future? If not, what different practices are needed? Should we try to manage more overtly by occupation, including linking compensation to occupations rather than to rank and years of service? These are some of the questions to be addressed—albeit somewhat broadly—in the next phase of the larger project.

As we show in this report, the enlisted force has been largely shaped by exogenous events and societal concerns; budget and career force management have had a lesser effect. The questions are, Has the nation paid a price for this and how high has this price been? Estimating the opportunity costs of this system would have been an illuminating exercise but one far beyond the scope of our current task. It is important, however, that we recognize that such costs exist and that a more orderly management process grounded in objectives would likely be in the nation's best interests. As we move into the future, there is little room for errors of either omission or commission. As a result, we need to bring a greater degree of rigor and understanding to both the requirements and management processes. Without this, enlisted force "management" could once again be overtaken by events without any assurances that desired outcomes—for example, experience and skill distributions, grade structures, and overall costs—would be achieved.

ACKNOWLEDGMENTS

We are grateful to our sponsor, LTC Bradford Loo, the Assistant Director for Enlisted Policy, Office of Officer and Enlisted Personnel Management (OEPM) and to COL David Moore, who held that office previously, and under whose aegis the project was first started. William Carr of the Office of Accession Policy shared several thoughtful insights into the history and background of enlisted force management gained during his tenure in OEPM and generously provided us with materials and documents. Lt Col (Ret.) James D. Freeman II and Selika Ducksworth helped in the early stages of the project. We owe a debt of gratitude to our reviewers, Martin Binkin (formerly of Brookings Institution) and Al Robbert of RAND. The report benefited greatly from their detailed and enormously helpful comments. Maj Gen (Ret.) Stuart Sherman and the staff of the Fifth Quadrennial Review of Military Compensation receive our thanks for consolidating the historical manpower data that we relied on. Defense Manpower Data Center aided with more recent data. We thank Jennifer Kawata who helped with data analysis, Rudy Ehrenberg for his substantive comments on earlier drafts, Jerry Sollinger for his invaluable help in organizing the report, and Cathy Montalvo for her assistance with the draft and references.

ACRONYMS

AFQT	Armed Forces Qualification Test
AGCT	Army General Classification Test
AIT	Advanced Individual Training
ASD	Assistant Secretary of Defense
ASVAB	Armed Services Vocational Aptitude Battery
AWOL	Absent Without Official Leave
BAQ	Basic Allowance for Quarters
BAS	Basic Allowance for Subsistence
BMC	Basic Military Compensation
DECI	Defense Employment Cost Index
DMDC	Defense Manpower Data Center
DoD	Department of Defense
DOPMA	Defense Officer Personnel Management Act
DRMS	Defense Resource Management Study
ECI	Employment Cost Index
ENTNAC	Entrance National Agency Check
FHA	Federal Housing Authority
GED	General Equivalency Diploma
HALO	High Altitude Low Opening

MMTF	Military Manpower Task Force
MOS	Military Occupational Specialty
NCO	Noncommissioned Officer
NDRI	National Defense Research Institute
OEPM	Office of Officer and Enlisted Personnel Management
OSD	Office of the Secretary of Defense
RMC	Regular Military Compensation
SHA	Station Housing Allowance
SRB	Selective Reenlistment Bonus
TIS	Time-in-Service
TOPCAP	Total Objective Plan for Career Airmen Personnel
VHA	Variable Housing Allowance
YOS	Years of Service

BACKGROUND

Although “careers” for officers have been the subject of debate in the United States for over 200 years, the idea of careers for enlisted members of the military services is a relatively recent development. Historically, few enlisted personnel made military service a lifetime occupation, as peacetime forces were small and pay was low. When large forces were needed, volunteers or conscripts were trained and used. After World War II, the Cold War resulted in large standing forces and periods of conscription; because pay remained low and the services emphasized “youth and vigor,” less than 5 percent of entrants continued to retirement. However, since the beginning of the all-volunteer force in 1973, career considerations have come to the fore. The current active military of 1.6 million (84 percent or 1.35 million of whom are enlisted) contains nearly 800,000 enlisted members who are considered “careerists” in that they have greater than four years of service.¹ The average time in service of the entire enlisted force is about eight years. Moreover, about 15 percent of new entrants are expected to continue to retirement and most of these will retire at 20 years of service.

¹The DoD Military Manpower Task Force in 1982 defined career force as “more than four years of service.” The 1984 DoDD 1304.20 (DoD, 1984b) defines it as “four or more years of completed active service.” DoDI 1300.14 defines an “over four component” as four or more years of service (YOS) but also defines those who have completed four years of service as input to the over four component. We use in this study a data definition that places in the career force everyone beyond their fourth year of service, i.e., YOS 5+.

The grade, skill, and experience composition of enlisted requirements has also changed significantly over the years as well. For example, before World War II, light infantry supported by horse cavalry and horse-drawn artillery was the norm for the Army. World War II, Korea, and Vietnam saw significant increases in the use of mechanized forces and airpower although light infantry still dominated the land battlefield. Today, light infantry represents less than 10 percent of the force and even these units have become highly specialized. Similar evolution in grade, skill, and experience composition trends has taken place in the other services, and all of these need to be examined and understood.

How enlisted members are accessed, trained, promoted, and transitioned has also changed significantly over the years. A high-school-educated entrant with high training aptitude is now the norm. Initial skill training may be as long as two years depending on the skill. Advanced skill courses and leadership education are standard. Promotions are more centralized and skill based. Rules affecting continuation into the career force and to retirement have been imposed. Given the constrained fiscal environment and downsized forces, DoD strives to ensure a balanced, ready, and cost-efficient enlisted force.

PURPOSE

Recognizing that the evolution of the enlisted force could easily have substantial implications for managing it, the Director of Officer and Enlisted Personnel Management asked the National Defense Research Institute to undertake an enlisted force management study. The study has two primary tasks:

- Assess how future enlisted requirements will continue to evolve; and
- Identify management changes that would provide a more effective and efficient match between future career enlisted inventories and requirements.

As part of the study, our first task was to examine how the enlisted force has been “managed” in the past and how both the management system and the force have evolved over time. We clearly can-

not identify changes that need to be made until we identify the elements that characterize the current management system and their effectiveness in matching inventories with requirements historically. This report documents the results of this first task. It takes a historical look at the enlisted force, cataloguing the changes in its shape, its size, its composition (skill, paygrade, experience, gender, race/ethnicity). It also provides a historical view of enlisted management policies and practices dealing with recruiting, developing, promoting, compensating, and separating enlisted personnel, and other exogenous events that have shaped the enlisted force over the past century.

The report has a twofold purpose. First, it establishes the basis for the more analytical phase of the project. Second, the historical information is documented so that it can serve as a catalogue for policymakers. As we studied the evolution of enlisted force management, a number of themes kept recurring. Since these topics have surfaced again and again, we decided to treat each topic independently and to provide a separate, time-coherent history of each. Cataloguing them in this fashion both provides policymakers with a convenient reference and serves the need of those who wish to focus on particular topics only.

ENLISTED FORCE MANAGEMENT

Enlisted force management is concerned with meeting national military manpower requirements with the nation's citizens. It attempts to balance the demand for enlisted personnel as determined by the requirements process with the supply of enlisted personnel in a cost-effective manner. As such, it is concerned with such questions as:

- Size: how large a force in peacetime; how to increase it in wartime?
- Grade, skill, and experience composition: what skills are needed; how much experience is needed; how many are needed at various levels of supervision?
- Cost: what will it cost; are there tradeoffs?
- How best to procure and enter people into military service (accessing)?

- How best to train and experience (developing; assigning)?
- At what rate to advance in rank/grade when qualified (promoting)?
- How much to pay and in what form to make payment (compensating)?
- How best to remove people from military service (separating, retiring, or transitioning)?

The success of enlisted personnel policies and practices in meeting the overall needs of the military depends to a large extent on its ability to shape the preferences and behavior of individuals who might serve, or who are serving, in the military.

This process of force management has ostensibly been going on in the United States since the late 1700s when the then-new nation began to maintain small but permanent forces. However, for much of this 200-year period, the concept of consciously managing a force—planning, organizing, and controlling the functions of accessing, developing, promoting, and transitioning—to achieve objectives was nonexistent. Instead, forces happened as a result of events and reactions to events. Military manpower was raised when needed and was sent home when not needed. For good reason, enlisted force management before the 1950s has been labeled “free flow.” Although scientific practice may have been applied to certain of the manpower functions (e.g., testing to determine suitability for service was pioneered as a workforce practice in the military during World War I), only with the advent of large standing forces (as opposed to militias) after World War II were attempts made to systematize—plan, organize, and control—the management of the enlisted force.

Depending on the era, certain of the questions about the need for military manpower (requirements), manpower costs (budget), and manpower inventory (personnel management) emerged as more important than others. During the period before World War II, the most important and immediate question was how to procure a large

force immediately.² In the post-World War II era, the emphasis shifted to *managing* the inventory of people. Although the overall issues remained relatively constant, particular aspects of management—recruiting, training, retaining, promoting, compensating, and retiring—received more or less emphasis at particular times, depending on the nation's military, social, and economic environment.

ORGANIZATION OF THE REPORT

In Chapter Two, we provide a profile of the current enlisted force to set the context for the report. Chapter Three provides an event-driven history that focuses on broad issues of size, experience, and grades and provides a brief picture of how the external environment and societal concerns affected force management in general. Chapter Four examines requirements over time, both in terms of overall numbers as well as skill, grade, and experience distribution. Chapters Five through Nine treat in detail certain recurrent themes, such as quality of the force, integration, skill specialization, and compensation, that can be tracked over extended periods. Although clearly there is considerable overlap between the subject matter of individual chapters and the integrated history provided in the first two chapters, we felt that these chapters serve an important purpose: They provide an in-depth, comprehensive history of specific issues that recur throughout military history and still remain very much at the forefront of challenges facing enlisted force managers today. These chapters provide policymakers with a useful reference and will be particularly useful to those interested in particular topics only and who may wish to skip the rest of the material that is not germane to their interests. Chapter Ten presents our conclusions.

²Marshall's lament about having no money to sustain a large military when time was available and no time to create a large military when money was available is an apt description of the process.

A CURRENT PROFILE OF THE ENLISTED FORCE

We first provide a snapshot of the enlisted force as it is today in terms of size, experience, grade, and occupational distribution and selected demographic characteristics to set the context for the report. (A historical perspective is provided in later chapters.) After all, the current force represents the end result of the various external forces and management efforts. And it provides the starting point as we analyze its future directions and the management policies to guide it into the next century.

SIZE

The active enlisted force today consists of 1.4 million people serving in four military services—Army, Navy, Marine Corps, and Air Force (Figure 2.1). The Army is the largest service and contains over 450,000 enlisted personnel, followed closely by the Navy, which employs around 400,000 enlisted personnel. The Air Force is somewhat smaller at 340,000 and the Marine Corps is by far the smallest: Its enlisted force consists of only about 150,000 personnel.

DISTRIBUTION

Grade

Figure 2.2 presents the grade distribution of the current force. The Marine Corps particularly stands out as markedly different from the other three services in its grade profile. For example, it has the highest proportion of junior personnel (E1 to E3): 50 percent compared

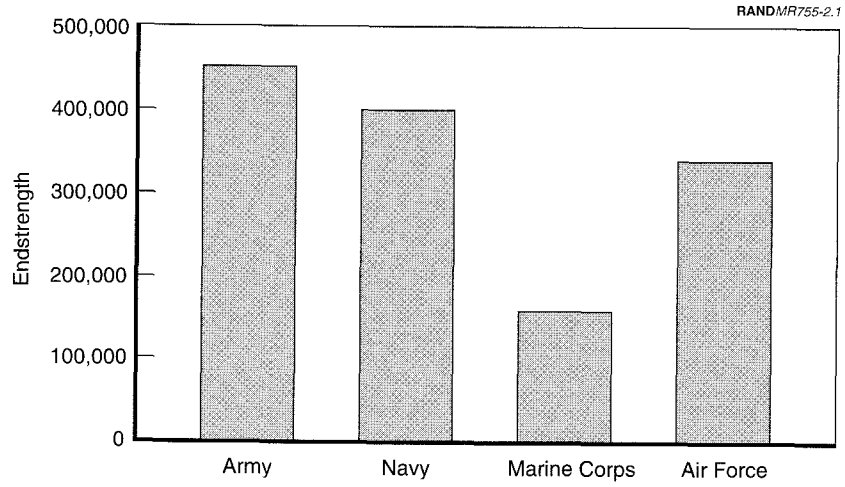


Figure 2.1—Enlisted Endstrength, by Service, 1994

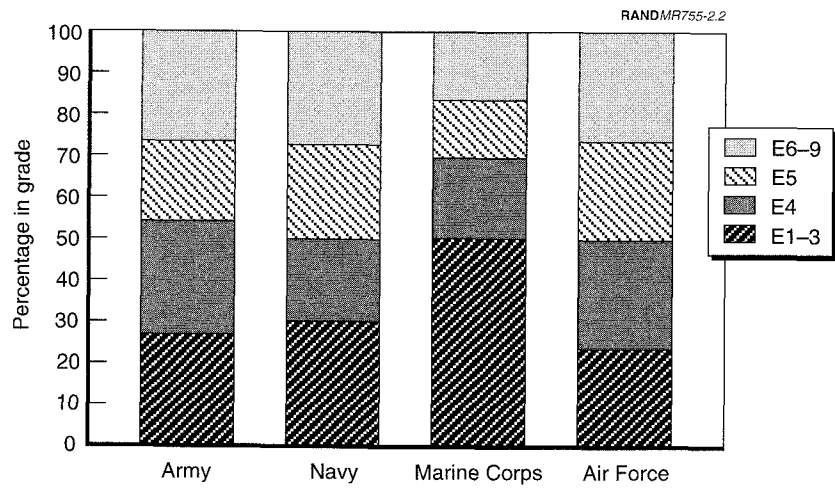


Figure 2.2—Grade Distribution of the Enlisted Force, 1994

with between 20 and 30 percent for the other services. Almost 70 percent of the Marine Corps enlisted force consists of individuals in the E1 to E4 grades compared with around 50 percent in the other three services.

Experience

Figure 2.3 depicts the experience distribution of the enlisted force and shows some clear differences among the services. The Marine Corps again shows the least experienced profile, with 60 percent of its force having between 1 and 4 years of service and 40 percent being what is traditionally called the “career” force (having more than four years of service). The Air Force, however, is the most experienced with less than 30 percent of its personnel having 1 to 4 years of service and over 70 percent being careerists.

Occupation

Figure 2.4 displays the occupational distribution of the enlisted force. Following a typology used by Eitelberg (1988), we categorize enlisted

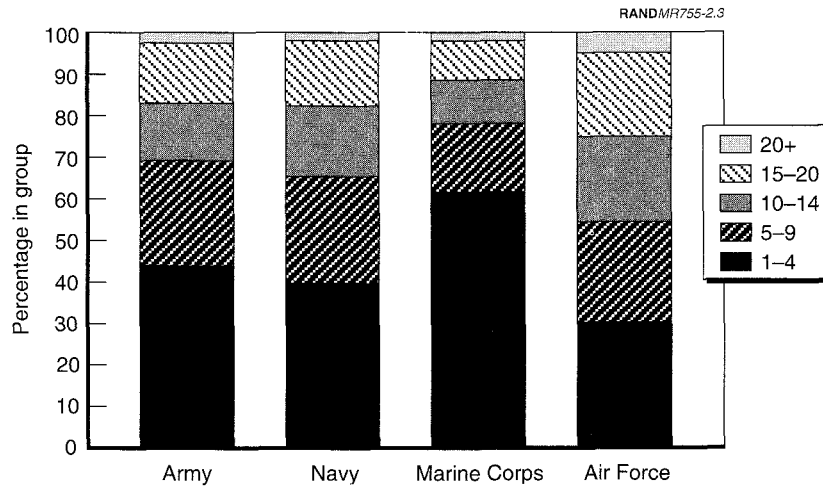


Figure 2.3—Experience Distribution of the Enlisted Force, 1994

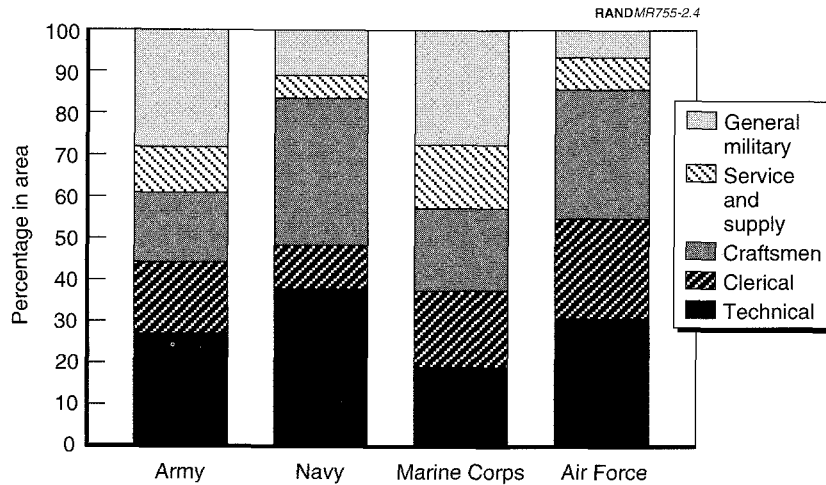


Figure 2.4—Occupational Distribution of the Enlisted Force, 1994

occupations into white collar occupations (composed of technical and clerical workers), blue collar occupations (craftsmen and service and supply workers), and general military skills (including infantry and seamanship).¹ Only 30 percent of occupations in the Army and Marine Corps and 10 percent or less in the other two services are classified as “general military.” White collar occupations appear to dominate the services, accounting for between 45 and 55 percent of all jobs in the Army, Navy, and Air Force, and about 40 percent of these in the Marine Corps. Craftsmen account for a large proportion of jobs in the Navy and Air Force. The force has indeed become increasingly specialized.

CONTINUATION

Attrition and retention of enlisted personnel have been recurring concerns in the military. We examine the cumulative continuation rates by years of service for the four services for the FY94 inventory in Figure 2.5. The figure shows what the survival rate of a given entry

¹Those in the “nonoccupational” category have been omitted from the calculations.

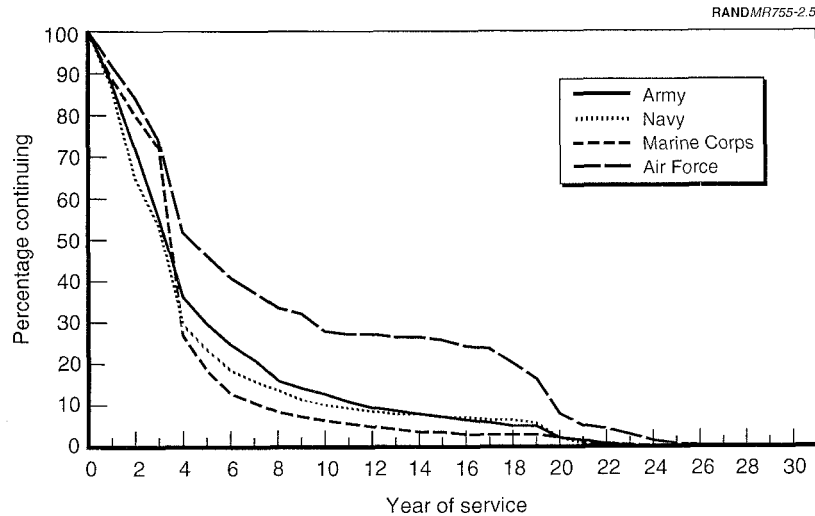


Figure 2.5—Survival Rates of Enlisted Personnel, by Service and Year of Service, 1994

cohort today would look like. Given a group of 100 accessions, we expect between 10 and 30 percent of them to leave within the first two years. The first-term reenlistment point (usually around year 4) shows a sharp decline in continuation. By this time, we expect between 30 and 50 percent of the cohort to remain in the military. The highest retention rate is in the Air Force, the lowest in the Marine Corps. The differences in services are driven largely by service philosophies and missions. Some loss occurs after the first-term enlistment period, but by the 10th year of service, continuation rates become quite flat and remain fairly constant. Another drop occurs at the first retirement eligibility point (20 years of service) with only between 1 and 5 percent of the cohort continuing on beyond that. The FY94 continuation rates reflect the effect of downsizing and early-out policies and as such cannot be regarded as “equilibrium” rates; nonetheless, we felt it was useful to examine what was happening to the force in the current period. Although the FY87–FY89 rates are probably the best indicators of true behavioral continuation rates, it is unclear whether these rates would apply in the changed and changing environment of today.

DEMOGRAPHIC CHARACTERISTICS

The demographic makeup of the enlisted force in terms of gender and race/ethnicity has been the subject of much heated debate and study. Figure 2.6 shows the proportion of women and minorities in the military. As the DoD report on population representation in the military (DoD, 1993a) points out, four factors affect the proportion of women in the military:

- (a) Women have a lower propensity to enlist than men;
- (b) Women have a more limited number of occupations and skills in which they may serve (for example, as governed by the combat exclusion law and service policies); in addition, although women have relatively less trouble than men meeting service entry standards (Armed Forces Qualification Test—AFQT), they are relatively less likely to pass the existing screens (ASVAB subtests) for some technical occupations;
- (c) Women tend to leave at higher rates than men; and

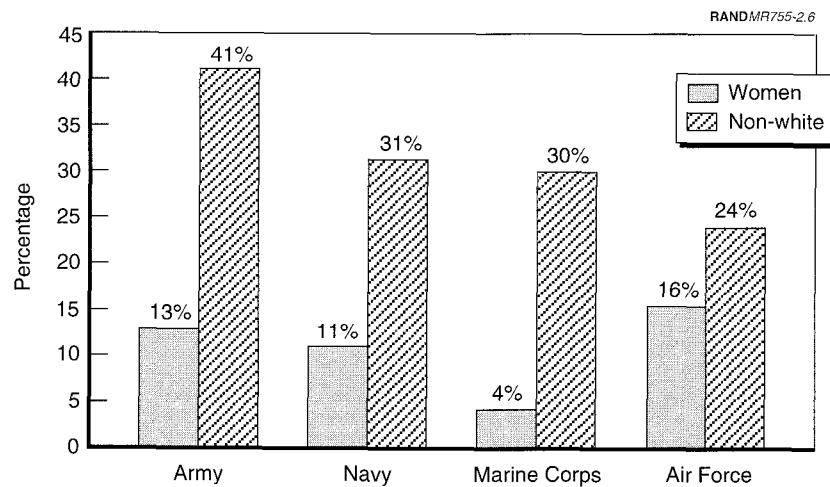


Figure 2.6—Service Gender and Minority Content, 1994

- (d) Because the military system is a closed one, the gender of the career force is shaped primarily by the proportion of women recruited.²

The overall proportion of women in the active enlisted force is around 13 percent, although the figure varies across the four services. The Air Force has the highest proportion of women on active duty (16 percent) and the Marine Corps has the lowest (4 percent). The Army and Navy are fairly similar with respect to proportion of women.

Minority representation in the active force is quite high (over one-third) compared with the civilian workforce, where minorities constitute around 25 percent of the age 18–44 civilian labor force.³ The Army particularly attracts and retains minorities at a high rate; 41 percent of the enlisted Army is minority. The lowest minority representation is in the Air Force (24 percent). Minorities constitute a little less than a third of the Marine Corps and Navy enlisted force.

This profile will change as the services move into the future and transition to a smaller force facing changing threats, changing battlefields, and changing demographics of the youth population. To ensure a smooth transition to a smaller force and one that is both technologically advanced and cost-effective, knowledge about available management tools and how effective they have been in the past is useful.

²Binkin, in his review of this report, dated March 8, 1996, points out that although women may have a lower propensity to enlist than men, some analysts believe this is partly because the services have not gone out of their way to target women for recruitment.

³This may not be an entirely fair comparison because the civilian workforce includes all occupations, rather than just those that are similar to the military. The difference in minority composition might have been smaller if we had been able to use a more circumscribed set of occupations.

**EMERGING ENLISTED MANAGEMENT POLICIES: THE
RESPONSE TO EXTERNAL INFLUENCES**

This chapter chronicles the most noticeable phenomenon of enlisted force management—external forces have far more influence on what happens to the enlisted forces than internal management efforts. It chronicles the major events that have influenced the enlisted force and the scope of their effect. It then traces the emergence of enlisted personnel management in response to a different class of external influences: military and societal concerns. Finally, it identifies a set of recurring themes. These are discussed in more detail in the later chapters of the report.

EVENT-DRIVEN HISTORY OF THE ENLISTED FORCE

For most of the military history of the United States, the answers to the classic questions of how many soldiers, sailors, airmen (after the 1920s), and marines; in what skills; and of how much experience were largely dependent on external events. In Figure 3.1, one can observe “bumps” in the size of the active-duty enlisted force for the earliest wars in which the nation was involved. When the nation needed to increase the size of the military, it enlisted or conscripted recruits from the general population; when the need abated, these recruits were equally quickly separated. For example, within four years, the enlisted force increased from 28,000 in 1860 to over 1,000,000 by 1864; by 1866, the force had decreased to 77,000. More recently, the surge in manpower appears as “spikes” in the data, but the Civil War experience—in terms of the proportional surge up and then down—remains unmatched. Notice the sharp spike by 1945 as

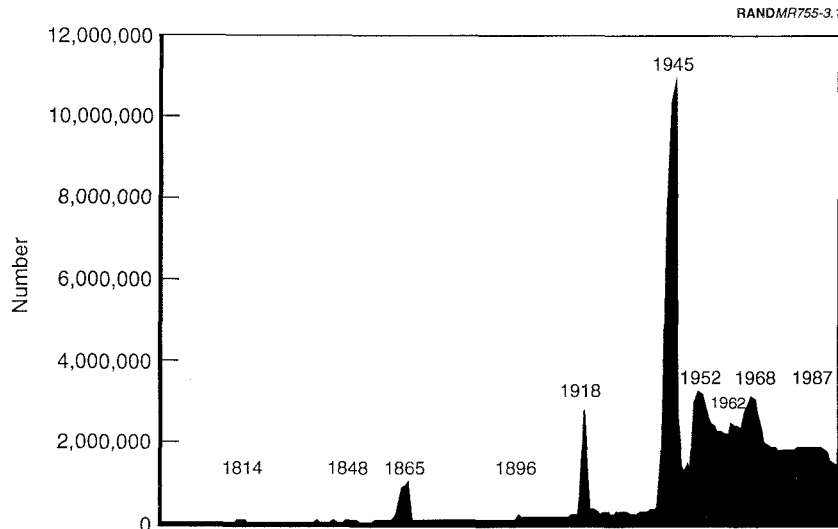


Figure 3.1—Size of the Enlisted Force, 1789–1994

the nation mobilized for World War II and the enlisted force grew to over 10,000,000. Three years later, however, the enlisted force had shrunk to about 1,300,000.

Since World War II, as shown in Figure 3.2, external events have continued to shape the size of the enlisted force: the post-World War II drawdown in the late 1940s; the Korean War in the early 1950s, and its own subsequent drawdown; the Berlin Crisis, which added manpower in the early 1960s; the Vietnam conflict and its own era of growth and drawdown. The debacle at Desert One was followed in the 1980s by the Reagan buildup, the fall of the Berlin Wall, Grenada, and Panama. In the 1990s, the continued split of the former Soviet Union, the Persian Gulf conflict, and participation in humanitarian and other operations other than war were significant. Last, the 1990s have witnessed a sharp reduction in the size of the enlisted force.

During most of this period, the Cold War—with varying degrees of warmth—dominated: a global conflict scenario on which to base force requirements. NATO was formed and the United States

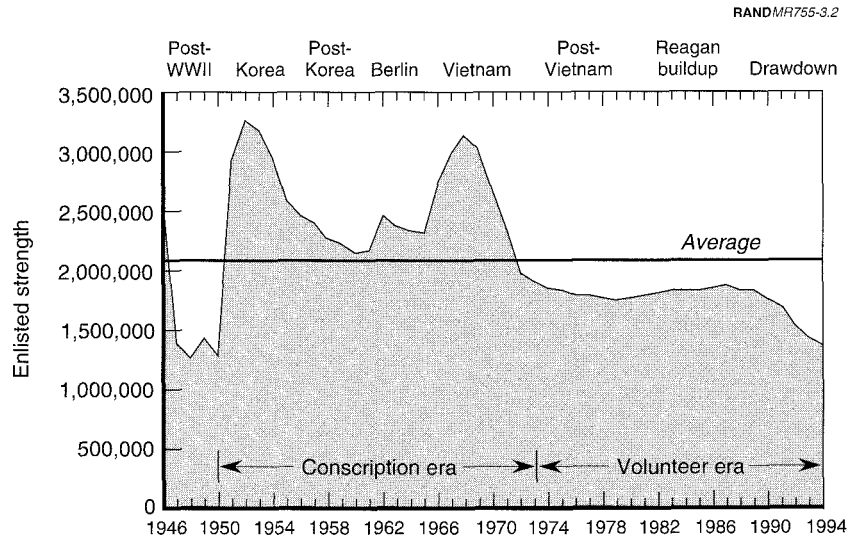


Figure 3.2—DoD Active Enlisted Strength, 1946–1994

entered into other regional alliances. The national defense acts of 1946–1949 were significant in setting long-term direction for a newly created Department of Defense and Joint Chiefs of Staff. The nation had a volunteer force from 1946 to 1950, but Korea saw a return to conscription. Vietnam manpower policy was dominated by conscription to meet the needs of the Army; the other services' and reserve component needs were met largely with draft-induced volunteers. Total Force Policy (implemented in 1971) and the all-volunteer force of 1973 had significant effects on requirements for active enlisted and on the supply of men and women. Along with these, a host of other factors also affected the questions of the size, skill, and experience composition of the force. For example, the continuing application of science and technology to warfare led to increased specialization and growth in capability through capital rather than labor. Particular doctrines for certain types of situations made low-intensity warfare more important. Greater use of officers, civilians, and contractors reduced the need for enlisted. Each of these will be discussed in later chapters.

EMERGENCE OF MANAGEMENT POLICIES: RESPONSE TO MILITARY AND SOCIETAL CONCERNS

Many military personnel policies for the enlisted force emerged both as a reaction to the military needs of the time and as a reflection of societal concerns for the military. Domestic priorities such as budget concerns also played a role. For example, the Truman Executive Order in the late 1940s integrated the force, although the full effect of that would be seen only on the battlefields of the Korean War. Twenty-year retirements were made possible in 1948. Limits on the number of women recruits and the jobs they were able to perform were also established in 1948. The next year saw significant compensation reform, and there have been other significant adjustments to compensation since then. While the Armed Forces Qualification Test was first administered in 1950, testing of military personnel goes back to World War I. Universal Military Training became law in 1951. Reenlistment bonuses were first implemented in 1954 to try to keep experienced people in the force.

The late 1960s and early 1970s saw the beginning of the modern era of enlisted personnel management.¹ The adoption of the all-volunteer force in 1973 was perhaps the most significant event of the last 50 years. Since then, all the military services have had to compete for qualified people as in the marketplace, and thus the services and OSD have had to take enlisted force management more seriously. By removing the “free good” element in military manpower, Pentagon managers were challenged to pay more attention to efficiency issues and to the notion of tradeoff analyses. For example, the growing costs of attracting volunteers forced a reassessment of the youth versus experience issue, which eventually led to changes in the first-term/career ratio. The OSD, as the central body responsible for force management, began to establish objectives for smoothing the “profiles”—the numbers of people in various years of service in each

¹Before this period, personnel management was decentralized and individuals were largely responsible for their own “careers.” For example, the 1950 edition of the privately published *Noncom's Guide* treated many of today's important personnel issues in but one of 28 chapters on military service. Treated at the same level of importance with a paragraph or page in this one chapter were such issues as enlistment, personnel classification, appointment of NCOs, transfers, and retirement as well as duty rosters, morning reports, venereal disease control, and the Pentagon Philatelic Society.

of the military services. The objective was to avoid “humps” and “valleys” in force management.

Changes in policy to aid recruitment and retention to smooth the transition to an all-volunteer force were made in 1973 and 1974 with enlistment bonuses and selective reenlistment bonuses (SRBs)² becoming more widely available for use. In the late 1970s, concerns about low personnel quality and the “hollow force” prompted managers to deal with issues such as personnel turbulence, the size of the first-term and career forces, and assignment policy. The ASVAB enlistment test became official in 1976 (immediately before this, the services set their own aptitude standards in selected areas on centrally administered tests). Because the test was misnormed, however, during the late 1970s, lower-quality people entered the force having mistakenly been classified as “higher-quality” personnel.³

The early 1980s saw growth in the size of the force and significant increases in compensation. An increased emphasis on family matters began in 1981 with the creation of family policy offices. Retirement reform and changes in tour lengths were enacted in 1986. The following year saw the enactment of the Montgomery GI Bill and the implementation of the Women in the Military Study (DoD, 1983), which had important implications for the future of women recruits. In the late 1980s, DoD began to structure its recruiting on a gender-neutral basis and began to consider early-release programs to reduce size. In the 1990s, tremendous changes in tenure, promotion practice, and voluntary incentives to leave were needed to accommodate the drawdown, and these changes led to renewed debate about how to best manage an enlisted force.

Over this long period, Congress has seldom become as involved with the management of the enlisted force to the extent that it has managed the officer corps. Certainly, none of the legislation enacted for enlisted personnel had quite the significance or the comprehensive-

²Some form of retention incentive has existed since the Revolutionary War. The SRB, which is geared toward skill needs, replaced a series of incentives that were paid to all reenlistees or only to first-term enlistees.

³This misnorming had a substantial influence on the overall proficiency of the enlisted force for over two decades. It also provided a valuable lesson for manpower managers who placed their faith in the erroneous test results and who ignored reports from the field that the ability of people they were receiving fell far short of expectations.

ness of the Officer Personnel Act (1947), the Defense Officer Personnel Management Act (1980), or Goldwater-Nichols (1986). Congress has mandated controls on the number of personnel who can be at grade E8 or E9 and on the overall size of the enlisted force, but in general, except when problems arose, Congress has allowed the DoD to manage the enlisted force.

RECURRENT THEMES IN ENLISTED PERSONNEL MANAGEMENT

Much of the enlisted personnel management history was clearly event-driven, but certain themes—discipline, desertion, requirements determination, quality, compensation, and integration (Hayes, 1982)—recur frequently in the period from the Revolution through World War II, and many of them continue to the present day.

Harsh disciplinary measures were long used to enforce good order and control of the enlisted force. Historically, all the militaries of the world recruited (or otherwise obtained) a very low-quality force rife with problems. Desertion was also a significant problem over a long time span. Desertion tended to vary with pay and with the weather—when pay was low or the weather was good, desertion was higher than when pay was high or the weather was bad. Desertion was a continuing problem through the 1950s, averaging about 15 percent annually (Hayes, 1982). In time, it became obvious that if enlisted personnel who did not wish to remain in the military were allowed to leave or were separated from the force, the desertion rate would decrease. After such policies were adopted, the services began to measure attrition, which was more akin to a voluntary quit in the private sector. Attrition of individuals before the end of their enlisted term (rather than desertion) emerged as a policy concern and continues to be a concern today.

Another crucial issue is the quality of the force, and questions still remain about how best to measure quality and how much quality is really needed or affordable, given the fiscal constraints facing the military. At one time, when manpower needs were weighted heavily toward brawn rather than brain, height was judged the best predictor of quality. In times of lowered manpower needs, the average height

of the force increased reflecting greater “quality.” In times of conflict and greater manpower needs, the average height of the force decreased (Hayes, 1982). As weapons became more complex, the emphasis shifted to trainability. During the draft era, quality (as measured by trainability) tended to be lower than it has been during the modern volunteer era. Some of the earliest central personnel management policy in the DoD dealt with sharing the quality pool among the services. This ongoing concern with the quality of the enlisted force is very much in evidence today, as manpower planners struggle with questions about whether the force needs smarter weapons, smarter and more motivated people, or both.

Compensation—including special pays, retirement, family benefits, and comparability with the civilian sector—has always been and still remains on the forefront of personnel management issues, as witnessed by the congressionally mandated Quadrennial Reviews of Military Compensation.

Racial integration of the force was mandated by the Truman Executive Order, but major concerns about racial integration reemerged during the 1960s and 1970s. In the 1970s and 1980s, integration of women came to the forefront, and in the 1990s the sexual orientation of military personnel was of concern.

The skill composition of the force became increasingly important as the military transitioned from a force using general military skills to one that needed more specialized skill as technology became dominant on the battlefield. Brain rather than brawn became the battlefield need, and manpower requirements changed as a result.

These traditional themes continued into the 1970s, 1980s, and 1990s. Probably the most significant addition to these themes in the late 1980s and early 1990s was the recognition of quality of life as a major concern for attracting and retaining a high-quality and qualified force.⁴ Additionally, in manpower requirements, one can also begin

⁴The enlisted force has become increasingly married, with increasing numbers of dependents. Part of this trend toward a family-oriented military includes members married to each other. These trends have several important implications. First, they are positively correlated with retention. Second, in the minds of some, they are negatively correlated with readiness because they can reduce flexibility in assignments and

to detect a devolution of officer duties to noncommissioned officers. Many types of work, from administration and paperwork to launching of missiles, have become sergeant and petty officer work. Largely, this is because technology and the rapidity of operations has mandated that responsibility move downward. Aspects of this devolution of duties can also be seen in changing concepts of development. Training, a skill-based concept that results in immediate ability to do certain tasks more proficiently, is slowly giving way to education of the enlisted force as a knowledge-based force becomes needed for successful performance.⁵

For example, the enlisted force is more highly educated than in any previous era. Figure 3.3 shows the proportion of grades E6 to E9 who have at least some college education for three different time periods. Fiscal year 1972 represents a force that, while not necessarily conscripted, was shaped by conscription. Fiscal year 1981 represents a force shaped additionally by the early years of the volunteer force. Fiscal year 1996 represents a force almost exclusively the product of the modern volunteer era. Figure 3.3 shows that generally the higher the grade, the more the educational achievement. Moreover, in this figure and the succeeding one, one can also observe that the proportion of college graduates grows over time as well across all grades and occupations.⁶

Figure 3.4 shows the data by occupation (aggregated for grades E6 to E9). Even in the occupational group associated with Army and Marine Corps combat skills (general military), the proportion with

deployments. Third, they increase family and dependent-related support costs (e.g., medical, child care, schools). For a review of many of these issues, see DoD (1993b).

⁵These future themes are being explored in a RAND study sponsored by the Director of Manpower and Personnel (J1), JCS. The results of that study will be used in later stages of this research.

⁶Comparisons with the private sector (1994 Current Population Survey for employed civilian noninstitutional population 25 to 64 years old) are becoming more favorable for the enlisted force. For example, the following civilian occupational groups have the proportions shown of at least some college: managerial/professional (86 percent), technical/sales/administrative (70 percent), service (44 percent), precision production (36 percent), operators/fabricators (25 percent), and farming/forestry/fishing (29 percent). Moreover, in the private sector, jobs that require the most education and training increased as a share of employment between 1983 and 1993 (Rosenthal, 1995).

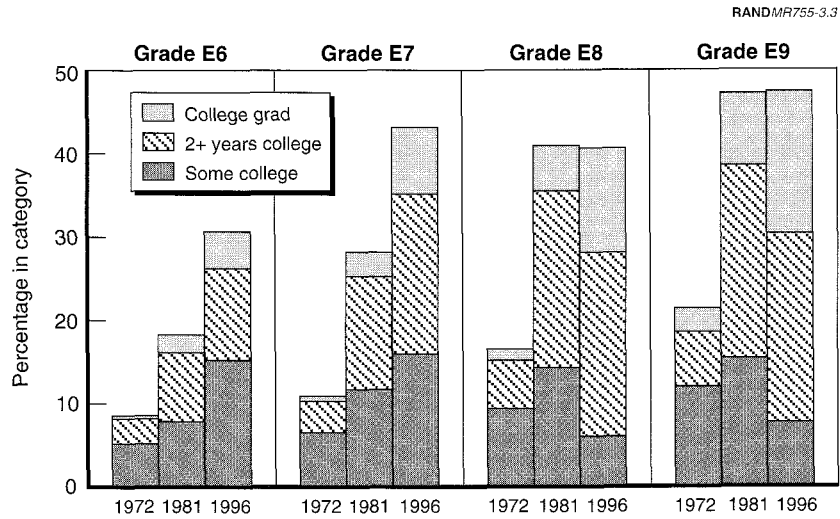


Figure 3.3—Educational Achievement, Grades E6 to E9, Selected Years

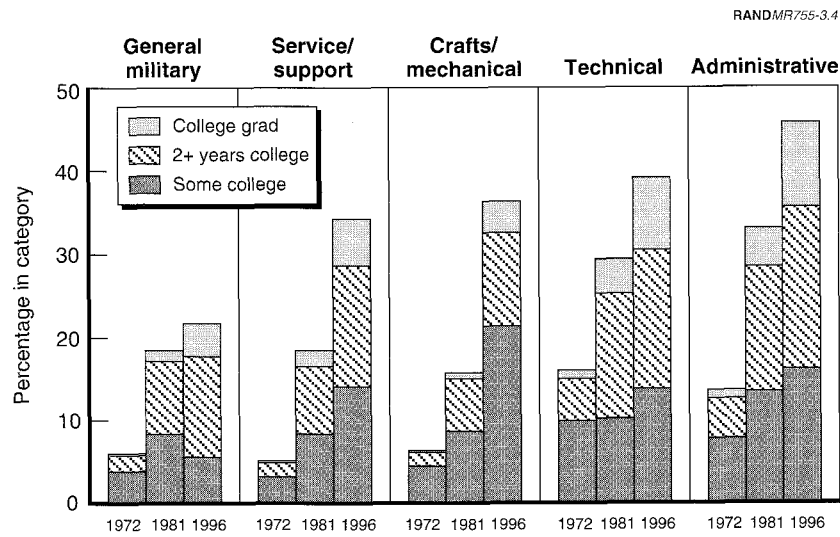


Figure 3.4—Educational Achievement, Grades E6 to E9, by Occupation, Selected Years

at least some college is much greater than was generally believed to be achievable in the era of a conscription-shaped enlisted force. Moreover, in the private sector in the United States “quality jobs” are perceived as those that require more education, greater tenure (experience), and higher compensation (grades).⁷ The enlisted force is increasingly moving in that direction.

Last, some have suggested that the noncommissioned officer corps itself is becoming more professional in the model of the officers, i.e., NCOs and petty officers must learn a rigorous body of military science and art through education and experience and must adhere to formal values. Indicators of this trend toward professionalism include increasing education levels among mid-level and senior enlisted members, founding of academic-degree-granting institutions such as the Air Force’s Community College of the Air Force, the emergence and elaboration of enlisted professional military education, the increasing status and voice of senior enlisted advisors at both service headquarters (e.g., Sergeant Major of the Army) and field units, and the emergence and evolution of NCO-oriented professional organizations. Although the enhanced status of enlisted personnel may not fully conform to conventional definitions of a profession (NDRI, 1994), it appears to be taking on more of the hallmarks of a profession and less those of a trade. This has important implications for the division of responsibilities between the officer and enlisted forces. Specifically, as the relative balance of human capital between junior officers and senior enlisted members shifts in favor of senior enlisted members, there are scope of responsibility, job design, status, and compensation issues that an organization would want to make to fully exploit this part of the workforce.

⁷See, for example, Rosenthal (1989).

**MANAGING THE ENLISTED FORCE: MANPOWER
REQUIREMENTS AND PERSONNEL POLICIES**

A basic tension has always existed between personnel management (faces) and manpower management (spaces). The military services, the Department of Defense, and the Congress have traditionally put more emphasis on the former with periodic, but not long-lasting, emphasis on the latter. What emerges is an enlisted force shaped by many forces including external events, societal concerns, missions, organization, technology, budget, and personnel management concerns. This chapter recounts the services' and DoD efforts to determine how many people are needed and in what skills. It also gives an account of their efforts at the more complex task of determining needed grades and experience, describes the policies used in an effort to carry out the personnel management task from the early 1950s until the present day, and shows how the enlisted force has been shaped as a result.

**MANPOWER REQUIREMENTS VERSUS PERSONNEL
POLICIES**

Determining requirements—how many people are needed in each of the military services, what types by occupation or skill, and how much experience either by grade, or length/years of service¹—is arguably the most difficult question manpower planners face.

¹A year or length of service distribution from 1 through 30 years is the measure of experience levels. A careerist is usually defined as someone who is beyond the fourth year of service. We will use the generic term “NCO” to refer to enlisted personnel in all

The history of manpower management within DoD shows an almost complete lack of centralized attention to analysis of manpower requirements until the 1960s when a group was formed within Systems Analysis in the Office of the Secretary of Defense to examine manpower needs. For the first time, the services' rationales for manpower requirements were scrubbed by OSD. Even then, however, the process was less than successful, since the management of requirements (*spaces*) was vested in Systems Analysis, whereas management of personnel (*faces*) was the province of the Assistant Secretary that dealt with military personnel. The requirements function was later incorporated under the Assistant Secretary of Defense for Manpower and Reserve Affairs in the late 1970s, but there is little evidence that even this marriage ever led to greater efficiency in manpower management. Indeed, there remained a preoccupation with the management of "faces." Sizing manpower requirements and devising personnel policies have seldom been intertwined.

HOW MANY AND WHAT SKILLS?

Determining needed numbers and skills has always been a difficult issue (Hayes, 1982), especially for the ground forces. In the Civil War, there never seemed to be enough men to enter the military to meet the ever larger need; in the very popular Spanish-American War, the limit on requirements was how many men would join up. In World War I, Pershing and the French worked out a notion of ground requirements based on how many divisions would serve. For the first time, the Department of War could think about structuring the ground force requirements in a logical way comparable to the way the Department of the Navy had determined requirements. In the Navy, the debate centered on how many capital ships would be needed to meet a perceived national threat. Once the number of capital ships was decided, the manpower component was largely derivable. After World War I, the Army had the division as a way to size ground forces; the Navy used capital ships for naval forces; and as an Army Air Corps and then the Air Force emerged, its size was

services in the grades of E5 to E9. NCO and careerist are sometimes used as synonyms; however, it is possible for a junior NCO to have less than four years of service and for a careerist not to have achieved grade E5.

structured around the number of airplanes.² The Marines Corps provides fleet marine forces of combined arms and supporting air components, but the Marine Corps skill mix will always be different from that of the other services because it depends to a great extent on the Navy for support services such as medical.

Today, determining requirements for size and skill composition in each of the military services is largely done in this same manner, that is, by using such measures as division force or fighter-wing-equivalents.³ Forces are made up of a variety of unit types. Each unit type has associated with it a collection of positions that must be filled for the unit to perform its mission (DoD, 1994b). However, the services' needs for military manpower are not automatically determined by a specified force structure. For any given force structure, the manpower manager has a variety of policy levers that can be used to meet needs; these will be discussed below. Productivity, personnel policies, organization, technology, and substitution of one type of manpower for another or of capital for labor play a role as well.

This process of determining programmed manpower—the number of billets required by a military service to staff its units and organizations⁴—has frequently been criticized for its subjectivity.⁵ Requirements for manpower are largely shaped by the nature of how the military mission is accomplished in the military services and how the concept of “job” has evolved historically (Bridges, 1994).

Much of the occupational world treats “job” as synonymous with “position” and strives to analyze jobs at the task level to write job de-

²“The Services guided by clear strategic concepts and personnel policies, develop their fiscally constrained force needs. Given a programmed force goal of, for example, x aircraft wings, y divisions, and z ships, the Services are charged with meeting that goal through a combination of equipment, manpower, and training” (DoD, 1974).

³Public Law 92-436 (1972) required that the Secretary of Defense report, explain, and justify personnel strength levels in detail for all forces including each land force division, carrier, and other major combatant vessel, air wing, and other comparable unit.

⁴In addition to the manpower requirement in units and organizations, the services allocate 8–16 percent of total manpower as “individuals,” which accounts for people who are transients (e.g., between unit assignments), trainees, patients, prisoners, cadets, or students.

⁵See for example, U.S. Defense Manpower Commission (1976), DoD (1988b), and numerous reports by the U.S. General Accounting Office (1986a, 1986b).

scriptions and job specifications to fix the boundaries of each position. In earlier eras, however, jobs equated to activities. People accomplished the work that needed to be done each day and at the end of the day (or week) could talk about the job that had been done.

This is particularly descriptive of how navies and armies worked before the industrial era (and for the most part how the operational parts of militaries continue to work). For example, in the era of sailing navies, sailors pitched in as needed to hoist sails or weigh anchors, and all took turns standing watches. Preindustrial armies worked in a similar fashion—soldiers were for the most part fungible across general military jobs—activities that needed doing. This is a reason why in the military, rank typically vests in the person rather than the position, as is standard in most civilian organizations.

In modern, industrialized military forces, more specialists are needed, and the Navy, Army, and Air Force departments have accommodated this by embracing—as did civilian industrialized bureaucracies—the concept of jobs as positions. (The trend toward specialization is examined in a later chapter.) In each department, methods of occupational analysis are used to determine the tasks that each job must perform. However, much of military work continues to be performed by groups or teams (e.g., squads or sections) coalescing around work activities. Servicemen and women talk of “missions” or “workups” or “training exercises,” and all military people involved must contribute as needed to the mission tasks (i.e., outside their individual job description). So although military people are trained in specific skills that are task dependent, they are not necessarily used in separately differentiated positions. As a result, the numbers of people needed (in the aggregate and in particular skills), their experience levels, and their grades depend as much on military expertise for answers as to what needs to be done to accomplish missions as on objective task-based standards for determining positions.⁶ The Air Force is generally perceived as having a

⁶The Defense Resource Management Study (Rice, 1979, p. 66) discussed the concept of “skill broadening,” which is facilitated by experience. “Skill broadening can help to overcome some of the compartmentalization that has accompanied recent moves toward more emphasis on task-oriented training and can permit substitution of personnel with multiple skills in places where several more people with limited skills are currently assigned.” These concepts also underlie current workforce management practices that include flexible work practices, broadbanding, and team/group

good job analysis and manpower requirements program, and this may be because more of their outcome depends on individualized effort. As a result, the Air Force is usually better able to demonstrate the need for enlisted positions by skill and grade and has often tried to determine how much experience is needed.⁷

Ultimately, though, the answer to the question, How many people are needed, appears to rest largely (but not exclusively) on the need for forces, a need that, in turn, is driven by changes in military missions and by external events (e.g., conflict or the end of conflict). Such events are not easily predicted. The answer to the question, What skills are needed, appears most related to organization and technology. (See Chapter Six on specialization.) Technology drives change in products and processes—military weapons systems and organizations—and as a result, certain jobs disappear and new ones emerge. Over long periods of time, one can demonstrate significant shifts in how the work of the military is accomplished. Some of these job shifts affect the size of the enlisted force (e.g., the ratio of active to reserve or of military to civilian). Other job shifts occur that can affect the enlisted skill distribution (e.g., the ratio of enlisted to officer, of officer to enlisted, or of enlisted to contractor). Such effects and shifts from these strong underlying forces must be accounted for when we attempt to determine future skill needs. We document some of these shifts below.

Job Shifts

Staffing a given set of forces, for example, depends on what these forces are expected to do (workload), how they are organized (combat-to-support ratio),⁸ which functions are assigned to active

competencies. Eric Trist is most often identified with the early theory about the sociotechnical approach to work systems.

⁷See, for example, Moore (1981).

⁸The meaning of the combat-to-support ratio or the tooth-to-tail ratio has been debated for years. In 1973, the DoD asserted that although such comparisons are inevitable, they are of questionable value as a managerial or decisionmaking tool. "Forces are structured to accomplish missions in support of attaining national objectives. The mix of resources required to support these forces is designed to provide required capability at minimum cost. No 'support' or 'overhead' resources are applied which are not essential . . . for accomplishment of the combat mission" (DoD, 1973).

and reserve forces (the active-reserve mix), and guiding personnel policies (how personnel are assigned and used). For a given set of forces, then, manpower requirements can be affected by changing workload (e.g., more or fewer aircraft sorties per squadron), changing the equipment in units (technological substitution),⁹ changing the organization (reducing overhead), changing the mix of active and reserve personnel, or changing assignment and utilization policies that affect the size of the pipeline (e.g., longer tours, fewer unproductive hours, and more efficient training programs lead to smaller personnel requirements).¹⁰

Some of these strong forces that affect the need for enlisted personnel are portrayed below. Whether these trends will continue in the future is uncertain.

Strong Forces

Figure 4.1 shows the civilian-to-active component military ratio (the number of DoD civilians for each active military person).¹¹ During the rapid increase of uniformed people in World War II, the ratio went down, and during the drawdown after World War II the ratio went up. Between 1966 and 1968, 95,000 civilian personnel were placed in formerly military positions to free military personnel to support operations in Southeast Asia; after the Vietnam conflict, civilians were substituted for military personnel and were not reduced as quickly as active military personnel were, and the ratio again increased.¹² Since then it has been reasonably stable until an

In the current era, where other than “combat” missions are the mode, the support structure may be more important.

⁹DoD has stated that one manpower principle is to decrease the number of personnel “by taking advantage of technology to attain equal or increased combat effectiveness. We have thus been able to reduce our Total Force . . .” (DoD, 1973).

¹⁰We will not be able to document in detail all of these changes and their effects. They have been reported elsewhere, for example, Binkin (1986) and National Defense Research Institute (1992).

¹¹Data in this section are drawn primarily from two sources: the annual volumes of *Selected Manpower Statistics* and *Contract Awards* produced by Washington Headquarters Services in the Office of the Secretary of Defense.

¹²In December 1972, the Deputy Secretary of Defense directed that 31,000 military spaces be civilianized by 1974. Both the Senate and House directed civilian substitu-

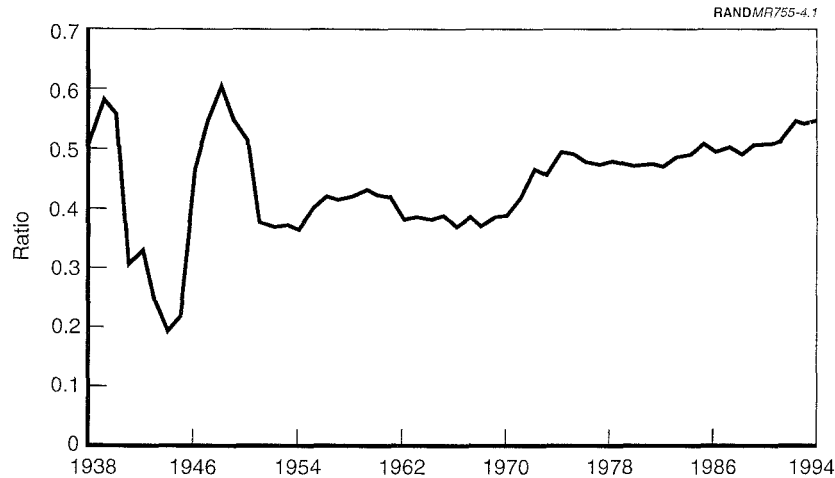


Figure 4.1—DoD Civilian-to-Military Ratio, 1938–1994

uptick during the recent drawdown. Use of civilians reduces the need for uniformed manpower, all other things equal.

Figure 4.2 shows contract awards by procurement program in 1987 dollars for hard goods and services per active component uniformed person. In a broad sense, capital (goods and technology) and contractor labor (services) have grown more rapidly than uniformed manpower. Since the 1950s, there has been a threefold real increase in constant dollars per military person for hard goods; this, all other things equal, reduces the need for uniformed manpower as capital is being substituted for labor. Such investments are “lumpy” and, depending on the useful life of the capital goods, do not need to be made every year. In this case, even with the “procurement holiday” of the 1990s, we are investing three times as much per military person in aircraft, missile and space systems, ships, tank-automotive, weapons, ammunition, and electronics and communications

tion in their FY73 defense authorization bills (DoD, 1973), not unlike similar direction 20 years later.



Figure 4.2—Prime Contract Dollars per Active Military Person, 1955–1994

equipment in 1994 as was invested in 1955. Services tend to be consumed each year and represent a substitution of one type of labor for another—in this case for uniformed people; 1994 constant dollar expenditures on services per military person were over six times larger than 1962 expenditures (\$8,500 compared with about \$1,250). All other things equal, increased spending on goods and services reduces the need for military personnel.

Figure 4.3 shows the reserve-to-active manpower ratio. The number of reserve personnel in paid status almost quadrupled between 1947 and 1950, which accounts for the spike in the ratio during that time period. Selected reserve strength again grew after the Korean War. From 1952 to the present, the ratio has quadrupled, and since the midpoint of the Vietnam conflict, this ratio has doubled. Availability of the selected reserve also generally reduces the need for active military manpower.

Figure 4.4 documents a significant shift from enlisted to officer manpower since World War I. These data show the enlisted-to-officer ratio over two centuries. During the previous century, the ratio is relatively flat with periodic spikes; in times of conflict, the ratio tended to increase as more enlisted personnel were added than

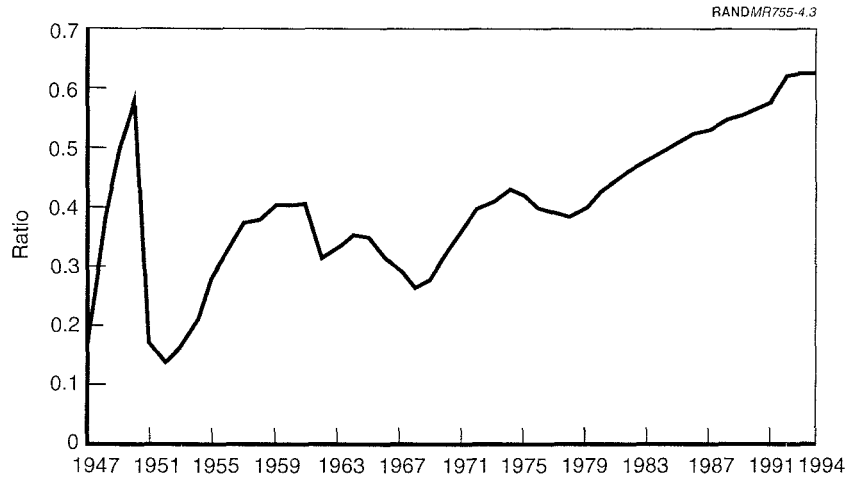


Figure 4.3—Reserve-to-Active Manpower Ratio, 1947–1994

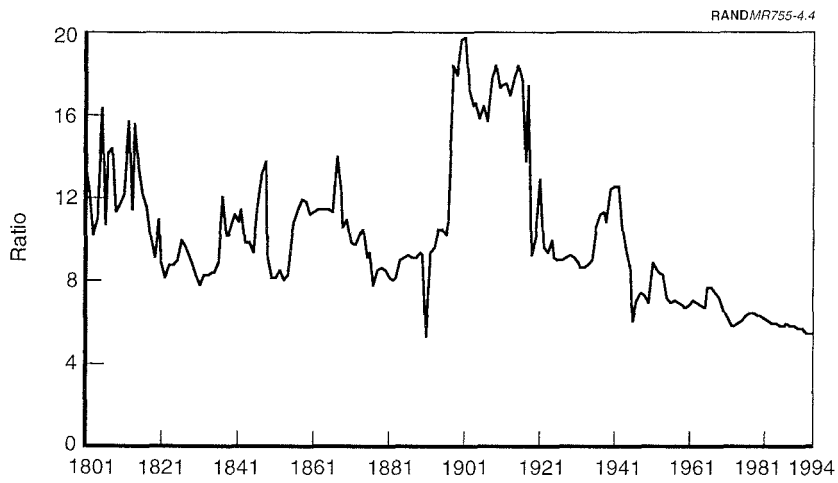


Figure 4.4—Enlisted-to-Officer Ratio, 1801–1994

officers. During this century, there is a downward trend with less frequent spikes in the ratio, as officers have come to represent a larger proportion of the active military.

The number of enlisted personnel nearly sextupled to about 225,000 for the Spanish American War. After the war, the level fell by one-half to about 115,000, which was a consistent level up until World War I. The “standing” active military began in this era. However, officer strength did not increase as much during this period, which accounts for the high enlisted officer ratio for the first 20 years of the century. And, before World War I, brawn still mattered most on the battlefield. Coal-fired ships, dismounted infantry, and horse-drawn artillery required proportionally more enlisted personnel. However, with the introduction of the airplane, the tank, the modern steam ship, and the radio, work began to shift toward more use of brain than brawn. New technologies tend to be officer heavy when first introduced because they are initially complex. Technological innovations also initially require a larger, officer-rich, support tail to provide service and supply. Moreover, beginning in World War II and continuing to the present, the need to coordinate, integrate, and sustain military forces numbering in the millions and not the tens of thousands led to a substitution of officers for enlisted personnel to staff increasingly larger and more hierarchical organizations as well as the simple addition of more officers. These broad trends continue to the present as shown in Figure 4.4.

The effect of technology on jobs is redistribution rather than reduction, leading to a higher proportion of more highly skilled, professional speciality and management jobs (Rosenthal, 1995). Other organizational changes that affect the size and composition of the enlisted force include: a switch to a professional military; units of smaller size; more command and control; weapons of mass destruction (officers controlling—technology issue); and support specialization, including growth of the medical corps. Over time, enlisted jobs have shifted to higher skills, to higher grades, and to longer required tenures. As in the private sector, jobs have gotten “better,” which requires entrants into and members of the workforce to have greater ability and motivation. These latter changes will be shown in particular chapters of this report dealing with them.

HOW MUCH EXPERIENCE? WHAT GRADES?

Determining numbers and skills appears to be a rigorous science compared with the art of determining experience and grade needs. Each service has detailed task-level occupational databases (National Research Council, 1991) that are used to categorize tasks into jobs that can then be further categorized in either the service or the DoD occupational coding system. However, the methods for determining grade requirements are less precise¹³ and frequently suffer from subjective determinations (Department of the Army, 1965).¹⁴ Also, the methods for determining experience needs largely do not exist (Moore, 1981).¹⁵ This section reviews the history of grade and experience management.

A LOOK AT ACTUAL EXPERIENCE AND GRADES, 1953–1994

Despite overt attempts by OSD and the services to manage/control grade and experience levels, the actual experience/grade distribution

¹³Each service determines requirements for grades in a slightly different manner. All four services have classification manuals and associated staffing guides that describe the knowledge and skills required at each skill level or grade within an enlisted specialty. Task descriptions of the actual work to be performed, as prepared by a management engineering or other type of manpower survey team, are compared with pro forma task or duty descriptions compiled in the classification manuals to aid in the assignment of the appropriate occupational specialties and grades. The classification manuals and staffing guides have evolved over considerable time (8 to 30 years) and are being updated continually. Grade levels are also influenced by budget, feasibility, and military expertise.

Grade “growth” can occur through creep (uncontrolled promotion flow), increased experience or skill requirements (which eventually translate to grades), or design (controlled accelerated promotion flow). Other grade changes (stable or lower grade content) can occur because of arbitrary decisions (mandatory grade content), decreased experience or skill requirements, or design (controlled stable or decelerated promotion flow).

¹⁴See also Armstrong and Moore (1980).

¹⁵Other studies have pointed out that there may be measurable benefits to using a more senior force that would presumably be more productive and also might require less indirect manpower to support it. See, for example, Nelson, Gay, and Roll (1974). As this study points out, substituting senior personnel for junior personnel would raise the average cost per person, but their greater effectiveness could result in a requirement for fewer direct personnel and fewer indirect support personnel and could thereby reduce total costs. See also the Defense Resource Management Study, Chapter IV (Rice, 1979).

often appears to be simply an outcome of a closed personnel management system and disparate rates of movements and flows through the system. This is clearly seen in Figure 4.5, which shows experience levels for the enlisted force over the last 40 years. These data show a force that has become more experienced over time, especially since the advent of the volunteer era in 1973. Although many military people continue to believe that a youthful force is needed, the reality is that an experienced force has emerged by the middle 1990s, which other military people believe is best.

This pattern of increasing experience is true for every service. In general, as shown in Figure 4.6, the Marine Corps has the least average experience (although it is more experienced than in earlier periods) and the Air Force has the most.

Another way to look at these data is by examining the *relative* proportions of career and noncareer personnel, as shown in Figure 4.7. This figure clearly shows that the force becomes proportionally more junior in periods of conflict because of the high accession levels. (This process is not unlike the far earlier one in which the force grew “shorter” as it grew larger.) In periods of relative calm, however, fewer junior people enter for two reasons: First, fewer people are

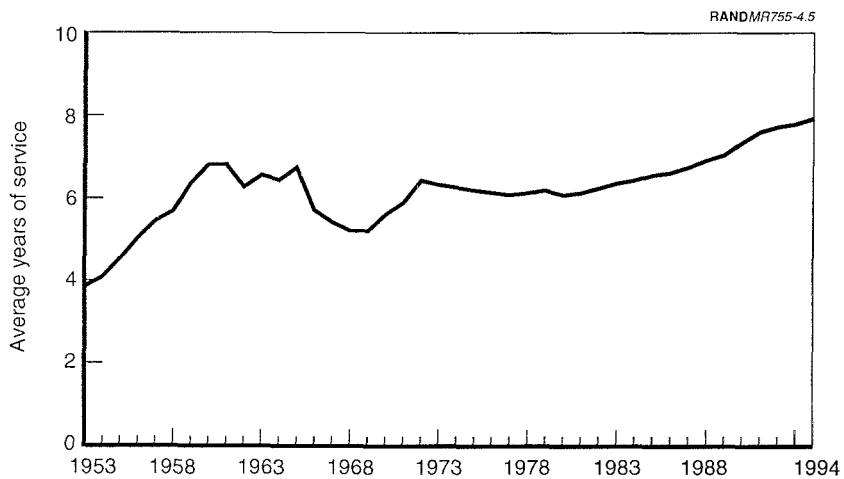


Figure 4.5—Average Years of Service, DoD, 1953–1994

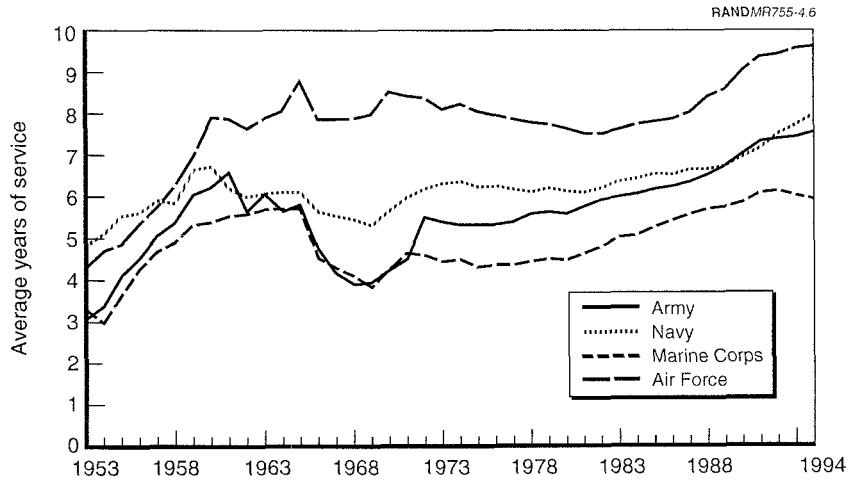


Figure 4.6—Average Years of Service, for Each Service, 1953–1994

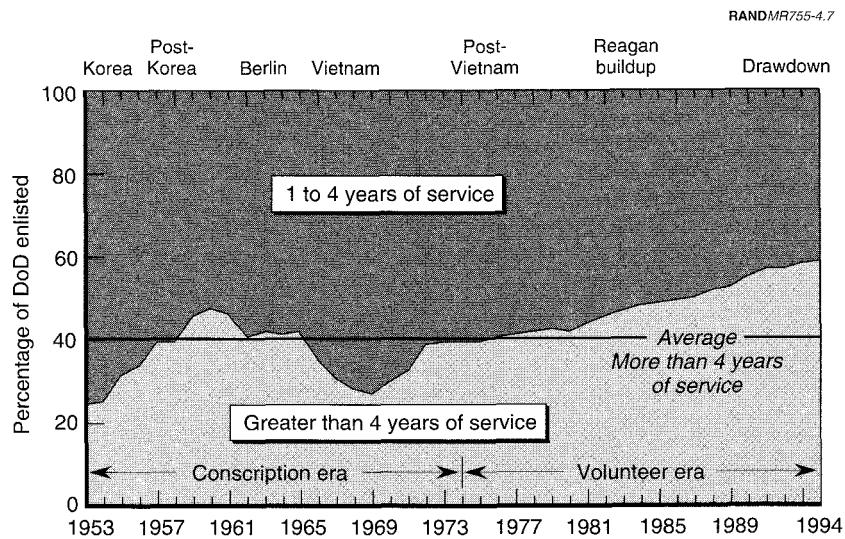


Figure 4.7—Career Content, 1953–1993

needed overall; second, the retention rate of senior people is higher. The career force increases proportionally as a result. This trend is particularly evident since the advent of the volunteer force in 1973 and seems to have occurred despite the many attempts to control the proportion of the force that is senior. The persistence of this trend raises the question of whether control of seniority can be (or should be) either a budgetary or career management objective.

Moreover, the relationship between grade and experience can also be seen over time. Not surprisingly, as experience began to increase, grade levels did also, as people moved through year-of-service points at which promotion occurred. Increased longevity creates pressures for grade “creep,” which, as will be discussed below, is periodically challenged in the budget process. In all the services, the average grade has risen as shown in Figure 4.8.

Another way to look at the changing grade mix is to aggregate the highest 6 grades (E4 to E9). This aggregation, called TOP 6, is fairly standard as is another aggregation, TOP 5. Figure 4.9 shows that the TOP 6 content has risen over the years.

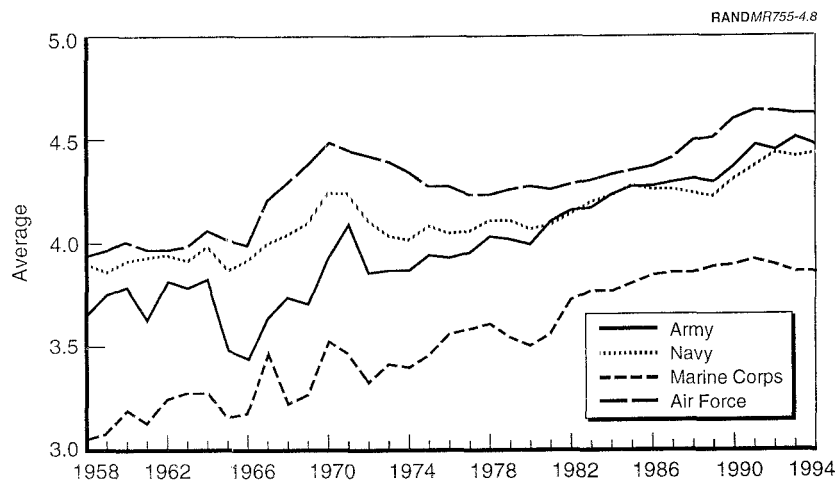


Figure 4.8—Average Enlisted Grade for Each Service, 1958–1994

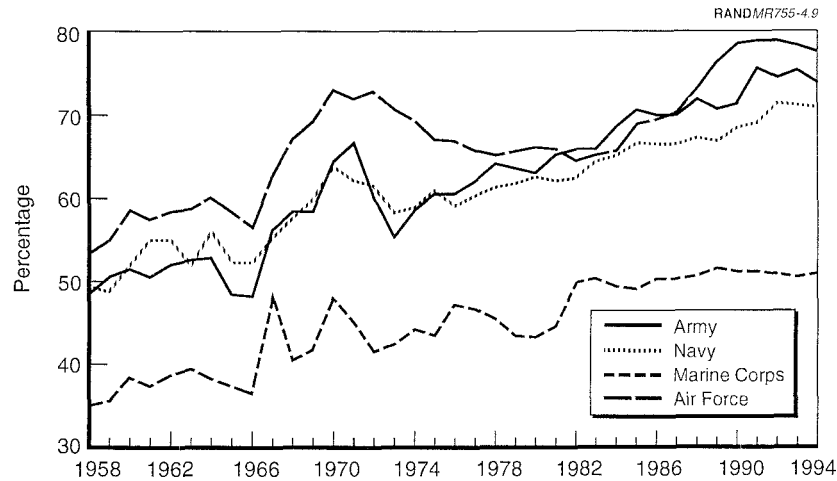


Figure 4.9—Percentage of Enlisted Force in TOP 6 Grades, 1958–1994

Last, the grade of E4 tends to be a swing grade, with some services promoting to this grade more quickly and in greater numbers than other services. Retention can also play a part in the number of E4s. In the Marine Corps, in particular, many marines separate before they are eligible for promotion to E4. Removing the grade of E4 from the data often portrays the starkest differences among the services.

Figure 4.10 shows the ratio of the TOP 5 grades to the lowest three grades (E1 to E3) for each service. In the Marine Corps, this ratio has stayed relatively constant since the early 1980s at a level of .6, which translates to three Marines in the TOP 5 for every five Marines in the lowest three grades. However, at its peak during the drawdown, the Air Force ratio stood at almost 2.5 (five airmen in the TOP 5 for every two in the lowest three grades). The reason for the growth is that the number in the TOP 5 stayed relatively constant whereas the number in the lowest three dropped precipitously, as the Air Force decided to cut accessions during the drawdown to protect its higher-grade members. The Army and Navy have about five soldiers or sailors, respectively, in the TOP 5 for every three in the lowest three grades (or a ratio of 1.6). Such ratios may be desirable for each service; relative comparisons may not be relevant.

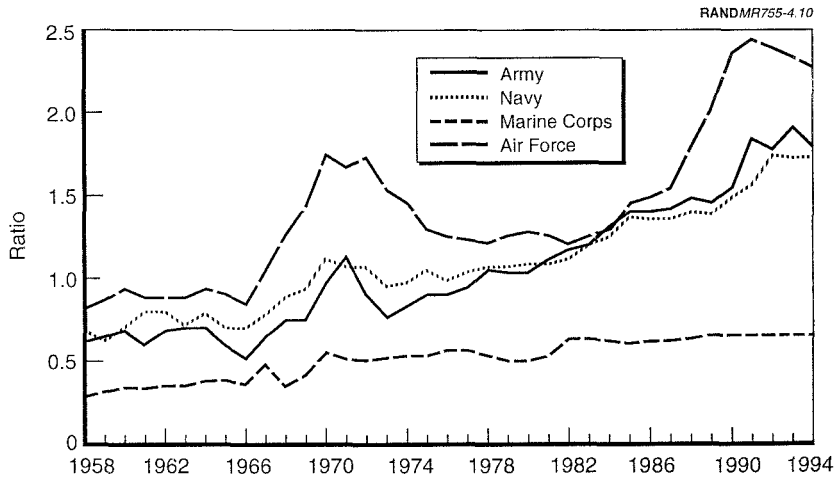


Figure 4.10—Ratio of TOP 5 Grades to Lowest Three Grades, by Service, 1958–1994

Averages and percentages such as those illustrated above tend to provide fodder for those who advocate a budget or cost-based approach to enlisted management. However, such percentages or averages may be misleading in that they may signal changes even when the number in the career force is stable. One way to eliminate this anomaly is to examine the *absolute* numbers at each grade or experience point rather than the average years or proportions.

An alternative to managing a career force as a fixed percentage of the overall force is to manage its absolute size and to tie the TOP 5 grades numerically to career force size.¹⁶ If the career force stays reasonably constant in an absolute sense, minor strength changes (up or down) are absorbed within the noncareer force. Thus, career content percentages would increase as the size of the force decreased and decrease as the size of the force increased, but the numerically stable career force would allow greater consistency in personnel manage-

¹⁶Over the years since the late 1950s, DoD has tried to find consistent relationships among grade requirements, experience (as measured by years of service), and promotion timing. Comparisons have been made of percentage content and numerical content. See, for example, U.S. General Accounting Office (1991).

ment practices. This consistency appears to have happened during the periods 1958 to 1963, 1972 to 1980, and 1985 to 1990, which were periods of reasonably stable career force size as shown in Figure 4.11.

However, if the force grows very large (or very small), this basic principle of a stable career force in absolute terms must be suspended. If the growth (or decline) appears permanent, enlisted force planners would want to build up or down toward a new absolute career force size. When strength again stabilizes at the new higher (or lower) levels, the career force size would also stabilize. Until then, growth (or decline) in career forces and management of the transition to the higher (or lower) levels would be part of the enlisted management paradigm. This appears to be what happened to the force from 1953 to 1958, 1963 to 1972, 1980 to 1985, and 1990 to the present.

As we will see below, bursts of policy issuance and budget control appear to be related to these transition periods (up and down) rather than to any broad, consistent practice of career management. The

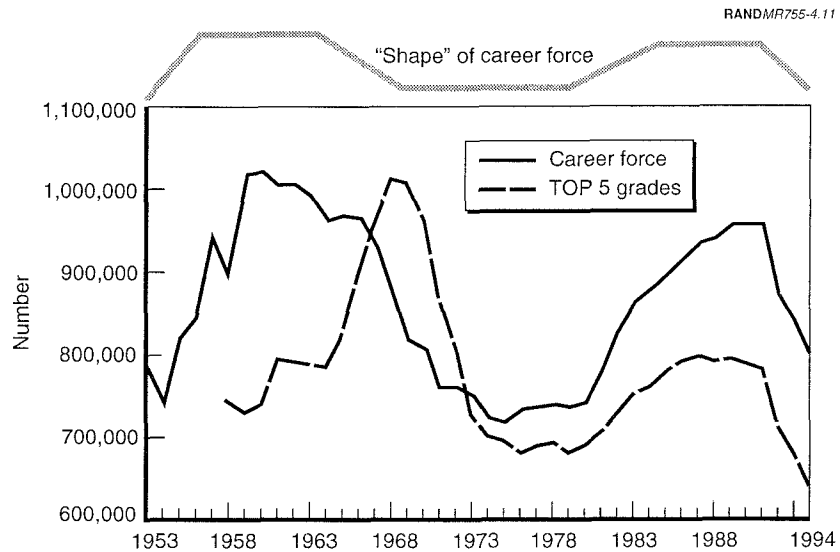


Figure 4.11—Career Force and TOP 5 Grades, 1953–1994

years 1958 and 1988 are quite similar in terms of numbers in the career force and the TOP 5 grades. However, between those years, there were certain periods when policy rode a roller coaster as did the two numerical measures.

Thus, it appears relevant to ask, Was the enlisted force actually managed by any personnel paradigm or did the patterns simply happen as a matter of events? The record is not entirely clear, as will be shown below. For example, the 1963 to 1972 period witnessed:

- Turmoil in strength;
- The beginning of grade and experience control by OSD;
- Frequent criticism of grade management by the Congress; and
- The advocacy of policy initiatives that linger to the present.

This was also the only period of the whole 40 years, as shown in Figure 4.11, when the TOP 5 grades exceeded the size of the career force. The question of whether existing enlisted management policy is still being driven by historical needs and objectives from that transitional time period is a valid one.

Part of the paradigm of managing the career force in an absolute sense deals with promotion policy. To meet the grade needs of a much larger force during the period from 1963 to 1972, when the career force was becoming smaller (retention was very low during the Vietnam era, especially in the Army), promotion timing—the point at which someone was advanced in each grade—was accelerated. Grade needs were met, but persons in those grades had significantly less experience than persons at the same grades in the early 1960s or in the 1980s. In essence, the point at which promotions were made (promotion timing) was allowed to float to meet grade needs. Since 1972, promotion timing has been the policy constant (DoD, 1974), and the number in grade floats depending on requirements¹⁷ (in the aggregate and/or by occupation) and meeting the minimum time-in-service (TIS) needs for advancement. Selection opportunity can play

¹⁷However, as discussed above, it is not clear that grade requirements are sufficiently precise to be used as the ultimate control mechanism. The services also use grade authorizations for personnel management flow to achieve career management objectives and as budget controls.

a role as well. Unlike the officer system, no policy goals for enlisted selection opportunity exist. Moreover, until recently, all services simply measured opportunity (by occupation or in the aggregate) after the fact. Questions have been raised as to how to set the minimum time in service (or grade) for promotion. For example, Is existing TIS policy guidance appropriate for a 30-year career or normed to the typical 20-year career?

In any event, there has been a fairly stable relationship between the career force (over four years of service) and the TOP 5 (E5 to E9) over time except for the Vietnam years from 1963 to 1972. Figure 4.12 portrays this relationship over a 40-year period.

This relationship is also generally true in all services, but some differences occur among the services as shown in Figures 4.13 to 4.16. The biggest contrasts are between the Air Force and Marine Corps. The Air Force did not grow as large proportionally during Vietnam (after Korea, the Air Force did not reduce in size as quickly as the Navy or Army), and its TOP 5 always stayed smaller than its career force during the entire period. However, the Marine Corps continued to have a TOP 5 greater than its career force until the early 1980s.

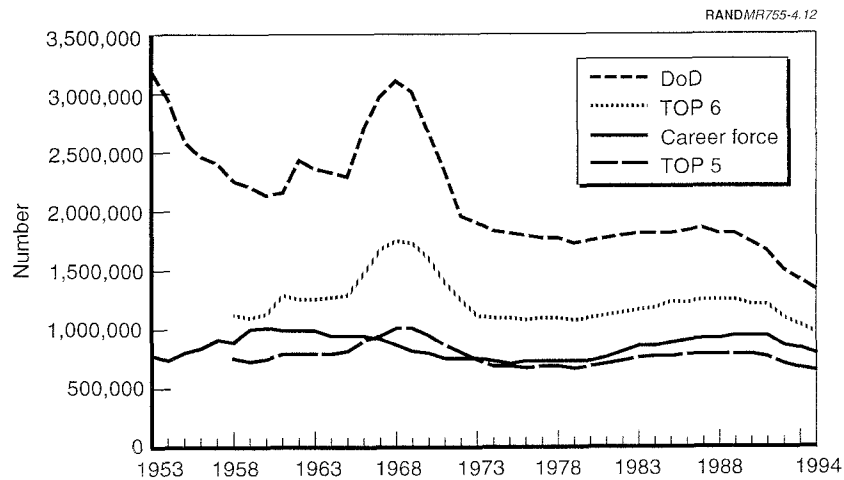


Figure 4.12—Strength, Career Force, TOP 5 Grades, and TOP 6 Grades, DoD, 1953–1994

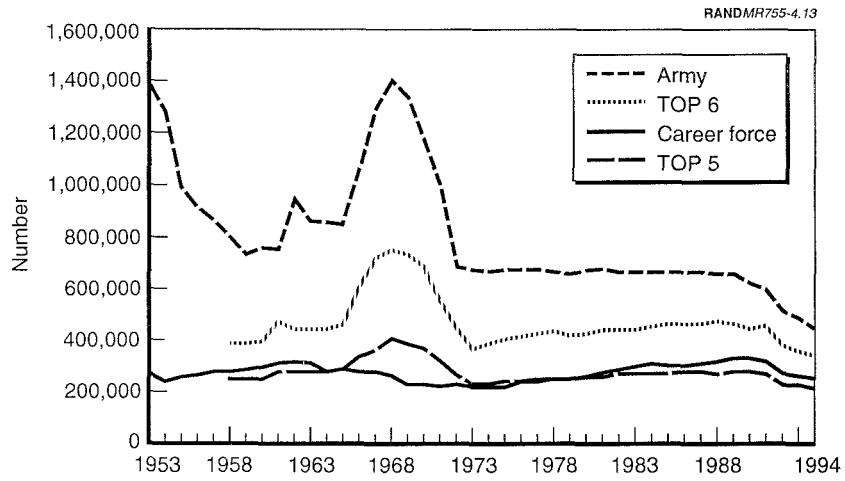


Figure 4.13—Strength, Career Force, TOP 5 Grades, and TOP 6 Grades, Army, 1953–1994

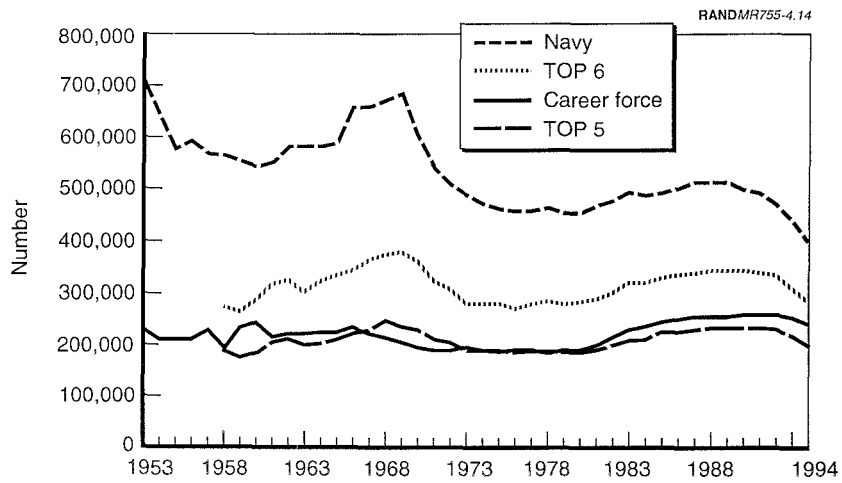


Figure 4.14—Strength, Career Force, TOP 5 Grades, and TOP 6 Grades, Navy, 1953–1994

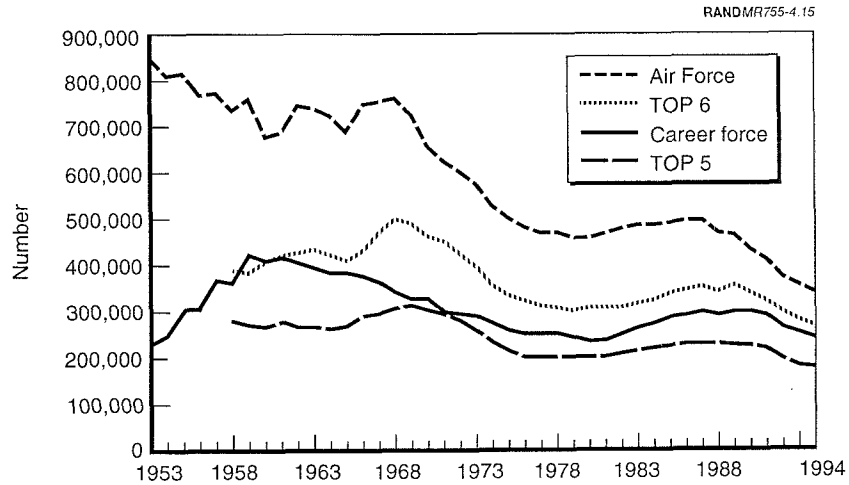


Figure 4.15—Strength, Career Force, TOP 5 Grades, and TOP 6 Grades, Air Force, 1953–1994

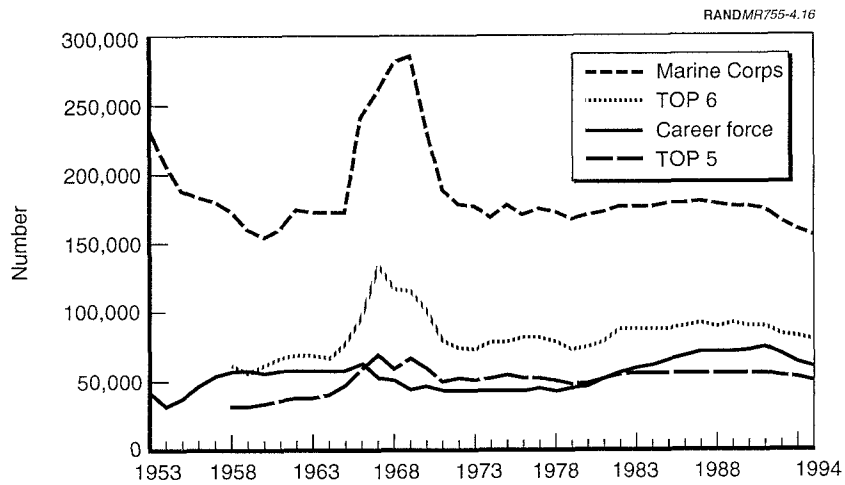


Figure 4.16—Strength, Career Force, TOP 5 Grades, and TOP 6 Grades, Marine Corps, 1953–1994

Important to promotion policy are answers to questions such as: Is the relationship between grade and experience designed to achieve certain objectives? Which ones? Is the relationship a direct outcome of promotion policy or unrelated to it? Does promotion policy provide sufficient opportunity to retain personnel at experience levels conducive to effective performance? Is promotion policy understood by soldiers, sailors, airmen, and marines? These are all valid questions that need to be considered as one analyzes how a future enlisted promotion system should operate.

Under current policy (DoD Directive 1304.20, 1984), the TOP 5 content of the total enlisted force will increase relatively with increases in the career force. This is an outcome of growth in a career force with fixed promotion policy as a personnel management tool and is not a result of changed promotion policy. In this view, TOP 5 growth is desirable when the career force increases. However, if the actual need for more higher grades did not change, it appears to be grade creep from a budget perspective, and, as will be discussed below, budget decisions will constrain or co-opt the policy. In a changing military milieu of force growth or decline, whether promotion timing should be a policy constant or a policy variable is an open question.

Last, a basic tension has always existed between personnel management (faces) and manpower management (spaces). The military services have traditionally put greater emphasis on the former. To the extent that manpower resources are managed to achieve a “smoothed” length-of-service distribution or profile, imbalances in accessions and retention will occur that appear to need resolution. Although smoothed year-of-service profiles make the analyst’s job easier, it is not clear that smoothed profiles are needed in any practical sense for managing an enlisted workforce.

DoD POLICIES, 1954–1976

What policy initiatives occurred during this time period? An early DoD Directive (DoD, 1954) provided guidance for manpower programs. The stated objective was to

accomplish approved national military objectives with a minimum of manpower so organized and employed as to provide maximum

effectiveness and combat power . . . each service shall seek optimum personnel utilization, maintain a high level of personnel performance and morale, and accomplish missions with a minimum number of personnel.

To this end, the following steps, among others, were directed:

- Correlate job requirements and personnel qualifications;
- Maintain the grade requirement of each space consistent with its responsibility;
- Maximize stability of assignments and minimize rotation or turnover consistent with requirements of training, readiness, and morale; and
- Encourage voluntary enlistment and reenlistment to increase the level of training, experience, and combat readiness and minimize involuntary induction.

These management objectives and programs from 1954 still seem applicable today. In particular, it is apparent that reenlistment results were the perceived key to increased experience and readiness. The relationship of reenlistments to accessions was apparent—keeping an experienced person meant one less person had to be recruited or conscripted. The emphasis on experience was not surprising given the very junior Korean War enlisted force. In 1954, over 75 percent of the enlisted force had four years of service or less.

By 1961, the enlisted force split evenly between junior (1–4 YOS) and senior (more than 4 YOS) people, and the average experience had increased from four years in 1953 to seven years in 1961. Experience levels remained relatively constant at this level to 1965. In periods of relative peace, such as existed between the Korean War and the Vietnam conflict, reenlistments tend to be higher, which reduces the need for accessions, and experience levels move in the desired direction. Although reenlistment controls were used in some services in the late 1950s to control costs, no one had yet confronted the personnel policy questions about whether there were too many reenlistments or too much experience in the enlisted force.

The grade question emerged as a significant policy issue in the late 1950s, and since then, OSD has attempted periodically to control ei-

ther the TOP 6 (E4 to E9) or TOP 5 (E5 to E9) grades. The DoD first placed formal grade controls on the E4 and above strengths of the services in 1958 (Department of the Army, 1964). A year later, when grades E8 and E9 were added, the ceiling was changed to reflect these grades.¹⁸ The reasons for these ceilings, which were established as a percentage of enlisted strength, were “budgetary economy” and inflationary trends in grade authorizations. (A consistent theme began to play out: Grades are more a function of budget considerations than personnel management considerations.) The ceilings were arbitrary and were very close to the actual E4 to E9 strengths in each service.¹⁹ The Army was required to reduce TOP 6 content between 1958 and 1964 from 51 percent to 49.5 percent, each of the other services was allowed to increase: Navy from 53.3 percent to 54.5 percent; Marines from 34.6 percent to 40 percent; and Air Force from 54.8 percent to 59.3 percent. The Army observed that the DoD ceilings appeared related to the career ratios (personnel with over four years of service).

While these relationships may have been accidental at first, there is reason now to believe that DoD in its monitorship of the grade structure has sensed the relationships and is closely watching Service grade authorizations accordingly.²⁰

Thus is policy born of accidental relationships.

The Army saw its solution to higher grades as a higher career ratio. In 1965, a 17 percent gap divided the grades needed (approved manning documents) and grades allowed by the DoD ceilings.²¹ The Army’s real problem was that a force that had less than 40 percent over 4 YOS and a documented grade need of 67 percent in the TOP 6 required insupportably rapid promotions. Given expected career

¹⁸In 1962, the ceiling was reestablished in terms of actual year-end strengths for grades E4 through E9 rather than in percentage terms.

¹⁹In another precursor to a long-running policy argument, the Army stated that outside Army activities (“joint” and “reserve”) accentuated the grade problem but did not create it.

²⁰These perspectives are from Department of the Army (1964).

²¹By this measure, there was a 143,000 NCO shortfall, which makes the Navy’s much heralded 20,000 petty officer shortfall in the late 1970s (computed in a similar fashion) pale by comparison.

lengths, an E4 would have to be promoted before attaining one full year of service to meet grade needs. Given the limited retention during the draft era, in 1964 the Army could not promote people fast enough to meet grade needs. As it turned out, the Army concluded it had inflated authorized grades in combat arms to keep pace with increases in other occupational areas, to enhance the prestige of combat arms, and to ensure career soldiers adequate compensation. The result was the “Army manning its combat positions one grade higher than Marines.”

DoD and the Army explored promotion systems using year-of-service controls (a “best judgment” as to the point in service when promotions to and from a particular grade should occur) and promotion opportunity controls (ratio of annual promotions to a grade to the average strength of the next lower grade). The Army concluded that it suffered twin evils: faster promotions to lower grades than other services and slower promotions to upper grades. The latter was perceived to be the worse one.

Last, the Army reviewed the skill distribution of promotions and concluded that the wrong skills were promoted early. (Technically trained personnel were promoted late.) “Control of promotions by MOS [Military Occupational Specialty] would placate vocal critics in DoD and benefit the Army . . . by reducing skill imbalances.” Moving away from uncontrolled skill promotions was proposed.

The overall conclusions of this study dealt with reducing grades (the grade pyramid then, as it does now, resembled an aircraft carrier with the E5 to E9 as the superstructure; the E4 grade as the broad deck; and E1 to E3 as the narrower hull). The Army determined that it would need a more “ideal” pyramid to have orderly promotion progression; that strict comparability between services in promotion patterns was unwise because of service differences; and that with 90 percent manning of requirements (still followed in 1995), a TOP 6 grade ratio of 52 percent should be submitted and justified to DoD as an objective for FY66.

This 1964 policy review captured all of the policy arguments that would play out over the next 30 years:

- Budget controls;
- Grade inflation;
- Grade controls;
- Experience levels;
- Promotion timing;
- Promotion opportunity;
- Promotion by skill;
- Grade shortages; and,
- Programmed manning.

Indeed, these same arguments surfaced during the drawdown beginning in the late 1980s. Most telling, however, is the fact that the policy initiatives of the early 1960s would again be overtaken by external and internal events, this time the Vietnam conflict. Before long, the Army would have over 70 percent in the TOP 6 grades (20 percent higher than the optimum) and would be promoting so rapidly that the end products would earn the sobriquet of “shake-and-bake NCOs.”

Nor was this just an Army problem. No service would ever achieve the 1964 mandated TOP 6 percentages, and all would operate through the 1960s and early 1970s with about 10 percentage points greater content in these higher grades. In the 1980s, the Marine Corps TOP 6 content would stabilize at about 50 percent, whereas each of the other services would continue to grow: the Air Force to nearly 80 percent, the Army to 75 percent, and the Navy to 70 percent. It is not at all clear that grades have ever been completely controlled for budget reasons or completely unconstrained for personnel management reasons.²² Thus, Vietnam was another era of “free flow” personnel management. DoD instructions in 1967 and

²²We discuss below how these two perspectives on grades affect people. Periodically, budget constraints determine service grades, and, periodically, grade ceilings are increased to allow minimum levels of promotion flow.

1969 required that the services provide experience, skill, and grade data²³ but imposed no new controls.

Congress also got involved with enlisted force management during this period. A special house subcommittee stated in 1968 that grade distribution procedures and promotion opportunities were inadequate. The subcommittee concluded that DoD based grade ceilings on arbitrary budget considerations and was not responsive to the services' needs and recommended that DoD improve its capabilities for ensuring realism in the TOP 6 grade authorizations while not taking essential grade management away from the services (U.S. General Accounting Office, 1977).

OSD convened a TOP 6 study in 1968 that concluded there was no sound basis for OSD to systematically review the services' TOP 6 grade requests and the services' grade requests had not considered long-term force renewal considerations (U.S. General Accounting Office, 1991). Four factors were cited as having excessive influence on enlisted career promotion prospects:

- Changes in force size and composition;
- Differences in service occupational grade structures;
- Differences in service promotion policies; and
- Lack of a means to separate career enlisted members fairly.

In 1968, following the guidance provided by the House Subcommittee on Enlisted Promotion Policy Review, OSD once again adopted percentage ceilings for the TOP 6 grades and in addition sought to establish a minimum time in service for these grades. These criteria (as modified over time) would form the basis for all future grade progression. This direction was part of overall enlisted force management guidance to the services, which prescribed long-range systems aimed at assisting the services in attaining enlisted management goals.

²³These "personnel data banks" would eventually lead to the wealth of manpower, personnel, and training data now available at the Defense Manpower Data Center.

Again in 1972, another special Congressional subcommittee criticized the increasing number of high-graded enlisted personnel and cited as reasons for the increases:

- Changes in service missions;
- Increased complexity of equipment;
- Expansion and contraction of forces in emergencies; and
- Grade controls and policy guidance established by OSD.

OSD responded that it had followed the recommendations of the 1968 subcommittee. (The House Appropriations Committee in 1976 also expressed concern over the increase in military personnel costs because of grade growth or the increase in average rank.)

In 1974, OSD established a requirement that each service develop enlisted personnel management systems that would allow them to avoid the peaks and valleys in their experience profiles that had plagued them to date. The Vietnam conflict had just ended and the all-volunteer force had just begun.

DoD (1974) defined the goal of enlisted personnel management as follows: “to support the most efficient allocation of Department of Defense manpower resources in support of Military Service missions.” It established ceilings for E8 and E9 (a maximum of 3 percent of the enlisted force),²⁴ and stated that the proportion of those in the TOP 5 grades could not be higher than the proportion of those having more than four years of service.²⁵ It established target promotion points for each grade (for example, seven years for promotion to E6) but did not establish policies limiting reenlistment of

²⁴Constraints on the top enlisted grades were mandated by Congress and have existed in Title 10 since 1962.

²⁵It appears that this mandate about the career force and TOP 5 relationship perfectly fit the needs and data of the day. As Vietnam accession needs wound down and as retention began to increase, this long-standing relationship reemerged. It is not clear that promotion mandates had nearly the effect of reduced accessions and increased retention in achieving it. However, this relationship is always easier for a high retention service (and thus proportionally larger career force) to achieve than a lower retention service to achieve. For example, during the period 1953 to 1994, the Air Force career force has always exceeded the TOP 5 relationship. However, the Marine Corps did not achieve the mandate at any time between 1965 and 1981.

those who repeatedly failed promotion selection, although each service established thresholds beyond which point the service members were not allowed to continue.

A key provision of the directive required that each service develop an objective force profile that is a target distribution by years of service and pay grade for each occupational grouping in the force and for the enlisted force as a whole. The objective force profile was to serve as the basis for service force management actions and policies aimed at achieving it (U.S. General Accounting Office, 1991). Although these profiles are now used to show the effect of policy changes on experience, they were initially developed primarily to control personnel costs (Armstrong and Moore, 1980, p. 13).

The move to enlisted management *systems* as required by the 1968 memo had been slowed by the Vietnam drawdown and by a lack of good analytical techniques and databases (U.S. General Accounting Office, 1977, p. 71). All of the services had plans or draft plans as early as 1969. Perhaps the most fully developed²⁶ and analytically based plan was the Air Force's Total Objective Plan for Career Airmen Personnel (TOPCAP) of 1971. After the 1974 directive that provided specific essential elements for a plan and criteria to judge the plan, the services did develop complete force management plans. However, the services²⁷ appeared to take three approaches to managing their enlisted force (U.S. General Accounting Office, 1977, p. 71):

- Primarily on requirements (Navy);
- Primarily on personnel flow considerations (Army); and
- Primarily on job requirements for career individuals (Air Force).

²⁶Ultimately, the Air Force would structure its personnel plans around several volumes. Volume 1 is a set of concepts, goals, and objectives for personnel management. Quantitative structure objectives for enlisted personnel, officers, civilians, and reserves are in separate volumes of the plan. A last set of volumes defines needed administrative and support systems. The Air Force follows an ends-means approach.

²⁷The Marine Corps approach was not characterized.

These different approaches continue to be practiced and lead to a question about which, if any, should be a basis for enlisted management.

DoD POLICIES, 1977–1994

Throughout the 1970s, all four services attempted to refine seniority management by establishing better defined grade/experience relationships in an attempt to reduce promotion stagnation and to make the advancement process more transparent. However, the services and OSD and Congress and its arms (e.g., the U.S. General Accounting Office) continued to vacillate between policy for personnel management objectives and outcomes that reduced the budget cost of the force.

The Defense Resource Management Study (DRMS) (Rice, 1979) was commissioned by OSD in 1977 in response to a Presidential call for a “searching organizational review” of the organization, management, and decision processes in the area of DoD resource management. One area of review was the first-term/career mix of the enlisted force. The DRMS concluded that judging by the competing considerations of cost (pay, bonuses, retirement accrual) and cost avoidance (recruiting and training), the careerist content of the Army and the Air Force (the only two services examined) should be 44 percent and 55 percent, respectively, but that these careerist levels should differ across occupations.

In the early 1980s, President Reagan established a Military Manpower Task Force to “review the entire military manpower question.” The MMTF (Weinberger, 1982) found that the services differed in the methods and criteria used to determine the number of authorized positions for grades E5 to E9 and suggested that OSD “intensify its review” of the methodologies the services use to determine requirements to avoid the “possibility of spending funds to support a higher enlisted grade structure than may be required for force readiness.” The task force concluded that the career force was growing in size and experience toward goals, without being explicit about what those goals were: A large and growing career force was accepted as a policy objective in the volunteer era.

By the late 1980s, there was increasing concern that the enlisted force was becoming too senior, and that current policies did not adequately link the seniority (grade) demand across occupations to supply (retention behavior). In September 1987, the Defense Resource Board (PDASD, 1987) conducted an implementation review of the defense budget and one topic focused on the growing seniority of the enlisted force. This review (Aging Force) highlighted several findings:

- Retention had increased sharply for the all-volunteer force, increasing both the grade structure and experience level of the force. This higher retention was partly attributable to the increase in basic pay for the career force between 1968 and 1973, the advent of the AVF, buildups, and drawdowns.
- Cumulative effects of this increased tenure and grade growth were reflected in an increase of \$1 billion per year in basic pay costs between 1980 and 1986 and an increasing requirement for reprogramming of budgets.
- On the plus side, higher retention reduced recruiting and initial training costs because of the reduced demand for accessions, while increasing productivity. However, the study pointed out that although this was an opportunity to increase readiness, there were no consistent measures to gauge the cost-effectiveness of such seniority.
- On the minus side, retirement accrual costs rose sharply.
- A more serious concern focused on the differential seniority patterns across occupations. Generally, one would prefer higher retention in the more highly technical skills because of the enormous costs of training. However, the seniority patterns in occupations selected for review reflected exactly the opposite; moreover, the higher promotion tempo in the more technical skills such as communication and intelligence suggested that there might be shortages in these fields.
- These patterns may be actually encouraged by the construction of grade tables that were strongly influenced by feasibility. Thus, longevity patterns shape the grade tables to accommodate longevity rather than to control it.

The study recommended the employment of a more uniform framework for determining careerist objectives, based on the DRMS, with benchmarks being established for occupational groups based on cost-effectiveness. A process for reviewing and adjusting these benchmarks should be built in. A section of the force (years of service 8–10) should be selected for especially careful management and this may require development of initiatives such as enlisted separation pay for managing losses. Only those grade or longevity patterns exceeding the reference points would need to be explored in the budget cycle (ASD, 1988). The report suggested that a further study of these issues be undertaken and this was done in 1988.

The later study (DoD, 1988a, p. 9) outlined a uniform framework that could provide a stable set of reference points for guiding enlisted longevity and grade. The study provided clear definitions for the terms' requirements, authorizations, and inventory.

Requirements are the positions (at the grade and occupational level of detail) required for organizations to fulfill their specified missions in combat. Authorizations are those resourced subsets of requirements for which the leaders of those organizations can currently expect an incumbent. Inventory means the people currently serving. Current Defense Guidance establishes that 90 percent of the requirements must be authorized (reducing the potential for establishing many organizations with very hollow staffing).

In reviewing current practices, the study pointed out that requirements determination was not driven purely by demand considerations but instead by the interaction of both demand and supply. “[I]t is a balance between the two, and one of its objectives is the definition of a grade structure that is feasible” (p. 10). Inventory, on the other hand, is shaped by a variety of factors (among these, buildups, drawdowns, pay, shifting occupational patterns, and employment opportunities tend to be the most important) and differs widely across occupations and across services.

The study pointed out that enlisted force management suffered from several drawbacks: The enlisted force, unlike the officer corps, was largely shaped by the budget rather than by statute. Each grade content was determined by its annual justification in the budget, a contentious process at best; absent a compelling explanation,

Congress tended to freeze the grade structure to slow grade creep (as it did by freezing the 1988 grade structure at 1986 levels) with unfortunate results.

The study compared enlisted and officer management and pointed to several parallels between the two as suggesting a design of an enlisted system:

- Defense Officer Personnel Management Act (DOPMA) set certain grade and promotion parameters based on a set of specific retention assumptions with the focus being on the senior grades. Consistent with this, enlisted grade flows should focus on the TOP 4 grades because these reflect the same level of stability as that found in the senior grades of the officer corps. Promotion points for the lower grades could then be set by the budget and population.
- Under DOPMA, involuntary losses are generated through nonselection for promotion and individuals involuntarily separated are given separation pay in partial compensation. Although technically, since enlisted personnel agree to serve for specific contractual periods and are not entitled to separation pay, it would be difficult to involuntarily separate career enlisted personnel who were performing acceptably but were in surplus occupations.
- Involuntary loss management—similar to that of the officer corps—must be based on performance and potential; however, under current policies, enlisted personnel may continue to retirement, even if they lag behind their peers in advancement.

However, the study suggested that some differences needed to be kept in mind. First, officer grade management serves more as a ceiling than a floor because of the very high retention of officers during the first years of service. For the enlisted force, where retention in the early years is much lower, the challenge is to ensure that a requisite number move toward the tenth year of service, after which retention is stable and predictable. Second, unlike the officer corps, great variance in retention patterns for different occupations occurs.

Based on this study, a memorandum was drafted that outlined possible policy guidance on enlisted force management that included, among others, the following objectives:

- The proportion of those serving in years of service 8–10 were to be set as a percentage of enlisted strength: 8–11 percent in the Army, 9–12 percent in the Navy, 7–10 percent in the Marine Corps, and 10–13 percent in the Air Force.
- Concerned about the possible effects of low accession levels, the proportion of those in years of service 1 and 2 were set at 28–38 percent in the Army and Marine Corps, 23–33 percent in the Navy, and 15–25 percent in the Air Force. The upper boundary would not be constraining during periods of large strength increases but the lower boundary was to be constraining during periods of stable or declining strength.
- Establishment of high year of tenure points at the service average promotion point plus 5 years for those in grades E4 and E5 for those with less than 14 years of service and who are not on a promotion list.

These were the proposals advocated by OSD for enlisted force management. Not surprisingly, a system built on a mandated service-wide grade pyramid, fixed promotion opportunity, and forced separation was expected to lead to a youthful (and probably less costly in terms of basic pay) force in all occupations. Such a system appeared to fit the Marine Corps well, which had already adopted something similar.²⁸

However, it is not clear that:

- Any officer management system—either the current or some other—would be good as the basis for enlisted management; unlike commissioned officers, enlisted are more specialized and occupationally tracked.
- A uniform system would accommodate service differences.

²⁸The Marine Corps Enlisted Career Force Controls program was designed to achieve equitable promotion opportunity and tempo across all Marine Corps skills. “The program involves shaping of the grade structure in order to provide *structural* equitability and to control the flow of Marines into the career force grade structure. By controlling the demand (grade structure) and the supply (Marines with greater than 4 YOS), promotion equity will result” (Defense Manpower Requirements Report, 1994, p. V-19).

- The proposed system of forced separation at certain points would fit the Air Force's philosophy and practices for managing an experienced workforce of technicians and craftsmen.
- The proposed system of uniformity across skills and of forced separation would fit the Navy practice for managing a workforce that required experience in certain occupations because of their technology component but not in others.
- The proposed system of uniformity across skills would fit the Army's preferences for occupational management that had emerged in the 1980s after evolution from a previous system that attempted to provide equitable promotion opportunity across all skills.
- The 8–10 YOS point is the correct one to manage seniority if seniority is to be managed.
- Strength, grade, and experience patterns have to be tied together.

In fact, the one thing that seemed obvious was that the proposed system did establish arbitrary grade requirements structures that could fix costs but might not achieve any other professed objectives.

The study concluded that the principal problem continued to be the absence of a common view among OSD, the services, and the Congress regarding "the correct balance among experience levels, grade patterns, and their implied resources. Until that common view . . . is established, imbalances will persist. Promotion patterns will be similarly unstable" (DoD, 1988a, p. 2). In essence, if these measures are the right ones by which to control or manage an enlisted force, nothing much had been accomplished since the first management directives in the 1950s. It is not clear that either objectives for enlisted force management or the means to attain them have ever been agreed upon.

As the services began drawing down, the Deputy Secretary of Defense issued a memorandum providing guidelines for the management of military manpower reductions. These were:

- a. Guard against the creation of hollow-force units—do not maintain force structure that cannot be sustained by available resources.

- b. Annual accession flows must be sufficient in quality and quantity to sustain future forces in a steady state.
- c. Retention programs must provide for:
 - 1. Incentives to retain our best performers;
 - 2. Smart lateral move and retraining options;
 - 3. Procedures to involuntarily separate career service members before their contracts expire after other management alternatives have proven inadequate.
- d. Ensure timely promotion flow patterns in remaining occupational fields, against promotion stagnation or a career force that is inexperienced.
- e. Protect our investment in aviators and health care personnel.
- f. Direct members lost from the active force to the reserve force or civilian component whenever possible, maintaining our best people in the total force (Deputy Secretary of Defense, 1990).

Thus, at the end of 1994, the services were in the midst of another cycle of policy initiatives keyed to a transition in strength. The “shape” of the force, as shown in Chapter Three, again appeared to have been affected more by events than career management policies, and perhaps by structural changes in the economy as well.

QUALITY OF THE ARMED FORCES

This chapter documents the history of service efforts to manage the quality of the enlisted force. It begins by describing the history of the current aptitude and education screens. It then charts the trends in the quality of the forces based on those aptitude and education criteria.

A Department of Defense report to Congress (DoD, 1981a, p. 5) summarizes the underlying rationale for establishing “quality” entry standards for the force:

Proper enlistment and screening and job placement are prerequisites for efficiencies in training, retention of skilled personnel, and mission performance. Any deficiencies in the selection and classification system lead to increased training times and cost, dissatisfied personnel with concomitant decreases in morale, productivity, and retention, and critical shortages of skills caused by failure to achieve optimal assignment of available manpower into the various occupations.

HISTORY OF CURRENT MILITARY APTITUDE AND EDUCATION SCREENS¹

Aptitude and education screens, although used in conjunction, serve two very different purposes. The aptitude screen today largely consists of the Armed Services Vocational Aptitude Battery (ASVAB).

¹This section borrows heavily from Eitelberg et al. (1984).

One subset of the battery constitutes the Armed Forces Qualification Test (AFQT) that is used to measure general trainability, although there still remains uncertainty regarding the relationship of AFQT rank and long-term subsequent performance in the military. Combinations of subsets of the ASVAB are used to screen personnel for entry into specific skill training courses. The latter screens are psychometrically determined to predict success in specific courses. Although education screens are also used to indicate quality, they measure quality along a different dimension. As Eitelberg et al. (1984) explain, educational attainment has a recognized value in “predicting a new recruit’s chances for adapting to military life. The personal attributes that allow or encourage certain teenagers to follow through and finish high school . . . apparently help make them more successful members of the nation’s military” (p. 21).²

Aptitude Screens

Aptitude testing was pioneered by the Army during World War I. The Army Alpha and Army Beta tests were developed in 1917 and 1918 both to measure ability and to guide the assignment of new recruits to military jobs. The former consisted of eight subtests and was a prototype on which later tests were based. The Army Beta test was one of the first important non-language paper-and-pencil tests and served to evaluate the aptitude of unschooled or non-English-speaking recruits. The Army General Classification Test (AGCT) largely replaced the earlier tests in World War II but essentially served the same purpose. After the war, the services developed their own separate aptitude tests but all had the same content areas. In

²The Congressional Budget Office summarized the relationship of quality to performance. “Research on military performance yields one firm conclusion: during their first term of service, soldiers in the top three aptitude categories I–III typically score higher on job tests, get better supervisory ratings, and receive faster promotions than lower-aptitude soldiers . . . The connection between high school graduation and performance is less certain. Studies based on job tests generally find that diplomas do not compensate for low AFQT scores” (Congressional Budget Office, 1986, p. 26). Kahan et al. (1985), however, found that when unit, rather than individual performance, was evaluated, not all team members need to be of high ability to ensure good team performance. In addition, although high school graduates have markedly lower attrition than nongraduates (Buddin, 1984), higher-quality recruits are both more expensive to recruit and also tend to have somewhat lower reenlistment rates.

1948, a working group was formed to develop a uniform aptitude test that met the following four criteria:

1. The test should represent a “global” measure of ability.
2. The test should contain items in vocabulary, arithmetic reasoning, and spatial relations.
3. The test should minimize the importance of speed so that slow performers would not be penalized.
4. The test should minimize the difficulty of verbal instruction relation to test items (pp. 16–17).

Their efforts culminated in the Armed Forces Qualification Test (AFQT) in 1950. The test was statistically linked to the AGCT. Unlike the earlier tests, however, the AFQT was designed as a screening device to measure both the individual’s “general mental ability to absorb military training within a reasonable length of time” and his “potential general usefulness in the service, if qualified on the tests” (Karpinos, 1996).

The AFQT has undergone several modifications since 1950. Since 1980, increased emphasis has been placed on verbal and quantitative items. In addition, scoring and ordering of items have changed over time. In addition to the AFQT, the services have used a variety of subsets to predict success in specific occupational training courses.

In 1974, DoD decided that a single test battery should be used both for screening enlistees and for occupational assignment. “By combining selection and classification testing, the testing process was made much more expedient. It enabled the Services to improve the matching of applicants with available job positions and allowed job guarantees for those qualified. The Armed Service Vocational Aptitude Battery (ASVAB) was selected for this purpose” (p. 17).

In 1976, a revised version of the ASVAB became the DoD-wide aptitude test of enlistment eligibility. Currently, it consists of ten subtests. The scores of four of the subtests—word knowledge, paragraph comprehension, arithmetic reasoning, and numerical operations—are combined to produce an AFQT score. This score, in conjunction with other standards shown in Table 5.1, is used to determine an applicant’s enlistment eligibility. The services combine subtests of

Table 5.1
Definition of AFQT Categories

AFQT Category	AFQT Percentile Score	Level of Trainability
I	93–99	Well above the average
II	65–92	Above average
IIIA	50–64	Average
IIIB	31–49	Average
IV	10–30	Below average
V	1–9	Well below average

the ASVAB to form aptitude composites that are intended to predict success in job training. These composites determine qualification for a large number of skill training courses and each service sets its own standards for entry into specific skills. AFQT scores are percentiles ranging from 1 to 99 and reflect a person's trainability with respect to that of the general youth population.

These scores are traditionally combined into categories as shown in Table 5.1 (DoD, 1985b, p. 9).

Categories I–IIIA constitute the upper half of the AFQT distribution and are generally viewed as high quality. Individuals scoring in Category V—who generally read at a 5th to 7th grade level—are excluded from military service and the proportion of Category IV recruits is limited to 20 percent by law.³

Education Screens

Differential minimum aptitude standards according to educational attainment were first adopted by the Air Force in 1950 with high school dropouts being required to have a higher minimum AFQT score than high school graduates. This lasted for five months. Ten years later, attendant on research that showed lower attrition among high school graduates, the Air Force once again adopted the education differential with the minimum AFQT score being set at 26 for high school graduates and 31 for nongraduates. The Army adopted a similar policy in 1962, followed by the Navy and Marine Corps in 1965. Different standards were also established for recruits with

³Fiscal Year 1981 National Defense Authorization Act.

General Educational Development certificates of high school equivalency in all services but the Marine Corps. Varying aptitude standards were also introduced by age and length-of-enlistment (for the Army), although these were subsequently dropped. Currently, a high school diploma is desirable but not mandatory.

The basic elements of quality measurement at enlistment are shown in the Table 5.2⁴:

Table 5.2
Enlistment Screens

Characteristics	Determined By
Physical condition	Medical examination
Moral background	Enlistment statement, police checks, and Entrance National Agency Checks (ENTNAC)
Trainability	ASVAB, AFQT, and aptitude composites
Motivation/discipline	High school diploma, recruiter interviews

Current Screening Criteria

Currently, the following are the basic eligibility criteria for enlistment in the armed forces (DoD, 1994a):

1. Age: between 17 and 35 years.
2. Citizenship: U.S. citizen or permanent resident.
3. Education: possession of a high school diploma desired but not mandatory; nongraduates may be accepted provided their AFQT score is 31 or higher.
4. Aptitude: Persons scoring in Category V are ineligible to enlist by law (10 U.S.C. 520 and DoD Directive 1145.1). Number of Category IV enlistees cannot exceed 20 percent of total number of enlistees.
5. Physical fitness: free of contagious/infectious diseases; free of medical conditions or physical defects that would require excessive time lost from duty or might likely result in separation for

⁴DoD (1985b), p. 12.

medical unfitness; medically capable of satisfactorily completing training; medically adaptable to the military environment; medically capable of performing duties without aggravation of existing medical conditions or physical defects.

6. Dependency status: cannot enlist married individuals with more than two dependents under 18, or unmarried individuals with custody of dependents under 18, without a waiver.
7. Moral character: disqualification on this basis encompasses individuals under judicial restraint, with significant criminal records, previously separated from the service with other than an honorable discharge, displaying antisocial or other problematic behavior.

Minimum standards for acceptance into the military were established early in military history but generally these standards, as Eitelberg *et al.* (1984, p. 7) point out, act as

flexible gates that open and close in reaction to the shifting needs of national defense and manpower recruitment Certain circumstances, such as a recruiting drought or a need for mass mobilization, typically necessitate less stringent physical standards, lower education and ability criteria, and more lenient eligibility requirements in other areas. Conversely, during periods of peace when the standing army is streamlined to function as a “caretaker,” or during periods of high unemployment when military “jobs” are relatively more attractive to the youthful workforce, the Armed Services are usually able to be more selective and the qualitative barriers to entry are strengthened.⁵

A prime example of the flexibility of screening criteria is seen in World War II. Just before World War II, entry screening was used to eliminate bad risks, i.e., those who could not meet the demands of war, and to select those who could be trained reasonably quickly. Four screens were applied to those eligible for induction: physical examination, aptitude testing, psychiatric evaluation, and administrative review of moral character and history of arrest. However, the specific criteria within these four categories were subject to modifi-

⁵This section and subsequent sections draw heavily on this work.

cation depending on the needs of the services. For example, early in the war, a literacy screen requiring that draftees have the ability to comprehend simple orders in English was used. This was later tightened to prohibit induction of those who could not read or write at the fourth grade level. However, by 1942, this requirement was relaxed and about 100,000 illiterate men were added to the Army's ranks. This flip-flop was again seen later when the minimum aptitude requirement that had been set at a little higher than the 5th percentile on the AGCT, a test of general learning ability, was relaxed to allow about 82,000 low-scoring draftees to join.

Following the end of the war, peacetime enlistment standards were raised and the 1948 draft law set an aptitude standard somewhat more restrictive than before (corresponding to a score of 13 on the current AFQT). Just before the start of the Korean War, the minimum aptitude standard was raised to 31 on the AFQT; this dropped to 13 and later to 10 as the conflict continued and a larger number of potential conscripts was needed. During the period between the Korean War and the Vietnam conflict, each service set its own minimum standards based on its needs and the trend was in the direction of raising standards to improve the caliber of the recruits. During the course of the Vietnam conflict, aptitude and education standards were lowered four times. In addition, "Project 100,000" waived the standards for many who would not have qualified otherwise.⁶ As the Vietnam conflict came to a close, military standards were again raised and the nation moved to the all-volunteer force.

⁶In October 1966, Secretary of Defense Robert S. McNamara initiated "Project 100,000" in response to President Johnson's War on Poverty under which men who would have been disqualified because of failure to meet mental standards or easily correctable physical defects were allowed to enlist. Generally referred to as the "New Standards" men, about 320,000 such recruits entered the military between 1967 and 1971, when the program was abandoned because of decreased manpower requirements. The DoD report described the rationale behind the program: "We were convinced that a very high proportion of these men would qualify as fully satisfactory servicemen when exposed to the modern instructional techniques used in the Armed Forces. As a by-product, their service would prepare them for more productive lives when they returned to civilian life" (DoD, 1969, p. vi). A subsequent study of these low-aptitude recruits—both those who enlisted in Project 100,000 and those who enlisted as a result of the ASVAB misnorming—found that these veterans did not appear to be at an advantage in later civilian life and, in fact, tended to earn lower incomes and to have lower educational attainment than their nonveteran low-aptitude counterparts (Laurence et al., 1989).

TRENDS IN QUALITY OF NEW ACCESSIONS

Eitelberg et al. (1984) discuss the changes in the quality of examinees and recruits over time, from 1953 through 1983. Figure 5.1 (based on Table 8, p. 40, of their report updated through 1994) shows the trends in the proportion of Category IV recruits over this time period and proves the point made earlier regarding the flexibility of screening criteria.

During 1952–1958, the services were directed to select particular proportions of new recruits in Category IV and this policy kept the proportion high (25–40 percent). Quality appears to have increased steadily from 1958 to 1966, when the Vietnam conflict draft and Project 100,000 caused an increase in the proportion of low-quality recruits for four to five years. After the AVF, there was a sharp decline in quality as the proportion of Category IV recruits increased in the mid 70s and early 80s. This was primarily because during FY 76–FY 80, the armed forces were using a version of the AFQT that was calibrated incorrectly, i.e., the method by which the raw test scores were converted to percentile terms was incorrect. As a result, many low-scoring recruits enlisted than would have otherwise been qualified to

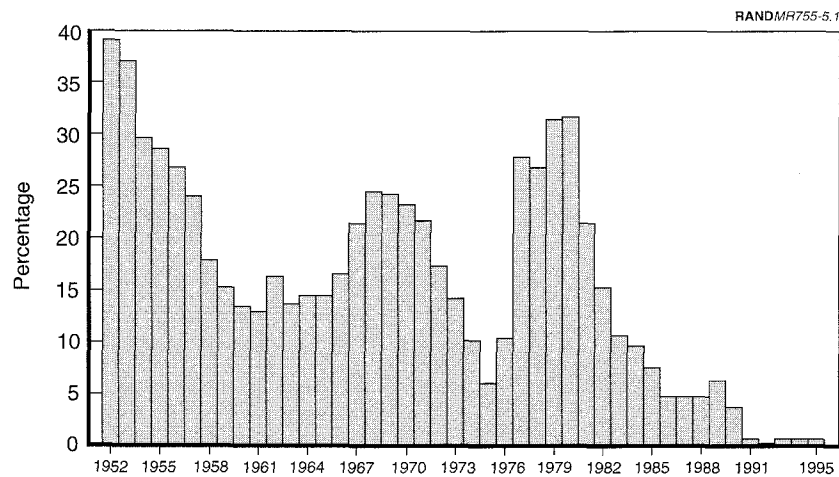


Figure 5.1—Percentage of Category IV Nonprior-Service Recruits, 1952–1995

do so and the Department of Defense mistakenly believed that the aptitude scores were showing marked and steady improvement. Subsequently, the error was corrected and quality once again began to rise. In succeeding years, recruit scores continued to rise. By 1988, military recruits were outscoring civilian youth. The services were taking in only about 4–5 percent Category IV recruits and no Category V recruits; in the general population, individuals scoring 30 or lower (Category IV and V) constituted about 30 percent. In other words, the services were selecting only from the upper two-thirds of the aptitude distribution. Since then, the proportion of Category IV recruits has fallen essentially to zero.

Trends in low-quality accessions for each of the four services from 1952–1994 are shown in Figure 5.2, drawn from data in the appendix to Eitelberg et al. (1984) and updated to 1994. The Air Force traditionally has had the lowest proportion of low-quality recruits whereas the Army has had the highest proportion over time. This was particularly true during the late 70s and early 80s.

Generally, recruits who are Category I–IIIA and high school graduates are regarded as “high quality.” This section examines

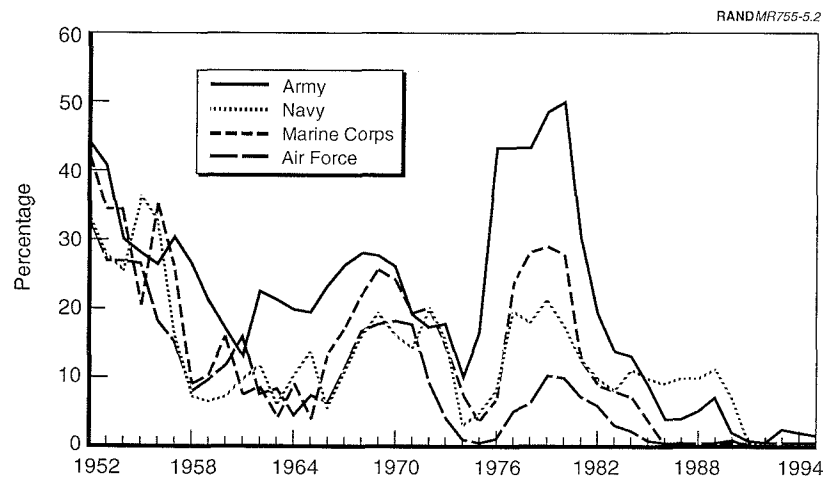


Figure 5.2—Percentage of Category IV Nonprior-Service Recruits, by Service, 1952–1995

trends in both of these indicators. Figure 5.3 shows the proportion of nonprior-service accessions who scored in Category I–IIIA (or the upper half of the distribution). Overall, over 70 percent of the entering cohort in 1995 was Category I–IIIA, a marked increase from 1981 when fewer than half of new recruits scored in these categories. Again, as the service breakdown shows, the Air Force draws the highest-quality recruits with almost 85 percent of all accessions being Category I–IIIA. The remaining services draw between 65–70 percent of their recruits from this pool of high-quality recruits. This is a substantial improvement, particularly for the Army.

In addition, as Figure 5.4 shows, the increase in the proportion of high school graduates has been remarkable. Since 1983, well over 90 percent of all new recruits have been high school graduates; in contrast, in 1988, the graduation rate among civilian youth was 75 percent. Again, this represents a marked improvement in quality particularly for the Army. By the early 1990s, 95 percent (or higher) of all accessions were graduates. In the Air Force, this figure approached 100 percent.

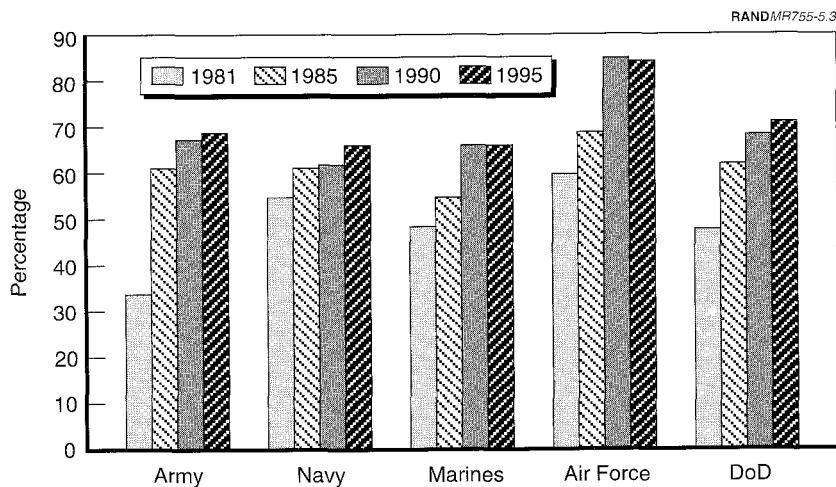


Figure 5.3—Percentage of Nonprior-Service Accessions Who Were AFQT Category I–IIIA, Selected Years

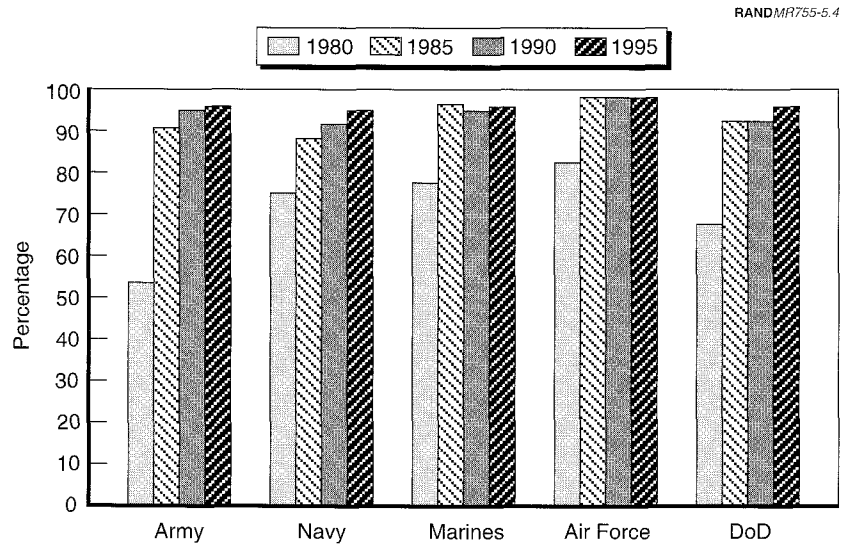


Figure 5.4—Percentage of Nonprior-Service Accessions Who Are High School Graduates, Selected Years

SPECIALIZATION IN THE ARMED FORCES

This chapter summarizes the history of specialization in the armed forces. The discussion divides into four chronological periods: the early years, World War II, post-World War II, and Vietnam and after.

Wool (1968) provides an excellent history of specialization in the military from the Civil War through the early 1960s. We briefly summarize his findings below.

THE EARLY YEARS

During the early years of the military, there was little demand for occupational specialization, partly in response to the low quality of recruits. The large mass of soldiers were infantry riflemen, although a few served in support activities. "Requirements for specialized personnel in support-type roles were filled largely by civilian employees or contractors, or by detailing of men from enlisted ranks to skilled-labor assignments when the need arose . . . it is estimated that only about 5 percent of all enlisted positions were actually in identifiable occupational specialties" (Wool, 1968, p. 11). The Navy depended on its commissioned and warrant officers generally for specialized functions. Specialized craftsmen were often offered noncommissioned officer ranks and higher pay than "line" enlisted personnel holding similar rank.

The Navy was the first to experience the effect of the Industrial Revolution. "The shift from sails to steam was probably the most far-reaching of these technological changes . . . The Civil War period witnessed a number of other major naval technological innovations,

including the first ironclad and the introduction of submarines, mines, torpedoes, and explosive shells” (Wool, 1968, p. 12). The emergence of the United States as a world power and the recognition of the central role of sea power led to the technological transformation of the Navy (the “New Navy”) and its crew. Now a new functional group—the engineer force—was added to the ship’s complements, along with electricians, blacksmiths, and other craftsmen. In the 1880s, the Navy began programs of recruitment and in-service training to teach both seamanship and the new mechanical trades and the Annual Report of the Navy Department boasted in 1914 that the Navy had become “the biggest university in America” and that it offered a practical training in trades that were useful both in wartime and peacetime (Long, 1914, p. 35).

The Army lagged behind for several decades until the World War I mobilization, but the subsequent transformation was quite dramatic. The combat soldier for the first time was actually in a numerical minority. Behind him there was a complex array of support units, manned by military personnel who performed duties very similar to those in the civilian economy. The older technical arms and services also grew apace and by 1918 accounted for about one-third of the total strength of the Army, excluding trainees. New branches—the Air Corps, Armor, Chemical, and Motor—provided evidence of the importance of major new weapons and transportation in the new Army. The need to deploy large masses of forces overseas called for new types of supply, transportation, and service units and for an enlarged management structure. Fueling this was the impracticability of relying on civilian employees or contractors for many of these support services, particularly in the light of wartime shortages of civilian labor. By this time, only 40 percent of enlisted positions were in the line-combat occupations, 30 percent were in service functions or support roles, and the remaining 30 percent consisted of craftsmen, mechanics and repairmen, administrative and clerical personnel, and technicians.

To classify these skills, the “Index of Occupations” was developed and used to categorize both requirements and inventory. It became evident that the distribution of available skills was quite different from that of the required skills and for the first time, the Army was forced to implement in-service technical training programs for its

new recruits. The Army used both civilian institutions as well as Army schools for the purpose.

WORLD WAR II

Before the outbreak of World War II, a gradual consolidation of advances in military technology had occurred. Aviation became a major combat arm, radio became increasingly important; and the internal combustion engine completely displaced animal power. However, Wool points out, the personnel systems were poorly prepared for the specialized manpower needs of World War II and there was little evidence of any integrated manpower planning system designed to match manpower requirements and resources. "The far greater scale of this War, its extensive reliance upon advanced technology, and the longer duration of the conflict made possible and necessary much more comprehensive systems for defining military skill needs and for managing the flow and utilization of skilled manpower within military service" (Wool, 1968, p. 19).

To meet these needs, the classification system was overhauled. By the end of the war, the Army identified a total of 532 military occupational specialties or MOSs; the Navy listed a total of 174 separate occupational designations; and the Marine Corps manual identified a total of 369 specialties under 21 broader occupational groups. "The detailed occupational classification of all positions in military units was a necessary first step in development of a comprehensive personnel system. Another equally important innovation was the establishment of procedures to report requirements for, and strengths of, military specialists on a Service-wide basis" (Wool, 1968, p. 20).

Table 6.1 shows the distribution of enlisted positions by occupational area and by service as of the end of World War II and bears evidence to the enormous change in the nature of military jobs.

Only about 40 percent of positions in the "ground" Army and only about a third of Marine Corps positions were in ground combat, and there was a dramatic increase in the number of what could be considered white collar occupational jobs (including "clerical-administrative" and "technical") and in the more skilled areas of the blue

Table 6.1
Percentage Distribution of Enlisted Positions, by Occupational Area, 1945

Occupational Area	DoD Total	Army,			Marine Corps
		Excl. Air Corps	Air Corps	Navy	
Ground combat	24.1	39.3	—	—	33.6
Electronics	5.8	3.8	8.1	9.5	8.1
Other technical	7.2	6.6	7.6	9.1	3.9
Administrative and clerical	15.3	15.1	19.9	11.1	15.0
Mechanics and repairmen	20.0	8.9	35.9	37.6	21.8
Craftsmen	9.2	7.1	4.7	21.9	2.6
Services	16.6	19.2	14.5	10.9	14.9
Misc. (including aerial gunner)	1.9	—	9.5	—	—
Total	100.0	100.0	100.0	100.0	100.0

SOURCE: Wool (1968), Table II-2, p. 21.

NOTE: Totals are rounded.

collar enlisted occupations. This change in the pattern of occupational requirements brought with it a concomitant demand for higher education levels and aptitude skills “hitherto required only for officers and certainly never before associated with the traditional image of the enlisted man” (Wool, 1968, p. 21).

As a result of the new requirements for military specialists, the services found it necessary to undertake a massive training effort. Wool (1968) estimates that at least one-third of the 14 million enlisted personnel received some form of specialist training in World War II and points out that the MOS was now an integral part of the military personnel system. However, one problem later came back to haunt the services: Under a mass conscription, a wide variety of skills and talents was available to the military and this made it possible to establish specialties requiring high levels of technical competence without any differentiation in pay or rank. This later had a “significant effect upon the ability of the Services to compete for specialized manpower under normal peacetime labor-market conditions” (Wool, 1968, p. 25).

POST-WORLD WAR II

Following World War II, several factors were at work to change rather dramatically the occupational requirements of the services:

- The transition of the military from full mobilization to a much smaller standing peacetime force. However, military strengths remained unprecedently large partly because of the need to support large overseas forces. During the Korean War, about one-half of the total force was stationed overseas; by the end of the decade, nearly 4 out of every 10 were stationed overseas. As a result, logistical and support-type units were needed to man overseas headquarters and administrative and service elements.
- The significant shift in the relative sizes of the four services: Because of the increased importance of air power, the Air Force received a large share of total manpower during most of the World War II period.
- The accelerated pace of weapons and military technology: emergence of atomic and thermonuclear weapons; developments in manned aircraft systems; applications of electronics and automation to communications, logistics, air defense, among others; the advent of a new missiles era.

Following the immediate postwar demobilization, the services moved to a policy of maintaining themselves largely through volunteers. However, to attract and retain young men who had good opportunities in the civilian economy, an orderly pattern of career advancement needed to be delineated similar to that for officers. Wool (1968) points out that inherent in this concept of “career management” was the delineation of broad areas of occupational training and utilization and clear promotion paths within each of these areas.¹ This also meant that the separate category of unskilled soldiers and seamen was no longer recognized; instead these duties were occupational oriented and combined with job training that could lead to higher levels of skill and responsibility. There was also an attempt to develop broader occupational areas or career fields into which specialties could be grouped and to “professionalize” the military personnel classification function. This former trend was later reversed.

¹While the concept of an occupational career was not new to the Navy, it was novel in the other services.

Improvements in technology and long and costly training in narrow areas led to a recognition that the personnel system needed to clearly identify those completing these kinds of training. The number of primary specialties in the Navy, Air Force, and Marine Corps rose dramatically. The Army tried hard to limit the number of specialties but was only partially successful. The common trend evident in the history of military occupational trends after World War II is the emergence of new groupings of specialties, most specially those related to operation and maintenance of jet aircraft, electronically controlled bomb navigation, fire control systems, missile guidance and control, and other electronics specialties.

The Department of Defense, in an attempt to unify the occupational structures of the four services, provided a summary occupational grouping scheme. This suffered from several problems including inconsistencies across services and the absence of direct differentiation by level of skill. However, these groups offer the only coherent statistical time series on occupational trends, as shown in Table 6.2, which shows each occupational group as a percentage of the total inventory.

The table shows several interesting trends: (a) long-term decline in ground combat occupations, partly because of the relative decline of the ground combat services and partly because of the modernization of the infantry divisions; (b) dramatic growth in the electronics group

Table 6.2
DoD Occupational Trends, 1945–1963
(percentage of total inventory)

DoD Occupational Group	1945	1953	1957	1960	1963
Ground combat	24.1	17.3	15.1	13.4	14.1
Electronics	5.8	9.5	13.0	13.4	14.2
Other technical	7.2	7.3	7.7	8.0	8.1
Administrative and clerical	15.3	20.6	19.2	20.6	19.9
Mechanics and repairmen	20.0	22.3	24.9	24.8	24.5
Craftsmen	9.2	6.6	7.4	7.6	7.2
Services	16.6	15.4	12.7	12.3	11.9
Misc. (including aerial gunner)	1.9	1.0	—	—	—
Total	100.0	100.0	100.0	100.0	100.0

SOURCE: Wool (1968), Table III-3, p. 42.

NOTE: Totals are rounded.

reflecting the revolutionary transformation of the postwar military; and (c) changes in occupational distributions largely concentrated in the period 1945–1957, mirroring major changes in military force levels and relative stability in the overall occupational structure since then.

VIETNAM AND AFTER

Eitelberg (1988) provides a look at the occupational distribution from the Vietnam War onward through the first decade of the all-volunteer force (see Table 6.3).

At the beginning of the 1960s, fewer than 19 percent of all enlistees were in a combat-related or general military specialty; they were outnumbered by craftsmen, technical workers, and clerical workers. Since 1960, the occupational distribution has remained relatively stable, although there has been modest growth in white collar occupations fueled by the increase in technical workers (an increase from 20.0 in 1960 to 28.9 in 1984). In fact, by 1984, technical workers constituted the largest of the five separate groupings identified by Eitelberg (1988): technical, clerical, craftsmen, service and supply,

Table 6.3
Changes In Enlisted Occupational Distribution, 1960–1984

Major Occupational Category	Peace-time	Viet-	Draft-	All-Volunteer Force		
	Draft 1960	nam War 1967	Volunteer Transition 1971	1975	1980	1984
White collar	39.4	40.8	45.1	44.7	43.0	44.0
Technical workers	20.0	22.4	25.7	25.8	26.8	28.9
Clerical workers	19.4	18.4	19.4	18.9	16.2	15.1
Blue collar	60.6	59.2	54.9	55.3	57.0	56.0
Craftsmen	30.3	33.1	28.6	28.6	29.2	28.1
Service and supply workers	11.6	12.0	12.1	12.2	10.3	10.5
General military skills, including combat	18.7	14.1	14.2	14.5	17.5	17.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Eitelberg (1988).

and general military. The percentage of clerical workers, along with all of the blue collar occupations, declined modestly during this period.

Figure 6.1 summarizes the changes in the occupational distribution of the enlisted force from 1865 to the present day. The figure is based on data from Eitelberg (1988) and tabulations obtained from the Defense Manpower Data Center (DMDC). The precipitous decline in jobs classified as general military is quite evident as is the equally marked increase in technical occupations and craftsmen. As of 1994, 18 percent of the enlisted force were in a general military specialty, 35 percent were blue collar workers (service and supply workers; craftsmen), and 47 percent were white collar workers (clerical and technical workers).

Figure 6.2—drawn from DMDC data—summarizes another historical shift in occupations that is not captured in the data above. Organization and technology have had a significant effect on military manpower requirements in the 20th century by changing the distribution of jobs between enlisted and officers. Since World War I, enlisted jobs have been a decreasing proportion of all jobs, as officer work has

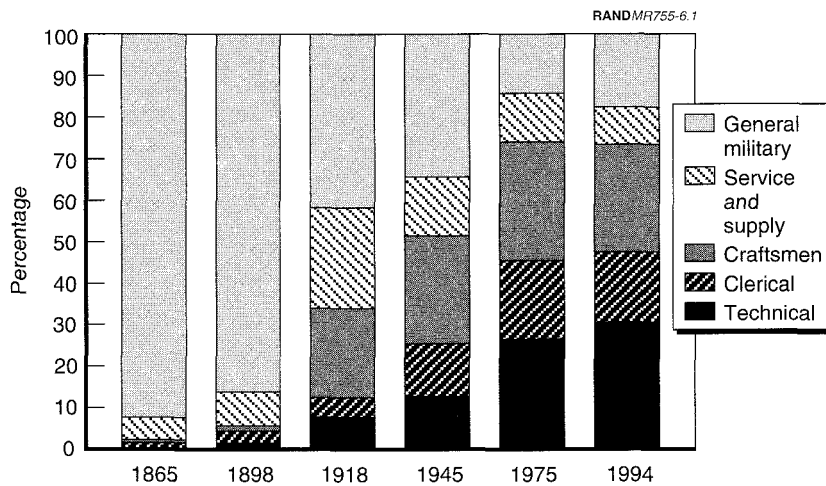


Figure 6.1—Changes in Enlisted Occupational Distribution, Selected Years

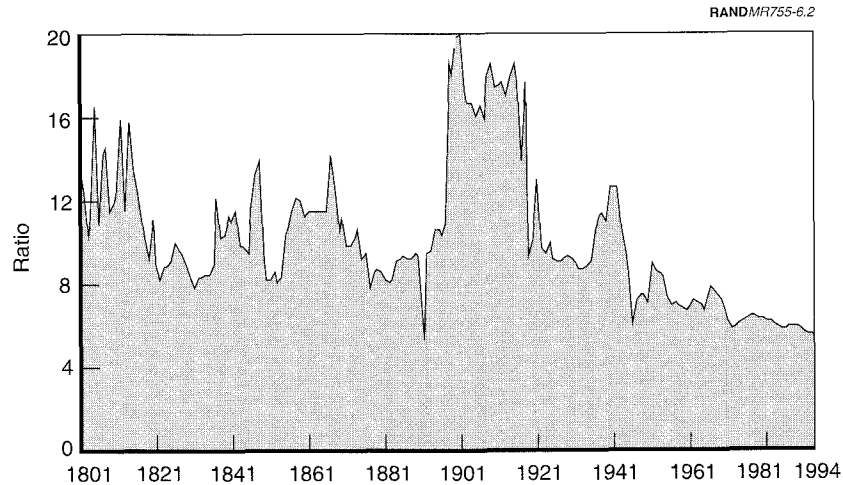


Figure 6.2—Enlisted-to-Officer Ratio, 1801–1994

increased. The figure shows the enlisted-to-officer ratio over two centuries. The ratio for the previous century stays relatively flat. During periods of increased manpower needs, such as the Civil War, more enlisted than officers entered military service and the ratios increased temporarily. For this century, there is a continuing downward trend in the ratio after World War I. The number of enlisted personnel nearly sextupled to about 225,000 for the Spanish American War. After the war, the level fell by one-half to about 115,000, which was a consistent level up until World War I. The number of officers did not increase as much in this period, which accounts for the high enlisted-to-officer ratio for the first 20 years of the 20th century. It was an era where brawn still mattered more. Coal-fired ships and horse-drawn artillery required enlisted personnel. However, with the introduction of the airplane, the tank, the radio, steam, and petroleum, work began to shift toward more use of brain, which both specialized the enlisted force as discussed above and led to proportionally more officers. Also, the need to coordinate, integrate, and sustain military forces numbering in the millions and not the tens of thousands led to a substitution of officers for enlisted beyond the simple addition of more officers. These broad trends continue to the present as shown in Figure 6.2.

INTEGRATION IN THE MILITARY

This chapter examines the history of the integration of blacks and other minorities and women into the military. It also examines the issue of sexual orientation and how it has been handled by the military.

BLACKS IN THE MILITARY

It is widely held today that the racial integration of the military was a fairly simple and straightforward matter.

In reality, racial integration during the 1940s and 1950s was a long, convoluted process which inspired many of the strong emotional reactions that the possibility of integrating homosexuals provokes today. Many white Americans (especially Southerners) responded with visceral revulsion to the idea of close physical contact with blacks. Many also perceived racial integration as a profound affront to their sense of social order. Blacks, for their part, often harbored deep mistrust of whites and great sensitivity to any language or actions that might be construed as racial discrimination. (National Defense Research Institute, 1993, p. 160.)

Given this background, it is a formidable achievement that the military today is regarded as a model of racial integration. This chapter outlines the rather tortuous history of how we got where we are today.

Revolution and the Civil War

Dorn (1989) provides a short, succinct history of black participation in the military from the time of the colonial militias to the turn of this century. Concerns about the role of blacks arose as early as the colonial militias and caused General George Washington to give several conflicting orders regarding the recruitment and retention of blacks in the Continental Army. General Andrew Jackson, pressed hard to defend New Orleans against the British in the War of 1812, called upon the free colored men of Louisiana to join the struggle. As soon as the war ended, recruitment of Negroes or mulattos was immediately banned.

President Abraham Lincoln was reluctant to recruit blacks until Congress explicitly authorized him to rescind quotas and to employ as many as were needed. Blacks accounted for about 9 to 10 percent of the Union Army and one-quarter of enlistments in the Navy (which officially authorized black enlistments in 1861). Approximately 180,000 blacks served in the Union Army and more than 29,000 in the Union Navy. The confusion and vacillation over the role of blacks was evident in the military's attitude. Dorn points out that at the beginning of a conflict, blacks were generally not recruited; as the war continued and the need for manpower increased, they were recruited vigorously; but once the emergency had passed, they were demobilized with unflattering speed.

World War I

When World War I broke out, blacks made up 10.7 percent of the total population and the same proportion served in the military. Many blacks pinned their hopes for a better future on involvement in the war and leaders hoped to use the Army as a means for social change. However, most black soldiers were draftees and were assigned to traditional, menial jobs in supply or support units. There was considerable disillusionment in the aftermath of the war because of the treatment black soldiers experienced during and immediately after the war. The Army and the Marine Corps remained segregated and the Navy relegated black enlistees to the messmen's branch only.

Black leaders became increasingly concerned about the conditions in the armed forces in the 1940s but the official policy of the War De-

partment remained that the proportion of blacks in the Army should not be greater than the proportion of blacks in the general population and that there would be no intermingling of colored and white enlisted personnel. As Binkin and Eitelberg (1982, pp. 19–20) point out:

Since segregation was a part of American life, the Army believed that it was a fixed part of the military establishment as well. The Army position was that the military should not be a laboratory for social experimentation; integration would hurt unit efficiency and create unnecessary racial friction. Black soldiers, because of the special treatment required, were thus viewed as manpower problems rather than assets.¹

Black performance during the war drew mixed reviews. Some dismissed blacks as being ill-educated and illiterate, with low self-esteem and initiative; to them, it was no wonder that such men tended to perform much less effectively than other groups. Others, however, laid the blame for the poor showing of all-black units at the Army's door, citing poor preparation, lack of training, and lack of leadership at the unit level.

World War II

More than 2.5 million blacks registered for the draft in World War II; of these, about 909,000 served in the Army. In 1944, the number of blacks stood at 700,000 and blacks accounted for 8.7 percent of Army strength and more than three-quarters were assigned to the service branches.

After the war, the Army faced a greatly increased number of blacks who wanted to remain in the Army. Increasing pressure was brought to bear on the Truman Administration, and this led to the issuance of an Executive Order on July 26, 1948, which "declared to be the policy of the President that there shall be equality of treatment and opportunity for all persons in the armed services without regard to race, color, religion, or national origin," and that promotions were to be

¹This chapter draws heavily on Binkin and Eitelberg (1982).

based solely on merit and fitness.² The order also established the President's Committee on Equality of Treatment and Opportunity under the chairmanship of Charles Fahy.

The Fahy Committee found that conditions varied across the services. The Navy had already made progress toward racial equality and had established a nondiscrimination and integration policy in 1946 under the leadership of the Secretary of the Navy James Forrestal. The Marine Corps still had all-black units but had moved toward integrated basic training. The Air Force, under the leadership of the Deputy Chief of Staff for Personnel Idwal Edwards and Air Force Chief of Staff Hoyt Vandenberg, had begun abolishing segregated units in 1949 and ensuring compliance with the Executive Order. The Army, however, lacked a group of leaders favoring integration, and its civilian Secretaries of the Army firmly opposed integration. It resisted Truman's demands for an integration plan and then moved exceedingly slowly in implementing the plan. The Fahy Committee urged the Army to substitute an ability quota for its racial quota pointing out that the former would be equally effective in regulating black enlistments.

Korea

With the onset of the Korean War, blacks enlisted in large numbers and by 1951, one out of every four new enlistees in the Army was black. Faced with imminent shortages in white units, specially those on the Korean front lines, several Army officers in the field placed black troops in white units and found that such integrated units functioned well. Social scientists studying the effectiveness of integration in 1951—the so-called Project Clear—concluded that integration, far from being detrimental, actually enhanced the effectiveness of the Army. By 1954, the Army was fully racially integrated, and all-Negro units were abolished.

The military had moved far ahead of society, and this progress led Moskos (1957, p. 29) to describe the Army posts as “islands of integration in a sea of Jim Crow.” The major problems confronting

²Executive Order 9981, *Federal Register*, Vol. 13, July 28, 1948, p. 4313.

blacks in the military stemmed from the prejudice confronting them in the communities surrounding the military bases. Race relations in the military, in contrast, appeared quite tranquil.

Vietnam

When Kennedy took office, he appointed the Gesell Commission in 1962 to study equal opportunity and ways of increasing the flow of qualified blacks into the services. That committee pointed to three reasons for the lower representation of blacks in the services than in the overall population: an unbalanced grade distribution, segregation or only token integration in the reserve forces, and racial discrimination in the communities surrounding military installations.

At this time, there were 860,000 blacks in the enlisted force. With the start of the Vietnam conflict, there was concern that blacks were being disproportionately asked to bear the brunt of the fighting. Statistics showed that although they constituted 11 percent of the U.S. population aged 19 to 21, black casualties accounted for one-fifth of all combat deaths in Vietnam. The Pentagon ordered a cutback in the participation of blacks on the front line and there was a dramatic drop in the proportion of combat fatalities among black troops. Between 1967 and 1972, blacks accounted for 12 percent of all combat deaths (Binkin and Eitelberg, 1982). The country was being torn apart by a growing protest movement both against the war and against the draft. The Marshall Committee reinforced the charges of racism made by black leaders. Some criticized the military for excluding the very poor, least educated, and least mobile in society because of overstated acceptance standards.

The Pentagon was reluctant to enter into what it perceived to be a social welfare business, but Project 100,000 preempted it.³ This was an experimental program for the annual recruitment of 100,000 men who normally would have been screened out because of low educational attainment and/or physical impairment. Under this program, about 246,000 recruits entered the military, a substantial number of whom were black, from the South, and draftees. Unfortunately, many did not possess skills that would qualify them for occupations

³See Chapter Five for further details on Project 100,000.

that could help them in civilian life, and a good many ended up learning combat skills and were sent to Vietnam. Several studies of this era concluded that, despite the charges, it was not institutional racism but economic discrimination that was at work during this time period.

This period was one of great turmoil and change: the civil rights movement, the antiwar movement, the War on Poverty, attempts to create a balanced society, and the Selective Service draft. Some were concerned about the unfairness of a disproportionately black military; this was matched by concern on the part of others about the stability and capability of a racially unbalanced force.

The Vietnam conflict saw renewed racial tensions. There were several incidents of racial clashes and riots in the services, mirroring the same tension that existed in American society (Binkin and Eitelberg, 1982). The study from the National Defense Research Institute (1993, p. 181) points out that this may have been the result of the convergence of two factors. First, although the formal, legal system of segregation had disappeared, practices that had discriminatory effects had survived.

The much-publicized fact that the draft disproportionately affected blacks was only one example. Others included discrimination in housing, in promotions, in the administration of military justice, and in the uneven distribution of blacks among and within the Armed Forces Cumulatively, these practices may have had much the same kind of impact as formal segregation previously had: they created an inequitable allocation of risks, rewards, and responsibilities among different racial groups.

Second, there was “heightened sensitivity to such inequities as a result of the extraordinary racial polarization that existed in American society at that time” (p. 181). However, despite the heightened level of tension, task and unit cohesion does not appear to have been seriously affected. “Perhaps, the best generalization is that while the implementation of racial integration could have been a major source of tension and difficulty in the military—given the strong racial prejudices of earlier eras—it was not necessarily so” (p. 182).

Post-Vietnam

With the advent of the all-volunteer force, new fears arose that the force would become primarily black. In 1970, the Gates Commission confidently predicted that the composition of the military would not fundamentally change as a result of the end of the draft. A few years later, over one out of every four new soldiers was black and Congress, concerned about the social and racial representation of the military, directed the Department of Defense to submit annual reports on the population representation of the force—the geographic, economic, educational, and racial composition of new recruits and the active force. Figure 7.1 shows black enlisted as a proportion of the total enlisted force for each service from 1970 to 1994. Clearly, by the end of the 1970s, the services (with the exception of the Air Force) had a disproportionately high representation of blacks in the enlisted force compared to the overall population. Part of this increase coincided with the misnorming of the ASVAB that led to the acceptance of

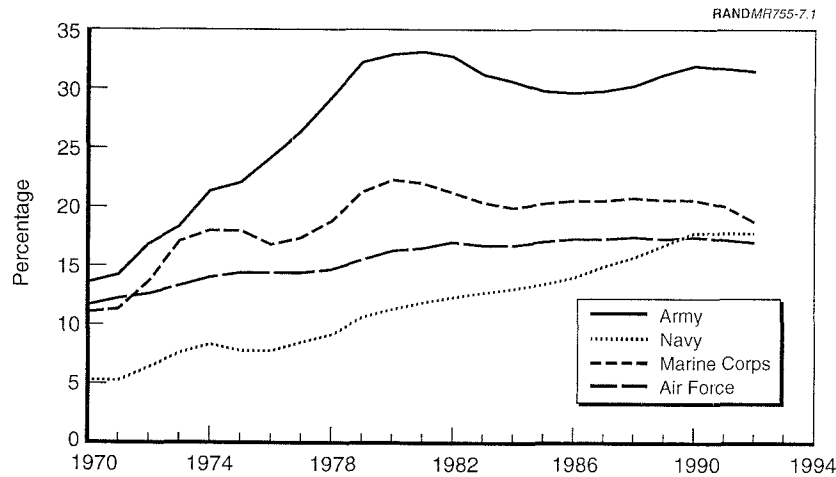


Figure 7.1—Percentage of Blacks in the Enlisted Force, 1970–1994

many low-scoring applicants into the force.⁴ This error was corrected by September 1980.

Over the period of the 1980s, the proportion of blacks in the Army and Marine Corps declined moderately, partly because of the revised AFQT and education standards and partly because of an increased propensity among more highly qualified whites to volunteer as a result of the substantial pay increases in 1980 and 1981 and the recession/growing unemployment of the early 1980s.⁵ This trend reversed in 1985 and since then the proportion has climbed steadily. In 1992, 22 percent of the force was black compared with 12 percent of the civilian labor force. Part of the reason for the high proportion is that retention rates for blacks are higher than for whites. The Army has the highest proportion of blacks: 32 percent, followed by the Marine Corps (19 percent), the Navy (18 percent), and the Air Force (17 percent). In terms of accessions, black men and women constituted 18 percent of all recruits in 1994 compared to 14 percent of all 18- to 24-year-olds.

The expansion of the role of blacks in the military has given rise to a number of concerns. The primary one revolves around the question of representation. The overrepresentation of blacks is seen as imposing an unfair burden on one segment of American society. However, others feel that the concern for the poor and blacks being exposed to greater risks is not prompted by altruistic or genuine concern but fear of a black population with military training. Many welcome the greater participation of black youth in the military because it provides them with opportunities they may not get elsewhere. Still others point out that the long-term value to blacks of military service is questionable because they generally tend to be trained in skills that do not transfer well to the civilian economy.

⁴It is generally true that blacks and most minorities tend to score lower than non-Hispanic whites on standardized tests, although the gap in achievement has closed significantly in the past 20 years.

⁵Binkin, in a personal communication to the authors dated March 8, 1996, also hypothesized that the underlying structural changes in the economy—from higher-paying manufacturing jobs to lower-paying service jobs—made the military a more attractive option for white high school graduates who did not intend to pursue the college track.

Figure 7.2 shows the proportion of jobs held by blacks in the military and compares the 1980 occupational distribution with that of 1994 to see if things have changed. Blacks tended to be disproportionately represented in combat, clerical, and service/supply occupations. The pattern has been changing; a higher proportion are now in some technical fields such as electronic equipment repair, health care, and technical specialists and fewer are in the infantry, gun crews, or seamanship occupational field.

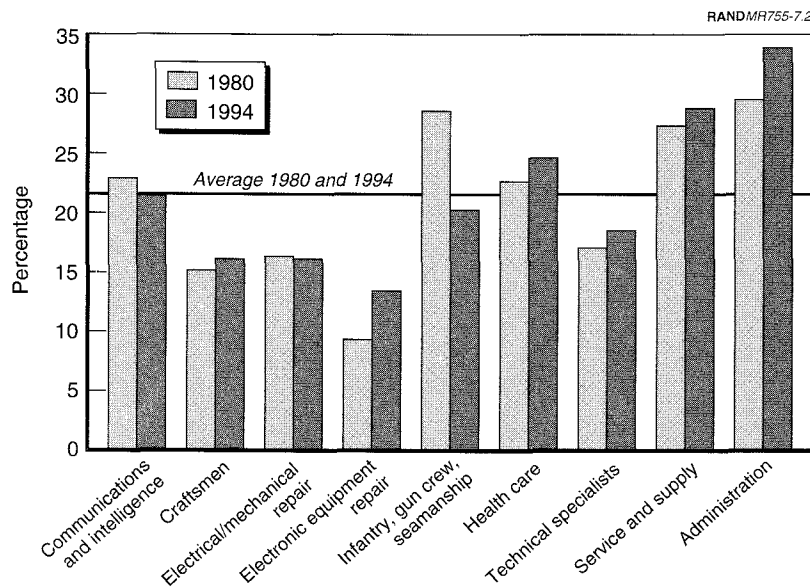


Figure 7.2—Blacks as a Percentage of Each DoD Occupation, 1980 and 1994

OTHER MINORITIES IN THE MILITARY

Figure 7.3 shows the total minority content of the services at different periods. The Army appears to attract the highest proportion of minorities, who constitute 40 percent of its enlisted force. Minorities in the Air Force account for less than 25 percent of the force. The Navy has increased its minority content substantially over time: from 20 percent in 1980 to over 30 percent in 1994.

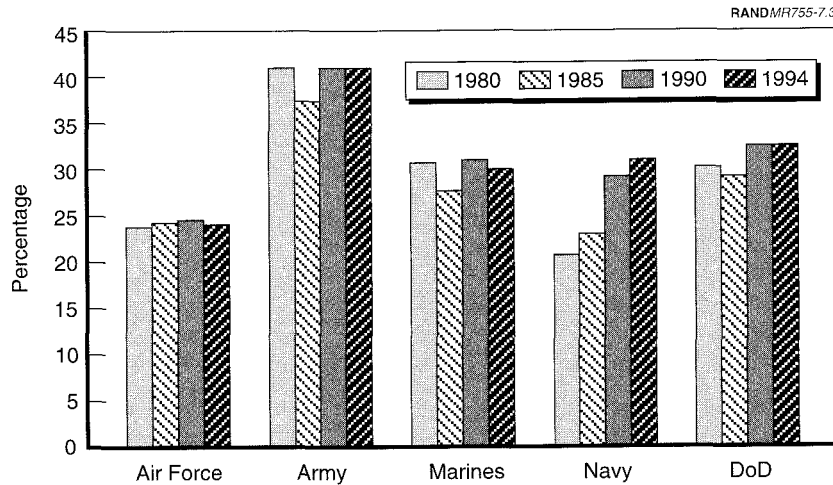


Figure 7.3—Minorities as a Percentage of the Enlisted Force, Selected Years

Nonblack racial/ethnic groups have traditionally accounted for 7–8 percent of the enlisted force through most of the recent decades. However, by 1992, they constituted about 10 percent of the force. Of these, Hispanics are the largest category. Compared to their numbers in the overall population, Hispanics are underrepresented in the military. Comparisons over time of trends in enlistment, as Binkin and Eitelberg (1986) point out, are not very reliable because definitions of minority groups have changed over the years. Their estimate of the trend in Hispanic representation shows a very slight growth in the 1970s to about 4 percent, followed by a slight decline in the early 1980s (mirroring the experience of the blacks). By 1992, Hispanics accounted for 5.6 percent of the enlisted force, compared with 9.1 percent of 18- to 44-year-old civilians.

WOMEN IN THE MILITARY⁶

When one reviews the history of women in the military, three phases are apparent. The first phase—encompassing the two World Wars—

⁶This section draws heavily on Binkin and Bach (1977).

witnessed the temporary use of women based largely on the notion of “freeing a man to fight.” The Army Nurse Corps, formed in 1901, and the Navy Nurse Corps, formed in 1908, represented the first uniformed military women but neither group received full military rank or benefits until World War II. These nursing corps were formed partly with the idea that these women would free men from nursing duties; in addition, there were insufficient numbers of men with the requisite skill and training. In World War I, the Navy (unlike the Army, which stood firm on its policy prohibiting enlistment of women) enlisted about 13,000 women as Yeoman-Fs to serve in both the Navy and Marine Corps as telephone operators, clerical workers, typists, and stenographers. These were the first to be given full military rank. At the peak of the war, about 49,000 women were in uniform, 73 percent of whom were in the Army and Navy Nurse Corps. All of these women were demobilized after the war. World War II represents, as Binkin and Bach (1977) point out, “a turning point in the history of women’s participation in the military” (p. 7). Women demanded opportunities to serve in the defense effort and a total of 350,000 women served in the four services. Most of them were employed in health care, administration, and communications; however, they served in small numbers in almost every occupation with the exception of direct combat. Women were also sent overseas: North Africa, the Mediterranean theater of operations, Europe, and the Pacific theater. Following the demobilization at the end of the war, the number of women in the military declined sharply from 266,000 in 1945 to a little over 14,000 in 1948.

The second phase—which could accurately be described as one of apathy—began with the Women’s Armed Services Integration Act of 1948, hailed as a major breakthrough for women. The legislation was precipitated by concern on the part of the services that with the end of conscription in 1947, they would face shortfalls in manning and the feeling that the services could economize by using women in “feminine” occupations. This would also provide them with a trained nucleus in the event of rapid mobilization during the Cold War. Women were given regular status but the act also imposed stringent limits on their numbers (2 percent of total enlisted strength) and their career opportunities. However, conscription was reinstated just after the passage of the act and the proportion of women in the military never reached maximum authorization even

during the Korean War, varying between 1.0 and 1.5 percent of the force. Women were relegated to “women’s work,” primarily health care and clerical jobs. The large demands of the Vietnam War and the initial effects of the growing feminist movement in the labor force led to several changes in 1967: the 2 percent limitation on female enlistees was abolished as were differences in the retirement provisions for men and women, and limitations on career opportunities. Nonetheless, the proportion of women remained below 2 percent of the force till 1972.

The third phase—the expansion years—was fueled by the end of the draft and the move to an all-volunteer force, triggering fears of possible shortages of male recruits, the debate on the Equal Rights Amendment, and feminist litigation against discriminatory practices. The disestablishment of the Women’s Army Corps in 1978 symbolically captured the changing status of women. A decision was made in 1972 to increase the proportion of women in the military and the next few years saw a tremendous increase in the total number of women enlistees. In 1972, the total number of enlisted women in the force was 32,400; by 1981, it had increased to 161,325. The number of enlisted women reached the highest it had been since 1945 in 1989. As the drawdown progressed, the number of women fell to 167,900 in 1994 but did not fall as drastically as did the number of men. As shown in Figure 7.4, as a percentage of the force, the proportion of enlisted women grew from 2 percent in 1972 to 9 percent in 1981 and to 11 percent in 1989. Even during the drawdown, the proportion of enlisted women in the force continued to increase (contrary to the dire predictions that women would be squeezed out because of the downsizing) and is now at its highest level ever—over 12 percent in 1994. This pattern has been true of all services except the Marine Corps where the proportion of women has declined since reaching a high in 1986.

In addition to increasing the numbers of women serving in the military, this period also saw several changes in policies and practices:

- Women were given access to a wider range of training opportunities.
- The kinds of jobs to which women could be assigned were expanded significantly. For example, only 35 percent of all enlisted

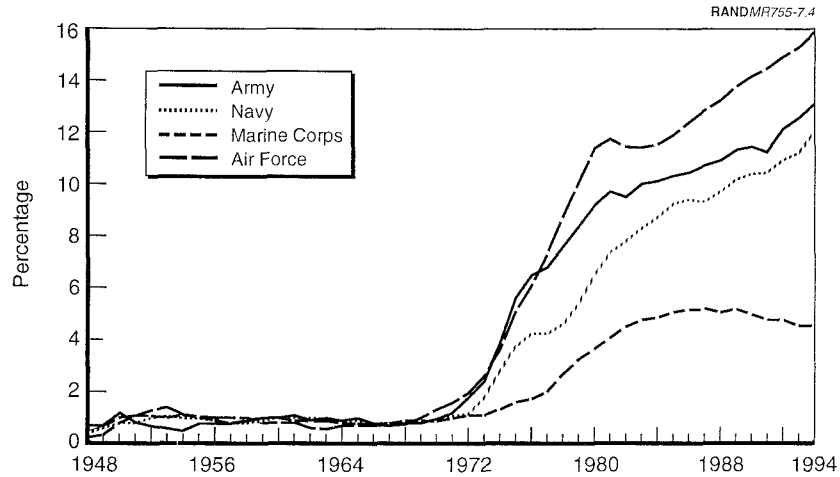


Figure 7.4—Percentage of Women in the Enlisted Force, 1948–1994

job specialties were open to women before 1972; the 1972 re-assessment opened 80 percent of all specialties to women; and by 1976, they were excluded from only the combat-associated specialties.

- The proportion of women in nontraditional specialties also increased as shown in Table 7.1, reproduced from Binkin and Eitelberg (1986). In 1972, less than 10 percent of women held nontraditional jobs; by 1976, this proportion had increased fourfold to 40 percent and by 1983 had increased even further to 45 percent.

Questions arose at this time regarding the career advancement opportunities for women as compared to those for men. As of 1982, women tended to be disproportionately represented in the bottom five enlisted grades and underrepresented in the top four grades. Pang (1984) shows that the reason for the disparate distribution is the fact that women tended to have fewer years of service because of the large influx of women beginning in 1972. In 1982, 95 percent of women had less than 10 years of service and 71 percent had less than 5 years of service compared to 76 and 53 percent of men, respectively.

Table 7.1
Percentage Distribution of Female Enlisted Personnel ,
by Occupational Category, FY72, FY76, and FY83

Occupational Category	1972	1976	1983
Traditional	90.6	59.9	55.3
Medical and dental specialties	23.8	18.6	13.6
Administrative specialists and clerks	66.8	41.3	41.7
Nontraditional	9.4	40.2	44.7
Infantry, gun crew, and allied specialists	0.2	0.2	0.8
Electronic equipment repairmen	1.2	4.3	5.6
Communications and intelligence specialists	4.2	15.0	14.0
Other technical specialists	2.8	2.7	3.0
Electrical/mechanical equipment repairmen	0.0	6.7	8.7
Craftsmen	0.1	1.4	1.9
Service and supply handlers	0.9	9.9	10.7

SOURCE: Binkin and Eitelberg (1986, Table 7.11).

However, as pointed out in DoD (1983), “little effort was made during this period to empirically determine the best way to utilize women based on skill, mission, and readiness requirements” (p. 1). In addition, many restrictions remained to the full participation of women in military culture. In 1980, the Congress rejected the idea of registering women for future conscription and the Supreme Court upheld a male-only draft. The Reagan Administration cut back on plans to increase the number of women in the military because President Reagan opposed the Equal Rights Amendment. Concerns were expressed that expanding the role of women would increase budgetary costs. Binkin and Bach (1977) explain: “The cost of a high turnover rate among women, on the one hand, and the necessary additional investment to construct and modify facilities to ensure privacy, on the other, have often been cited” (p. 71). However, they point out that there was admittedly scanty evidence to support this belief. They concluded that “whether this nation can sustain its armed forces solely by voluntary means could well depend on how effectively the female labor resource is employed” (p. 71). Korb (1989, p. 25), who was Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics from 1981–1985, supported this view:

A number of studies of the effects of women in the services have found no conclusive evidence that a high percentage of women reduces readiness. In my view, women actually increase readiness,

since they have more education and higher aptitudes than their male counterparts. But we hear a lot of anecdotes about women tending to be absent from duty for medical reasons more frequently than men. These anecdotes, though, overlook the fact that men are frequently absent for more “traditional” reasons—being drunk and disorderly, for example

There is, however, one issue involving women that we must confront: the combat-exclusion policy Unfortunately, the combat-exclusion policy has created the worst of all possible worlds for female military personnel.

The decade of the 1980s is the start of the last phase in which more clearly defined requirements for women in uniform were established in the services, as the services recognized the role of women in a fully integrated force. All services have policies and/or regulations restricting women from combat positions. However, additional opportunities became available to women in 1988 when the Department of Defense adopted the “Risk Rule” providing a standard interpretation of the combat exclusion laws. Until then, the application of the combat exclusion statutes had been left to the services and the military departments. This had resulted both in inconsistent exclusions from one service to another as well as somewhat broader interpretations that led to women being excluded from noncombat positions not explicitly covered by the language of the statutes. The Risk Rule states: Risks of direct combat, exposure to hostile fire, or capture are proper criteria for closing noncombat positions or units to women, when the type, degree, and duration of such risks are equal to or greater than the combat units which they are normally associated with in a given theater of operations. Noncombat land units should be compared to combat land units, air to air, and so forth (DoD, 1990). As a result, by 1990, more than 30,000 additional positions were opened to women under this rule.

Figure 7.5 compares the proportion of women in several different occupations in 1980 and 1994. Clearly, the health care and administration fields continue to attract a disproportionate share of women. Women, by law, hold very few combat jobs although there appears to be a small increase in the proportion of combat jobs held by women in 1994. Women are also underrepresented in the mechanical and

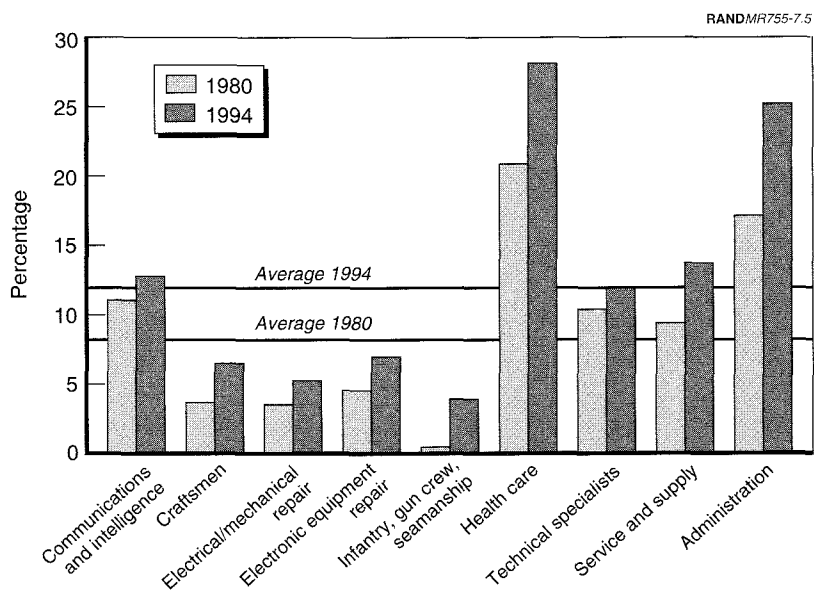


Figure 7.5—Women as a Percentage of Each DoD Occupation, 1980 and 1994

electronic fields, although this may be partly due to self-selection or aptitude.

More than 40,000 military women served their country in the Persian Gulf. This gave new impetus to the perennial question of whether women should serve in combat arms or other direct combat positions. The Defense Authorization Act of 1991 repealed the combat exclusionary provision relating to female Naval aviation officers and the exclusion of women from assignment in the Air Force to duty in aircraft engaged in combat missions, leaving 10 U.S.C. 6015, amended (prohibiting the assignment of women to duty on Navy or Marine Corps vessels engaged in combat missions) as the only exclusion law in effect today. At the same time, the statute established the Presidential Commission on the Assignment of Women in the Armed Forces. The commission reported in November 1992. The emotional nature of the women in combat issue is clear from a perusal of the dissenting statements and the close nature of the voting

on certain issues. The following were some of the commission's recommendations:

- The Secretary of Defense should retain discretion to set goals that encourage the recruitment and optimize the utilization of women in the services, allowing for the requirements of each service.
- The services should adopt gender-neutral assignment policies.
- The services should retain gender-specific physical fitness tests and standards . . . provided they do not compromise training or qualification programs for physically demanding combat or combat support MOSs.
- The services should adopt specific requirements for those specialties for which muscular strength/endurance and cardiovascular capacity are relevant.
- Entry level training may be gender-specific as necessary
- Military readiness should be the driving concern regarding assignment policies; there are circumstances under which women might be assigned to combat positions.
- Women should be excluded from direct land combat units and positions. Further, . . . recommends that the existing service policies concerning direct land combat exclusions be codified.
- Re-enactment of Sec. 8549 of Title 10, U.S. Code which was repealed by Public Law 102-190, Sec. 531 for the Air Force, and re-enactment of the provisions of 10 U.S.C. sec. 6015 prohibiting women from assignment to duty on aircraft engaged in combat missions, which was repealed by Public Law 102-190 for the Navy, and codification of Army policy.⁷
- Repeal existing laws and modify Service policies for servicemen to serve on combatant vessels except submarines and amphibious vessels.⁸

⁷The vote on this recommendation was very close: 8 in favor, 7 against.

⁸The commission argued that the combatant vessel exclusion law (10 U.S.C. 6015) was inconsistent because it "allows women to serve as aviation officers aboard Navy ships, but prohibits their assignment to combatant ships in any other capacity" (p. 31). In

- Retain the DoD Risk Rule as currently implemented. Navy policies which implement the Risk Rule should be modified to reflect the changes (above)
- Women should not be required to register for or be subject to conscription.⁹

In April 1993, the Secretary of Defense directed the services to open more specialties and assignments to women. In particular, Air Force aircraft and Navy ships including those engaged in combat missions were to be open to women who were qualified.

To conclude, what Binkin and Bach wrote in 1977 about women and the military remains a propos even today, almost 20 years later:

All in all, the foregoing analysis underscores the ambivalence of national attitudes towards the role of women in the armed forces. With respect to this issue, the so-called will of the American people proves to be elusive, judicial opinion is unclear, attitudes within Congress are not sharply drawn, and reactions of the military establishment, which is still suffering "growing pains" on the issue of sex integration, have escaped reliable assessment (p. 52).

HOMOSEXUALS IN THE MILITARY¹⁰

Since World War I, homosexuals have been restricted from serving in the military either through personnel regulations or by the application of the sodomy provisions of military law. The Articles of War of 1916 prohibited assault with the intent to commit sodomy and represent the first attempt to deal with sodomy in the military population. The 1920 revision explicitly mentioned sodomy as a separate offense.

In the interwar period, the military attempted to screen and exclude homosexuals from service by examining recruits for "stigmata of de-

addition, they stated that "women's outstanding performances have resulted in a more capable force, and, during the process, changed traditional attitudes within the Navy" (p. 33).

⁹The commission based this recommendation on the fact that the primary purpose of conscription was to acquire a pool of "combat troops," and women were not eligible for ground combat positions.

¹⁰This section draws heavily on NDRI (1993).

generation” such as overly feminine characteristics (sloping shoulders, broad hips, absence of facial and body hair) and “sexual psychopathic” behavior which included sexual relations with men. The military also tended to discharge those suspected of homosexual acts administratively by giving them a Section VIII discharge for unsuitability. The individuals were court-martialed in cases where force was employed, when minors were involved, or when the sexual partner was incapable of giving consent.

During World War II, several revisions were made in the policies and practices regulating homosexual activity and the exclusion of homosexuals from the military primarily. The “homosexual” replaced the “sodomist” as the focal point of legal concern and there appeared to be a growing consensus that homosexuals could be readily identified and that they should be excluded at induction or discharged from service upon discovery.

In 1946, the Army briefly liberalized procedures by increasing the likelihood of their obtaining honorable discharges but reversed this two years later. On October 11, 1949, the Department of Defense outlined a uniform military policy toward homosexual behavior:

Homosexual personnel, irrespective of sex, should not be permitted to serve in any branch of the Armed Services in any capacity, and prompt separation of known homosexuals from the Armed Forces be made mandatory.

A few years later in 1953, Executive Order 10450 codified “sexual perversion” as grounds for dismissal from federal jobs. Although there are no consistently reliable statistics, some estimate that the number of discharges from the military ranged about 2,000 a year (the same as in the World War II period); because of the much smaller base force, however, this rate of discharge was 10 times higher than during World War II.

In 1959, DoD issued a directive on administrative discharges in which it described reasons for such discharges. One such reason, unsuitability for military service or “unfitness” included “sexual perversion” including homosexual acts and sodomy (later revised to read “homosexual acts or other aberrant sexual tendencies” in 1975).

In 1965, these regulations were revised to reflect a more liberal policy; this represents a turning point in the legal history of homosexuals in the military. Members facing a less-than-honorable discharge were given the chance to be represented by counsel and to present their cases before administrative charge boards. Because of the inconsistencies in the way the directives were implemented, the Carter Administration asked for a complete review of the policies and procedures for discharge.

The review culminated in a revised DoD Directive 1332.14 in 1981 that is important for three reasons. First, it made clear that an investigative finding that individuals had engaged in, or solicited homosexual acts, would lead to a mandatory discharge, thus removing the military's discretion in deciding whether to retain an open homosexual. Second, it explicitly stated that homosexuality was incompatible with military service for the following reasons:

The presence of such members [homosexuals] adversely affects the ability of the armed forces to maintain discipline, good order, and morale; to foster mutual trust and confidence among service members; to insure the integrity of the system of rank and command; to facilitate assignment and worldwide deployment of service members who frequently must live and work under close conditions affording minimal privacy; to recruit and retain members of the armed forces; to maintain the public acceptability of military service; and to prevent breaches of security.

Third, the revision also stated that homosexuality alone did not automatically require a *misconduct* discharge. In the absence of other actions, the discharge could be honorable.

The policies promulgated in this directive remained unchanged, despite several legal challenges, until January 1993. From 1981 to 1991, the General Accounting Office estimated that there were 16,919 discharges from the military for homosexuality; these discharges accounted for 1.7 percent of all involuntary discharges during this period.¹¹ The largest number of homosexual-related discharges occurred in 1982 (as did other involuntary discharges); since then the

¹¹U. S. General Accounting Office (1992).

numbers have declined. On average, there were approximately 1,400 homosexual-related discharges per year.

On January 29, 1993, President Clinton signed a Memorandum directing the Secretary of Defense to study ways to end discrimination on the basis of sexual orientation in determining who may serve in the Armed Forces. The RAND study (NDRI, 1993) commissioned by the Secretary offered several lessons from a review of the history of racial integration in the U.S. military:

- Major changes in military policies can be implemented without a favorable public consensus.
- Both civilian and military leadership is crucial for implementation of change.
- Strongly enforced standards of conduct—rather than emphasis on tolerance—can change how troops behave toward previously excluded (or despised) groups even if underlying attitudes change very little.

The resulting policy outlined in a Memorandum to the service secretaries from the Secretary of Defense on July 19, 1993, was a compromise: (a) Homosexual conduct was still grounds for barring entry and discharge from the military but (b) sexual orientation was to be considered a private and personal matter and applicants were not to be asked or required to reveal their sexual orientation. This compromise was colloquially referred to as “don’t ask, don’t tell.” It held that *open* homosexuality presents an unacceptable risk to morale, cohesion, and discipline. Servicemembers are not to be asked about nor discuss their sexual orientation (Burrelli and Dale, 1996, Summary). Burrelli and Dale point out that “the courts have uniformly held that the military may discharge a servicemember for overt homosexual behavior. More recently, however, there was been some erosion of judicial consensus” on this issue.

An Executive Order passed in 1995 bars “sexual orientation” as grounds for denying someone a security clearance. However, because of the “don’t tell” provision of the current law, homosexuals in the military services are prevented from discussing their sexuality. Thus, “[a]s long as the individual does not tell, and there is no evi-

dence of behavior, the notion of their homosexuality, or concealment thereof, is moot" (Burrelli and Dale, 1996).

MANAGING LOSSES FROM THE ARMED FORCES

Throughout its history, the military has paid considerable attention to those who leave its ranks before the end of their obligated service. People are expensive to acquire and train. When they leave early not only has the military lost a valuable asset, but it also has to acquire and train a replacement. Although the concern over early departures has been constant, the means of departing has varied. Initially, most early departures occurred when the individual decided to leave, either permanently (by deserting) or temporarily (by “going AWOL”). Clearly, some separations are due to personal or family reasons. Subsequently, the decisions on departure shifted to the institution as it separated those who could or would not perform acceptably.

This chapter charts the history of separations, focusing first on desertion and AWOL and then turning to the era of institutionally directed separations.

DESERTION/ABSENCE WITHOUT OFFICIAL LEAVE

Earlier in history, unauthorized separation from the armed forces generally constituted desertion. Desertion rates during the mid- to late-1800s tended to be high for several reasons: lack of training, liquor, general dissatisfaction with the service, tyrannical commanders and their brutal treatment of men under their command, and what Hayes termed “a certain naiveté” on the part of enlisted personnel, who were often misled by recruiters (1982, p. 45). Hayes also points out that both pay and the state of the economy appeared to correlate with desertion rates. When pay was cut, great numbers

deserted. During depression, the desertion rate fell; when civilian pay scales exceeded military pay, desertions increased.

The turn of the century saw a sharp decline in Army desertion rates in part because of two factors: Penalties for convicted deserters were made harsher, and applicants were enlisted at Army depots rather than at recruiting stations. This latter practice had the effect of weeding out many would-be deserters (those who would not show up at the processing station after enlisting), thus lowering desertion rates.¹ In the Navy, however, desertion rates remained at about 15 percent through 1908. This was blamed on the laxity of authorities in dealing with deserters, breaking of promotion promises, the harshness of life on board ship, and inadequate pay. Table 8.1, reproduced from Hayes (1982) shows the rates of desertion in both

Table 8.1
Army and Navy Desertion Rates, 1900–1917
(in percent)

Year	Army	Navy	Unem- ployment
1900	4.0	14.5	5.0
1901	4.1	16.8	2.4
1902	5.0	14.1	2.7
1903	7.1	15.1	2.6
1904	6.6	15.3	4.8
1905	6.8	14.4	3.1
1906	7.4	15.1	0.8
1907	5.6	15.5	1.8
1908	4.6	15.5	8.5
1909	5.0	8.8	5.2
1910	4.6	7.9	5.2
1911	2.3	6.9	5.9
1912	3.0	6.4	5.2
1913	4.2	6.7	4.4
1914	3.1	5.2	8.0
1915	3.2	4.4	9.7
1916	3.1	3.8	4.8
1917	1.9	2.8	4.8

SOURCE: Hayes (1982), Table 7, p. 57.

¹This is analogous today to attrition from the Delayed Entry Program where high school students sign up for a future entry into active duty.

services along with the unemployment rate. The general pattern suggests that desertion rates tended to be much lower in periods of (relatively) higher unemployment rates.

By the 1920s, desertion rates were low and similar across the two services. The services had attempted to create fair and honorable conditions that would lead to low desertion. Data after the 1920s do not provide desertion rates, as these were now considered classified information. Instead, they provide absent-without-official-leave (AWOL) rates. The services took a number of steps that directly or indirectly aimed at reducing AWOL or desertion rates. For example, the Career Guidance Program was implemented, which expanded the available career fields and was an attempt at organized management of enlisted careers. The Dependent's Assistance Act of 1950 provided a liberal quarters allowance for enlisted personnel, payable to their dependents.

Two regulations were implemented by the Department of the Army with the objective of using manpower efficiently. The policy change that affected AWOL/desertion rates most directly was the publication of Army Regulation 635-208, which made it easier to discharge enlisted men determined to be unfit for military service. Unfitness included frequent incidents of a discreditable nature with civil or military authorities; sexual perversion; drug addiction; established patterns of shirking or failure to pay debts. A second regulation, Army Regulation 635-209, dealt with unsuitability and allowed commanders to discharge men who were clearly unsuited in terms of temperament to deal with the discipline of a military unit.

Hayes (1982) reports that Army AWOL rates dropped from a high of 140 per 1,000 personnel in 1953 to about 40 per 1,000 in 1960. With the onset of the Vietnam conflict, however, both AWOL and desertion rates began to rise once again (see Table 8.2), culminating in a high of 104.3 per 1,000 by 1971 (AWOL) and 42 per 1,000 (desertion). With the inception of the all-volunteer force, rates began to decline steadily and by 1982, the AWOL rate stood at 34.3 per 1,000, whereas the desertion rate overall was only 10.9 per 1,000.

Table 8.2
AWOL and Desertion Rates, FY68–FY82

Year	AWOL Rate per 1,000	Desertion Rate per 1,000
1968	49.9	17.2
1969	64.9	24.3
1970	86.3	33.6
1971	104.3	42.0
1972	95.3	35.1
1973	93.2	29.8
1974	95.0	29.9
1975	86.6	26.3
1976	68.2	20.1
1977	48.5	19.1
1978	46.0	18.0
1979	46.2	18.5
1980	46.8	17.9
1981	42.3	14.7
1982	34.3	10.9

Rates differed considerably by service, with the Army and the Marine Corps generally having much higher rates of both AWOL and desertion than the Navy or the Air Force.²

ATTRITION

With the inception of the all-volunteer force, the focus of concern shifted from AWOL and desertion to early attrition of individuals in their first term of service. Through the early 1980s, all the military services were losing approximately 30 percent of each entering co-

²AWOL rates in the Army ranged from a high of 176.9 per 1,000 in 1971 to a low of 27.3 in 1982; Navy AWOL rates were 19 per 1,000 in 1971 but by the late 1970s and early 1980s, the rate climbed sharply and by 1982 was 63.6 per 1,000. The Air Force had extraordinarily low AWOL rates compared to the others: 9.4 per 1,000 in 1971 and 3.7 in 1982. The Marine Corps AWOL rates resembled those of the Army: 166.6 per 1,000 in 1971 and 65.4 in 1982. Desertion is defined as absent without leave for more than 30 days. Desertion rates for the Army reached a high of 73.5 per 1,000 in 1971 but fell to 11.0 per 1,000 by 1982. The Navy trends are again in the opposite direction: low during the Vietnam era and becoming higher in the late 1970s and 1980s (between 20 and 30 per 1,000). The Air Force desertion rate was 1.5 per 1,000 in 1971 and was down to 0.6 per 1,000 by 1982. The Marine Corps generally had the highest desertion rates of all the services reaching a high of 105 per 1,000 in 1975 but falling to 21.1 per 1,000 by 1982.

hort within three years of service. Of these losses, most were classified as “adverse,” a category that includes inadequate performance during training, behavioral or attitudinal problems, homosexuality, pregnancy, minor or major criminal offenses, and substance abuse. The largest loss rates occurred during the initial six months, when over 10 percent of the entering cohorts were being discharged. Some attrition, as pointed out by Klein et al. (1991), is inevitable and even desirable. However, early attrition is expensive and a conservative analysis of the cost of first-term attrition gave a lower-bound estimate of \$200 million per year (1989 dollars).³ “This cost represents the human capital investment that was made in recruits who separated early but was not amortized as a result of work performed after training. In addition, the separation process itself requires extra personnel time to justify and handle adverse discharges” (Klein et al., 1991, p. 1). Binkin points out that these statements need to be qualified somewhat: The military assumes that everyone of the same grade and years of service is making a similar contribution to national security regardless of occupation. He suggests that the services, rather than focusing on attrition across the board, should focus on occupation-specific attrition and try and manage losses in those occupations that require the most investment in training dollars and time and are the most crucial to the defense mission.

Klein et al. (1991) categorize efforts to reduce this persistent problem as focusing on two general strategies. The first, exemplified by the Army’s prebasic training physical fitness program, emphasizes programs and policies to help retain recruits who might otherwise separate early. Such programs typically include training, counseling, and other services. The second strategy seeks to identify characteristics that distinguish between recruits who do and who do not separate early with the view to incorporating them in enlistment standards. However, as they point out, neither approach has been entirely satisfactory.

Buddin (1984) analyzed the early attrition behavior of 1979 and 1980 accessions and found that non-high school graduates and recruits with a GED tended to have attrition rates that were 8 percentage points higher than the rates for high school graduates (15–16 percent

³Stephen P. Klein and Thomas J. Martin, unpublished work.

compared with 9 percent) and that older recruits appeared more attrition-prone than younger recruits. Several other studies confirmed the finding that education appeared to be linked to attrition. However, a later study pointed out that trends in cohort quality do not predict cohort attrition well. “A sharp improvement in recruit quality in the early 1980s was in fact associated with a rise in 6-month attrition losses and only a modest reduction in 36-month losses for both men and women” (Buddin, 1988, p. 1). This is illustrated by Tables 8.3 and 8.4, reproduced from Buddin (1988).

Buddin suggests that cohort characteristics alone do not determine attrition rates. Service attrition policies and practices tend to vary considerably from time to time and place to place resulting in different interpretations and enforcement of service attrition policies at different bases. “Thus, while recruit characteristics can be used to rank prospective recruits by relative risk category, the interpretation and enforcement of attrition policies may have a critical effect on determining the actual attrition level” (1988, p. 56).

Klein et al. (1991) analyzed the reasons for early separation and found that over 80 percent of the recruits had multiple reasons for their early release and that readily available background characteristics did not appear to forecast them. They did point out, however,

Table 8.3
Trends in Male Accession Quality and Cohort Attrition,
FY1977–FY1986
(in percent)

Cohort	HSDG	High Quality	6-Month Attrition	36-Month Attrition
FY77	69.0	27.0	13.9	30.7
FY78	73.2	30.7	11.5	27.4
FY79	69.0	27.7	10.9	28.9
FY80	65.1	27.6	10.7	31.1
FY81	79.5	37.6	10.6	28.7
FY82	84.7	42.7	11.7	27.6
FY83	89.9	49.1	11.6	25.1
FY84	92.0	50.7	10.9	23.9
FY85	90.9	53.2	9.9	na
FY86	90.3	54.4	11.0	na
Average	79.8	39.5	11.4	28.1

SOURCE: Buddin (1988), Table I.

Table 8.4
Trends in Female Accession Quality and Cohort Attrition,
FY1977–FY1986
(in percent)

Cohort	HSDG	High Quality	6-Month Attrition	36-Month Attrition
FY77	90.6	45.2	12.8	37.2
FY78	90.3	48.1	12.9	36.3
FY79	90.6	39.5	13.2	35.1
FY80	86.6	32.8	14.3	37.5
FY81	92.7	44.6	14.9	36.1
FY82	97.2	58.2	15.4	34.7
FY83	99.6	66.5	15.8	33.8
FY84	99.5	65.7	15.7	33.3
FY85	98.1	66.8	13.5	na
FY86	97.9	71.8	14.2	na
AVERAGE	94.1	53.3	14.3	35.6

SOURCE: Buddin (1988), Table 1.

that over a quarter of the individuals studied appeared unable to adjust to the military environment because of social or emotional immaturity and suggested that increased attention to counseling or to screening such individuals may help reduce early attrition.

Another one-third of the recruits fail to reenlist after successfully completing their first term. The remaining one-third formed the basis of the career force and appeared to exceed reenlistment standards based on on-the-job performance, education, and generalized ability scores. Nonetheless, there were questions regarding who was being retained. Were the services successful in retaining higher quality recruits? Were the standards set by the services successful in screening the best of those eligible to reenlist? Ward and Tan (1985) addressed this question using data on the FY74 entry cohort and found that, in general, the military appeared to be successful in retaining high-quality enlisted personnel who also appeared to have the highest performance of any group. However, the study also questioned the usefulness of AFQT and education as predictors of subsequent performance and suggested that the actual track record of the recruit is, by the end of the first term, a much better indicator of quality and that this should be given greater weight in setting reenlistment eligibility.

Another insight into the first-term reenlistment decision is provided by Buddin et al. (1992). They find that individuals are quite sensitive to promotion tempo and that military pay elasticities that are not adjusted for promotion timing tend to be too high and to overestimate supply at this decision point. Their findings are particularly relevant to the drawdown environment in which promotion opportunities are changing and have slowed considerably, especially in some occupations. They point out that in 1991, the average E5 promotion tempo was about 20 percent slower than in the early 1980s, so that the average soldier was waiting another 9 and 16 months for promotion in the Army and Air Force, respectively. They also warn that strong declines in promotion tempo, while tempting as a means of lowering retention during drawdown, may have unlooked-for effects on quality and discourage quality soldiers from joining the career force.

RETENTION: RECENT EXPERIENCE

We shift gears slightly now to focus on retention instead of attrition. The figures below show the recent retention experience of the different services by presenting cumulative continuation or survival rates for selected years. These continuation rates reflect individual decisions to continue in the service along with the effects of service policies and practices, including the recent drawdown, separation incentives, and other changes in the military environment. As a result, these rates vary by service and over time. They are important in that they provide insight into what the force profile will be in the future.⁴

The figures also help address two related issues: (a) Have continuation rates changed over time and, (b) do continuation rates differ across services? All the rates display the same pattern: lower continuation rates in the first two years, reflecting early losses; much lower continuation rates at the first-term reenlistment point (3rd and 4th year points); remarkably high and stable continuation rates for the career force; a sharp drop in continuation at the 20th year point, the first time that individuals are eligible for retirement; and then some

⁴Simple continuation rates by year of service are also important in understanding retention and in allowing for comparisons across services or time periods within a service for particular groups, e.g., those in YOS 8–12.

fluctuations in continuation as individuals take retirement at different points until the 30th year point, when all but a few retire.

Because FY89 represents probably our best estimate of steady-state rates (i.e., before the drawdown and restructuring), Figure 8.1 shows the FY89 continuation rates for the four services and highlights the differences among them. For example, it is clear that the Air Force has the highest continuation rates and the difference between it and the other services is quite marked. The Marine Corps tends to have the lowest survival rates, to a large measure because of a deliberate emphasis on youth rather than experience. Both the Navy and the Army tend to suffer from high early attrition, before the end of the first term of service.

Figures 8.2 to 8.5 show cumulative continuation rates for each service for FY89, FY92, and FY94 and highlight the changes in profile as a result of the drawdown and restructuring.

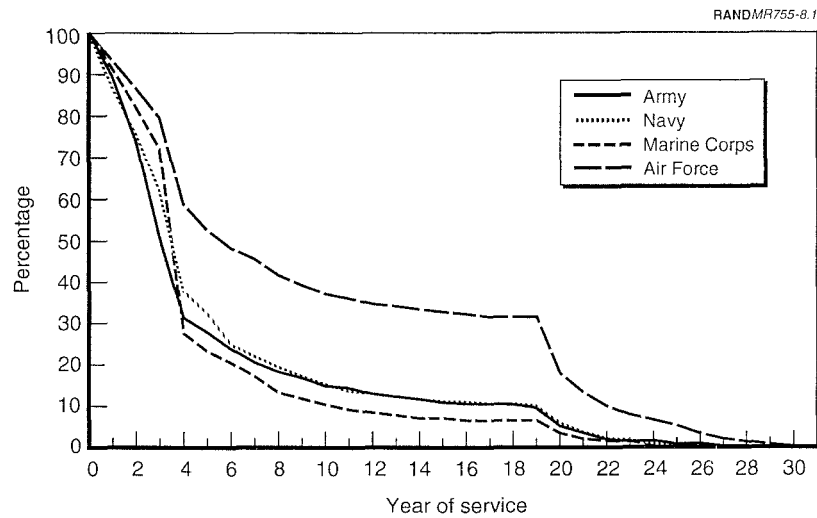


Figure 8.1—Service-Specific Survival Rates, by Year of Service, FY89

Army

First-year losses in the Army range about 10–12 percent and this has not varied much over time. There is a sharp decline in the proportion of new recruits continuing on after year 4 in FY92 probably as a result of the drawdown. FY94 rates appear to be back to FY89 levels with about 35 percent reenlisting.

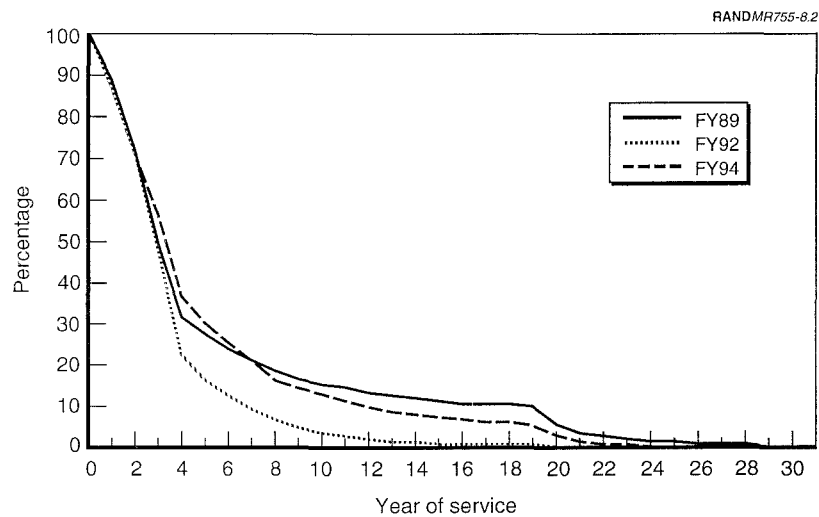


Figure 8.2—Army Survival Rates, Selected Years

Navy

First-year losses in the Navy approximately equal those in the Army. Only about 35–40 percent continue beyond the fourth year of service. However, the pattern over time is somewhat different because the Navy was later than other services in implementing the drawdown. This is reflected in that fact that the FY94 continuation rates are lower than those in the earlier years.

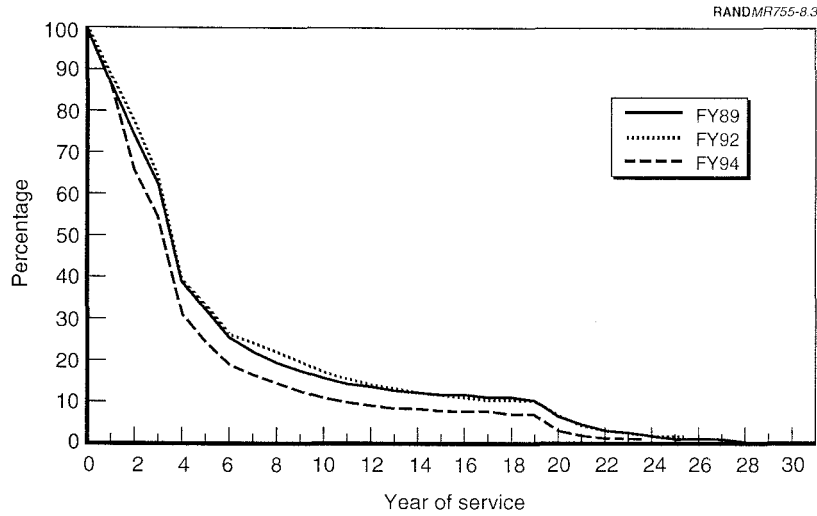


Figure 8.3—Navy Survival Rates, Selected Years

Marine Corps

There is little difference over time in the early year continuation rates. Only about 25 percent reenlist at the end of the first term. Of all the services, the Marine Corps was the least affected by the drawdown; nonetheless, we do see a small effect in the lower FY92–FY94 continuation rates compared to FY89.

Air Force

The Air Force shows a marked change in continuation rates as a result of the drawdown. BY FY94, however, the Air Force had already experienced most of the major upheavals. As a result, FY94 rates are much higher than those in FY92 (although lower than those of FY89). Early attrition in the Air Force is remarkably low and first-term reenlistment rates are much higher than in the other services.

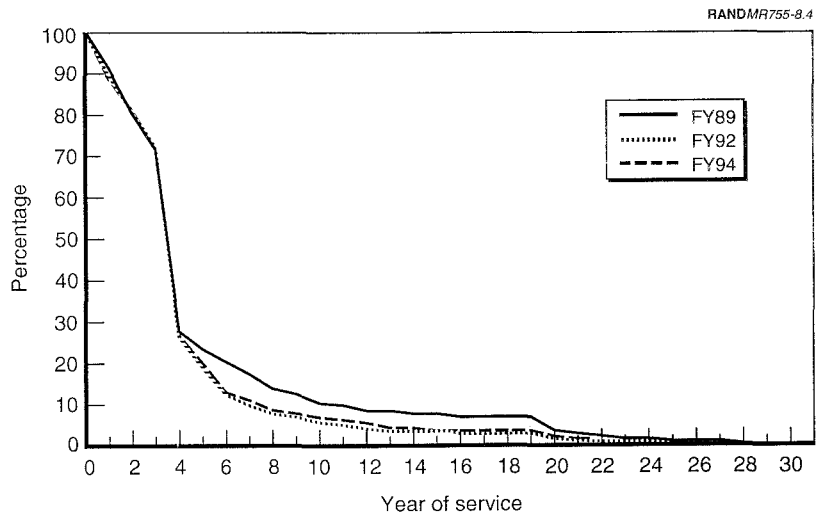


Figure 8.4—Marine Corps Survival Rates, Selected Years

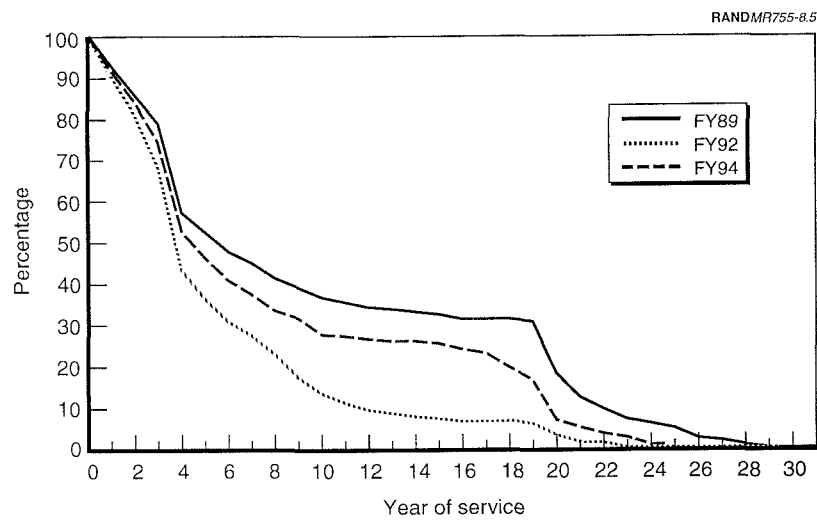


Figure 8.5—Air Force Survival Rates, Selected Years

MILITARY COMPENSATION

Military compensation has varied considerably with respect to the civilian populace, ranging from far behind to noticeably ahead. The end of the draft made it a much more important issue, because the military then had to compete for its workforce. Military compensation is also complex, with a not insignificant amount of the compensation being in-kind transfers. It is safe to say that few understand the full complexity of the pay system.

However, it is widely understood that military compensation plays an important role in national security by helping to attract, retain, and motivate military personnel essential to the military strength of the nation. This chapter addresses the history of military compensation by laying out its underlying principles and then describing its underlying components including their evolution. These components are regular and basic military compensation, reimbursements and benefits, retired pay, special and incentive pay, and separation and retention pay.

PRINCIPLES OF MILITARY COMPENSATION

The Military Compensation Background Papers (DoD, 1991) delineated six principles that underlie the uniformed services compensation system. As revised by the Seventh Quadrennial Review of Military Compensation (DoD, 1992), these are:

Effective in peace and war. The compensation system must allow for the smooth transition of active, reserve, and retired forces from peacetime to mobilization status. The system also must be

designed to accommodate the rapid expansion and contraction of forces resulting from changes in national security posture.

Equitable and efficient. The compensation system must be perceived to be equitable by the member and efficient by the taxpayer. It must sufficiently reward the member over a lifetime, taking into account the exigencies of the service. At the same time, it must assure the taxpayer that neither more nor less is being spent than required for a balanced, effective force.

Flexible and competitive. The compensation system must provide the flexibility necessary to sustain skill and force mix objectives; to compete with the private sector under changing market conditions; and to deal with revised manpower goals that result from changes in mission, technology, or tactics.

Motivational. The compensation system must encourage productivity and reward advancement. Because the military is a closed personnel system whose members perform highly specialized tasks, the compensation system must adequately recognize the value added by experience to force mobilization and readiness.

Predictable. The compensation system, to remain attractive over time, must generally provide the lifetime remuneration promised at the outset of a member's career. Predictability entails both system design at a given time and policy commitment over time.

Understandable. The compensation system should be as easy to understand as possible to foster national support and member commitment. It is important for members to appreciate how the elements interact to guarantee consistent remuneration to balance the unique hardships attendant upon military service.

These principles bound the individual elements of compensation into a coherent and self-reinforcing structure. However, questions about how to efficiently and fairly compensate military personnel have remained thorny issues since the beginning of the military. These issues focus both on the level (comparability with the civilian sector) and the structure of pay (setting of pay by grade, longevity, and occupation; general allocation between active and retired pay; and the parameters of the retired system) (Asch and Warner, 1994).

REGULAR MILITARY COMPENSATION

Until very late in the 19th century, enlisted men were treated as a commodity that could be bought in the market at a fixed low wage (lower than the civilian rate) and as Hayes points out, “pay, per se, was rarely considered as an incentive by Congress to induce men to enlist or to retain them on active duty except during wartime when a system of bounties to include free land was used” (Hayes, 1982, p. 19). Over time, several different types of pay and allowances were gradually added to basic pay until today the military compensation system consists of some 70 separate pays, allowances, or benefits. If we discount benefits, there are some 40 separate pays and allowances, although it is rare for members to receive more than seven or eight pays or allowances. Every member, however, is entitled to receive three basic elements of military compensation: basic pay, basic allowance for quarters (or quarters in kind), and basic allowance for subsistence (or subsistence in kind). In 1962, the Gorham Commission grouped these three elements under the rubric “regular military compensation” (RMC) in an attempt to construct a measure that could be used as the basis for comparing civilian and military pay. The First Quadrennial Review of Military Compensation broadened the term RMC in 1967 to include the so-called “Federal income tax advantage,” to reflect the fact that service members—unlike their civilian counterparts—do not pay income tax on allowances received for quarters or subsistence (whether in cash or in kind). The Congress formally recognized the term “regular military compensation” in the Act of September 19, 1974, Public Law 93-419, 88 Stat. 1152 (1974). The Military Pay and Allowances Benefits Act of 1980 broadened the term still further and included both the variable housing allowance and overseas housing allowance in the definition. However, not every member received these pay elements; thus, a new term “basic military compensation” (BMC) was adopted to reflect the pre-1980 definition of RMC.

BASIC MILITARY COMPENSATION

Basic military compensation serves as the broad base of the military compensation system. The basic pay table is identical for grade and length of service—regardless of service, job specialty, or geographic

area of assignment—and reflects the fact that members are being compensated for their military experience and responsibility, and not for a particular military specialty to which they are currently assigned. Providing quarters and subsistence recognizes the government’s obligation to house and feed military members. The base level of compensation is set and adjusted to generally reflect prevailing wages in the civilian sector.

The purpose and history of each element of BMC is discussed below.

Basic Pay

Basic pay is the primary means of compensating members of the armed forces and is based on the member’s pay grade and length of service. Basic pay can be traced back to the Continental Congress and the Federal Congress when various acts passed from 1789–1799 established a system of pay and allowances for the troops, including “rations” and “uniform clothing” for “every noncommissioned officer, private, and musician.” (Act of April 30, 1790, ch. 10, §§5-10, 1 Stat. 119, 120–121, 1790). As DoD (1991) points out, although the components of this system of pay plus allowances have changed occasionally, the system itself has proved remarkably enduring.

Before the Joint Service Pay Readjustment Act of 1922, separate pay legislation for the Army and Navy was the norm. In 1922, for the first time, the Congress attempted to deal with compensation for all the armed services in a comprehensive manner. In response to higher living costs, higher rates of pay were established for all members. Cash allowances were authorized for enlisted personnel when quarters and subsistence were not furnished in kind and longevity credit was given as “permanent additions” to base pay.

The Career Compensation Act of 1949 restructured the military compensation structure and laid the foundation for the current system. Its main purpose was to establish a system that was both equitable and responsive to the post-World War II manning needs. Basic pay was to be determined by pay grade and length of service (the latter being reflected in a series of “longevity steps”); to this was added special pays and allowances—the two most important being quarters and subsistence allowances, now referred to as Basic Allowance for Quarters (BAQ) and Basic Allowance for Subsistence (BAS).

The Uniformed Service Pay Act of 1958 increased pay rates to make them more competitive and added paygrades E8 and E9 to the enlisted structure as an incentive to undertake career enlisted service. The configuration of the longevity step was also changed, “precluding increases beyond the length-of-service point at which individuals were normally promoted, so as to maintain a closer relationship between performance and higher pay” (DoD, 1991, p. 26).

In 1967, Congress decided to strengthen the link between civilian and military pay by requiring a comparable increase in military pay whenever the General Schedule of compensation for Civil Service employees was increased. Because the increase had to be based on basic pay that made up 75 percent of RMC, the increase required to raise RMC by the same percentage as civilian salaries was greater than the General Schedule rates. In 1967, for example, basic pay was raised by 5.6 percent whereas General Schedule rates went up by only 4.5 percent. As DoD (1991, p. 29) points out, the military pay adjustment adopted in 1967 had some undesirable aspects.

Inflating basic pay rates to absorb the entire RMC increase resulted in a corresponding inflation in items linked to basic pay, such as various bonuses, drill pay, separation pay, and, particularly, retired and retainer pays. Moreover, raising quarters and subsistence allowances in an implicit rather than explicit pay tended to obscure their relationship to the expenses they had been originally intended to defray Finally, increasing basic pay rates by a higher percentage than General Schedule rates created an inaccurate impression that military personnel were getting a bigger increase than their civilian counterparts in the Federal Government.

To balance this, however, was the fact that the whole of the pay increase was subject to federal income tax.

Later acts, while still retaining the linkage between military and civil service pay raises, modified the pay adjustment mechanism so that the increase in military compensation was distributed to all three cash elements of RMC—basic pay, BAQ, BAS—although not necessarily on an equal allocation basis.

By 1981, there was a prevalent feeling that military pay had lagged behind civilian pay and that the methods used to adjust civil service pay had limited applicability to military pay. The pay adjustment

mechanism was suspended by Congress for FY81 in favor of an 11.7 percent overall increase and was later suspended entirely in the Uniformed Services Pay Act of 1981. The Congress, while pointing out that the 11.7 percent pay raise had brought about some improvement in retention and manning, cited the need to “restore, in current dollars, the relative relationship of military compensation to pay in the private sector that existed in 1972” at the adoption of the all-volunteer force concept and so mandated increases of 14.3 percent in BAQ and BAS and increased basic pay by 10–17 percent depending on pay grade. Congress also noted that the comparability indices were flawed and needed to be replaced by a new adjustment mechanism. However, no such mechanism was developed and the pay adjustment mechanism continued to hold sway.

In 1983, different concerns held sway in the Senate, which recommended that the link between military pay and civil service wages be severed, concerned that the civil service increases reflected largely white collar occupations and so resulted in inordinately large pay raises for the predominantly blue collar military force. The pay adjustment mechanism was again suspended and a 4 percent raise was adopted.

The House Armed Services Committee in 1985 again reiterated its concern regarding the adequacy of military pay and its commitment to providing periodic pay raises for the military to help recruit and retain high-quality personnel. By 1987, both houses of Congress began to be concerned that military pay levels were once again lagging behind civilian wages and this concern is an underlying thread in discussions of all subsequent National Defense Authorization Acts. In 1988, the House Armed Services Committee, in House Report No. 100-563 (Committee on Armed Services), p. 251, accompanying H.R. 4624, 100th Congress, 2d session, stated:

Today, the nation’s armed forces have the highest quality young men and women in history, representing a dramatic reversal of the dark days of the 1970s when recruiting and retention rates plummeted. Although several factors contributed to the turnaround, the large pay raises in October 1980 and 1981 played a paramount role. The committee believes that a competitive rate of pay remains important and is deeply concerned that the gap between private sector and military salaries, as measured by the Employment Cost Index (ECI), is widening. Currently, military pay lags 11 percent behind

wages in the civilian economy. If this trend is not reversed, the nation's armed forces could again fall on hard times.¹

Basic Allowance for Quarters

The purpose of these three allowances is to provide a cash allowance to members not provided with quarters for themselves and their dependents to enable them to obtain civilian housing.

Like officers, enlisted personnel have been provided furnished living accommodations at government expense or a cash substitute when such accommodations were not available. Statutory authority for enlisted commutation payments was first established by the Act of 1915, which authorized a payment of \$15 a month and commutation of heat and light at varying rates. The Act of 1922 fixed the quarters allowance at 75 cents a day. It was not until 1940 that recognition was given to the principle that those in the highest three pay grades who had dependents were entitled to government housing, or a cash allowance in lieu of quarters. This principle was continued in the Career Compensation Act of 1949, which broadened the category of those eligible for dependent quarters or cash payments in lieu thereof to "career" members as well. The act also provided that all members without dependents were eligible for BAQ when quarters were not available. For this purpose, junior personnel were considered as without dependents, regardless of dependency status; this was primarily to discourage them from marrying and creating a "social problem."

The 1962 Act modified the enlisted BAQ system, increased the BAQ rates for E4 through E9 personnel to the Federal Housing Authority (FHA) median housing expense of comparable income groups, and established within-grade differentials on the basis of with- or with-

¹Hosek et al. (1992) argue that the ECI may not be the correct measure for examining the erosion in active pay. They constructed an alternative measure called the Defense Employment Cost Index (DECI) that measures the true opportunity wage of active duty personnel. By the DECI, basic pay grew 4.7 percent less than did civilian wages from 1982 to 1991 compared to an 11.8 percent difference estimated by the ECI. Further, they show that for enlisted personnel, basic pay moved closely with civilian wages whereas for officers, basic pay was clearly outpaced by civilian wages. Other analysts have also questioned the existence of the pay gap in this time period.

out-dependents status rather than on number of dependents as was previously the case.

In 1985, BAQ rates were restructured so that they would cover 65 percent of median housing costs in each grade. However, since then, there has been some concern that BAQ has tended to lag behind housing cost growth and that service members are being “required to absorb more and more of the difference between the amount of the housing allowances with which they have been provided and the housing costs they actually experience out of their own pockets” (DoD, 1991, pp. 81–82).

Basic Allowance for Subsistence

The purpose of BAS is to help defray a portion of the cost of subsistence when rations in kind are not available, or when permission to mess separately is granted or when assigned to duty under conditions such that no messing facilities are available. At first, BAS was intended to be the cash equivalent of the food being supplied by the government to its military personnel, but the rate soon lost all ties to government food costs and subsistence allowances because of the adjustments mechanisms incorporated into the various acts mentioned above. In 1980, the Congress legislatively mandated a 10 percent raise in BAS attempting to bring the allowance into closer alignment with food costs. In 1981, the Congress again legislatively increased BAS by 14.3 percent with the idea of restoring purchasing power that they felt had been eroded over time. Since then, BAS rates have been adjusted legislatively.

Federal Income Tax Advantage

The origin of the tax advantage accruing to military personnel because of the nontaxable status of subsistence, quarters, and certain additional housing allowances (BAS, BAQ, Variable Housing Allowance (VHA), and Station Housing Allowance (SHA)) can be traced to a 1925 decision of the United States Court of Claims. The court held that neither the provision of government quarters nor the commutation thereof was allowance of a “compensatory” nature

and, therefore, did not constitute gross income subject to taxation (*Jones v. United States*, 60 Ct. Cl. 552, 1925). The court thus drew a fundamental distinction between “pay” and “allowances” and stated that the latter are for purposes of reimbursement, not for compensation. The Treasury Department subsequently adopted regulations that specifically excluded BAS and BAQ (whether in cash or in kind) from federal income tax and still later, Congress excluded “any qualified military benefit” from inclusion in gross income (Tax Reform Act of 1986).

DoD (1991, p 123) defines the federal tax advantage as “conceptually, the additional amount of taxable income a member of the uniformed services would have to receive under given tax rates, in a system in which cash and in-kind quarters and subsistence allowances were fully taxable, to produce the same after-federal-income-tax regular military compensation the member received under the present system.”

The tax advantage was of relatively little significance until 1948 because the level of pay and allowances was such that most military personnel would not have been subject to income tax. From 1941 through 1947, emergency tax-relief legislation excluded the entire military compensation of enlisted personnel. The tax-free status of BAS and BAQ was formally recognized in the Uniformed Service Pay Act of 1965. However, the Act of 1967 formally required that the federal tax advantage taken into account when calculating any given military pay increase, and this continued until 1974 when it was changed.

The federal income tax advantage clearly differs from individual to individual and depends on the member’s basic pay, level of allowances, tax-filing status, other sources of income, number of dependents, etc. As DoD (1991, p. 124) succinctly states: “The multitude of factors—many of them wholly unrelated to military service—that influence the Federal income tax advantage attributed to particular members of the uniformed services results in an element of military compensation that is distributed among military personnel in a raggedly uneven pattern.”

REIMBURSEMENT ALLOWANCES AND MILITARY BENEFITS

Beyond the base level of military compensation, a number of additional allowances and benefits are specifically structured to recognize the distinctive nature of military service.

Reimbursement allowances are items such as clothing allowances, which enable a member to maintain service uniforms; the VHA, which partially reimburses the member for the extra housing expenses incurred as a result of being ordered to duty in high cost-of-living areas; and the SHA, which partly compensates the member for housing expenses overseas.

The Military Personnel and Compensation Amendments of 1980 added the VHA program—probably the most significant change in the basic structure of quarters allowances since the 1949 Act. Under this program, a member entitled to BAQ was also entitled to the new allowance whenever he was assigned to a high-cost housing area with respect to his grade. The amount was measured as the difference between the average monthly housing costs for members in that pay grade and 115 percent of the BAQ received by the member. This was also payable to those who were assigned to unaccompanied tours of duty outside the United States whose dependents lived in high-cost areas. The 1985 and 1986 Authorization Acts amended this program by changing how the basis of the allowance was calculated and reducing or eliminating what were seen as flaws in the program: tying it more closely to dependency status, including utilities and maintenance costs in the definition of “housing costs,” and authorizing both BAQ and VHA to be paid in advance in special cases where the member has been assigned to a high-cost housing area. This latter provision was put in to help the member defray part of the front-end costs of renting/leasing private housing.

In addition to BAQ and VHA, the overseas housing allowance is paid to those stationed outside the United States. First established in 1942, it was meant to help defray the costs of living overseas. The 1949 Act provided that extra living costs of dependents could also be included in calculating the amount of the entitlement. The allowance varies geographically, by grade level, and by dependency status. In a cost-containment measure, the 1985 Act withdrew the

overseas housing allowance from personnel stationed in Alaska and Hawaii but extended VHA eligibility to such personnel.

The military compensation system incorporates a number of benefits that are important for the morale of members and their dependents. Some of these benefits have analogs in the civilian sector; others, such as commissaries and exchanges, do not. All of them, however, are specifically designed to take into account the distinctive nature of military service. Noncash items of military compensation are benefits such as medical care, commissaries, and exchanges provided to the member and his dependents to allow them to maintain “quality of life” and to provide reassurance that the member and his family will be provided for adequately when service is completed.

Military health care benefits are heavily oriented to the provision of in-kind health care to members of the armed forces and their dependents unlike the civilian compensation system that provides mostly health care insurance benefits. This serves several purposes: It helps ensure the availability of physically fit personnel in time of national emergency; it provides incentives for personnel to undertake military service and make it their career; it provides military physicians and dentists exposure to a range of demographically diverse morbidity that helps support their professional training and interests; and it acts as the base on which to build the wartime medical care system for casualties. Before 1956, the statutory basis for dependent medical care was quite fragmentary but this was changed by the Dependents' Medical Care Act of June 7, 1956, which set forth the categories of dependents eligible for medical care and the types of care to be provided in military medical facilities. In doing so, Congress cited the need to make military careers more attractive and to ensure that the military remained competitive with the private sector, which offered liberal medical care benefits for dependents.

These benefits are based on considerations that go beyond compensation to the member.

RETIRED PAY

The basic purposes of retired pay (along with retainer pay, separation payments, and post-service benefits) are outlined in DoD (1991, p. 447). These are

the overall effectiveness of the compensation system in both peace and war; on the achievement of substantial equity for members of the armed forces, especially in the sense of establishing a compensation system that is generally competitive with compensation in the private sector; on the interrelationship between the military manpower requirements of the United States and the compensation system considered as a whole; and on the motivation of members and potential members of the armed forces.

The 1885 Act was the first to provide nondisability retirement authority for enlisted personnel. It authorized the voluntary retirement of Army and Marine Corps personnel (later extended to the Navy) after 30 years of service at 75 percent of the active duty pay of the member plus an allowance in lieu of quarters, fuel, and light. The Act of 1916 created the Fleet Naval Reserve for Navy and Marine Corps personnel retiring after 16 years; the members of this reserve received retainer pay and would be available for mobilization during war or emergency. The Act of 1945 authorized the voluntary retirement and transfer to the Reserve of Army enlisted personnel with between 20 and 29 years of service; monthly retirement pay was to be computed at 2.5 percent of the last six months average monthly pay times the number of years of service (with a maximum of 29 years). The Act of 1946 permitted retirements up to the 30-year point, which raised the maximum monthly retirement pay to 75 percent of terminal pay. The Department of Defense Authorization Act of 1981 adopted the "high three year average" rule (whereby the member's monthly retired or retainer pay base is an average of the member's highest three years of basic pay) in an effort to contain sharply increasing retirement costs. The Military Retirement Reform Act of 1986 established a two-tier annuity: a reduced annuity during the period from retirement to the normal retirement age (62), and a higher annuity later, by establishing new and lower multipliers to be used in computation of base pay.

Thus, there are currently three retirement systems in effect depending on when the member entered service: (a) before September 8, 1980; (b) between September 8, 1980, and July 31, 1986; and (c) on or after August 1, 1986. They are similar in that retired or retainer pay is determined by applying a percentage multiplier to a number that is a function of the member's basic pay at retirement. For those joining on or after August 1, 1986, the initial retired or retainer pay is calcu-

lated by multiplying the pay base by a percentage factor (2.5 percent multiplied by member's years of creditable service), which is reduced by one percentage point for each full year of service difference between the member's years of creditable service and 30 and by 1/12th of a percentage point for each month by which the member's years of creditable service are less than one year. This percentage factor is recomputed when the member reaches age 62. Thus, for a member retiring with 20 years of service, the multiplier would be 40.0 percent (50.0 percent after age 62). It is unclear whether these changes are well understood by those who are affected by them or by senior uniformed managers who may be under an earlier system. Moreover, no one knows what the retention behaviors will be when those who entered after August 1986 are first eligible to retire in 2006.

SPECIAL AND INCENTIVE PAYS

Historically, as DoD (1991) points out, the first special and incentive pays were adopted to provide enlistment and reenlistment incentives; however, the first special and incentive pays adopted in this century were intended to compensate those exposed to unusually hazardous conditions. The purpose of the majority of special and incentive pays has changed over time so that today most of these pays are aimed at recruiting members for certain career fields that would, in the absence of these incentives, experience shortfalls in manning. Some special pays are described below.

Hostile fire pay (which had its origins in the "badge pay" of World War II) is provided to those who are subject to hostile fire during periods of nominal peace, to personnel serving in hostile fire areas/vessels/aircraft, and to personnel posted in foreign areas who may be subject to harm or danger.

Demolition duty pay was established in 1949 by the Career Compensation Act and was intended to provide an incentive for personnel to volunteer for and engage in such hazardous occupations.

Crew and non-crew-member flight pay was first extended to enlisted personnel in 1914 and the idea was to compensate personnel for the hazardous nature of military flying duty. The Career Incentive Act of 1955 introduced longevity step differentials into flight pay (for both officer and enlisted), which were later abolished in 1986 probably be-

cause of the recommendation of the Fifth Quadrennial of Military Compensation.

Parachute duty pay was first established in 1941, a few months after the Army formed its first parachute unit. Congress felt that parachute troops incurred greater risks than those flying as passengers or pilots of military aircraft because of the increased risks involved in parachute jumping. In 1985, a separate, higher parachute duty pay rate was established for “parachute jumping at a high altitude with a low opening”—so-called HALO parachute jumping duties.

Glider duty pay was first authorized in 1944 to ensure that glider units of the Army and Navy were placed on the same parity as the air forces of the Army and Navy and paratroops. This authority was later repealed in 1984 on the grounds that such members could qualify for crew-member/non-crew-member pay.

Flight deck duty pay, first established in 1965, was intended to increase the Navy’s ability to attract and retain personnel for duty involving frequent and regular participation in flight operations on the flight decks of aircraft carriers.

Toxic Fuels and Propellants and Chemical Munitions pay was authorized in 1981 in recognition of the imminent danger from these hazards faced by personnel engaged in these activities.

Submarine duty incentive pay has been around since 1901 soon after the commissioning of the first submarine. It was provided partly to compensate for the arduous and hazardous nature of submarine duty and partly to offset the uncommon wear and tear on clothing. In 1980, the basis for this pay was changed to mirror flight pay: Submarine personnel were to be continuously eligible for this pay even when on shore duty provided they met the other qualifications.

The services also have a number of other pays: operational submersible duty pay (1960), diving duty pay (1886), special pay for career sea duty (1835), experimental stress duty pay (1955), personal exposure pay (1981), and leprosy duty pay (1949), among others. These are all meant, in one way or another, to provide incentives to enlisted personnel to engage and remain in hazardous or disagreeable occupations (Hook Commission, 1948).

ATTRACTION AND RETENTION PAYS

Enlistment Bonus

The purpose of the enlistment bonus is to induce persons to enlist for and serve in military skill specialties designated as "critical." As far back as 1776, the Continental Congress offered a cash bonus or "bounty" as an incentive to enlistment and this bounty played a large role in increasing the size of the forces until after the Civil War. Because of various abuses during the war and because it proved ineffective, the bonus program fell into disfavor. It was revived in 1971 as the country phased out conscription and moved toward an all-volunteer force. Unlike the original bonus program, which was available to anyone who enlisted in the Army, the current bonus is offered to persons enlisting in military skill specialties experiencing critical personnel shortages in any of the services. The Military Selective Service Act Amendments of 1971 authorized the payment of no more than \$3,000 to persons enlisting in a combat element of the force for three or more years (or extending their original enlistment to three or more years). The Army and Marine Corps tested the program in 1972 by paying a \$1,500 bonus to persons enlisting in an infantry, artillery, or armor career field for four years. The Armed Forces Enlisted Personnel Bonus Revision Act of 1974 extended the bonus program to enlistments in any skill designated as "critical," permitting a bonus payment of up to \$3,000 to persons enlisting for four or more years, or extending an initial enlistment for such a period in any such skill. The bonus was substantially increased in 1980-1981 citing the need to ensure that those recruited would have the ability to use the increasingly sophisticated weapons with which the forces were equipped, and again in 1989 for the same reason. The House Armed Services Committee, in raising the maximum limit from \$8,000 to \$12,000 stated in House Report No. 101-121, Committee on Armed Services, 1989, p. 275, accompanying H.R. 2461, 101st Congress, 1st Session:

Several of the services have begun to experience recruiting difficulties during the current fiscal year at a time when youth unemployment has declined markedly and private sector wages are on the rise.

In recognition of the Army's special recruiting problems, the Uniformed Services Pay Act of 1981 also authorized the Army to pay an enlistment bonus of \$4,000 or less to recruit high school graduates who scored at or above the 50th percentile on the Armed Forces Qualification Test and who enlisted for three years in a critical skill. This differed from the standard bonus program in that persons enlisting for three years were eligible.

The Army and Marine Corps have consistently used the program since its inception. The Air Force did not use it before 1981 and the Navy did not use it in 1977–1978.

Reenlistment Bonus

The purpose of this bonus is to retain personnel in critical skills in military service and to maintain adequate levels of experienced and qualified personnel in the armed forces. As early as 1776, George Washington urged that a reenlistment bounty be established, writing to Congress on February 9 of that year:²

That if Congress have any reason to believe, that there will be occasion for Troops another year, and consequently of another enlistment, they would save money and have infinitely better troops if they were, even at the bounty of twenty, thirty or more dollars, to engage the men already enlisted .

Legislative authority for a reenlistment bonus of one form or another has existed continuously since shortly after the Revolutionary War. Although reenlistment bonus programs have been drastically changed over time, one basic principle has remained inviolate: To qualify for bonus benefits, a member must serve continuously or reenlist immediately (although a nondisqualifying break in service of 24 hours to four months has been allowed). Until the early 1920s, there was considerable variation in the way the services administered the reenlistment bonus program. The Career Compensation Act of 1949 redesigned the reenlistment bonus so that it would more effectively serve the purpose for which it was intended by: (1) basing the amount of the bonus on the number of years to be served rather than service already performed; (2) increasing the bonus in

²See Fitzpatrick (1931), p. 317.

proportion to the length of the reenlistment period to encourage longer periods of reenlistment; and

(3) placing a career dollar and number limit on bonuses so that no bonuses would be payable for the last few years of service. The recognition that the program would be more effective if it were weighted more toward first-term reenlistments led to changes in 1954. In 1965, because of the shortages that the services were facing in some of their technical, high-training-investment skills, the variable reenlistment bonus program was established by which an additional sum of not more than four times the amount of the regular reenlistment bonus could be paid to first-time reenlistees in critical skills.

The two programs, however, were felt to be defective: The regular bonus was paid to all reenlistees, regardless of the criticality of their skill, whereas VRB was paid only at the first reenlistment point and was not responsive to retention problems at later points. As a result, the Armed Forces Enlisted Personnel Bonus Revision Act of 1974 established a Selective Reenlistment Bonus (SRB) program. Members who had completed at least 21 months but not more than 10 years of active duty and who were in critical skills were eligible for the bonus if they reenlisted or extended for three or more years. Later members completing between 10 and 14 years of continuous service were also made eligible. Three eligibility SRB "zones" currently exist, depending on length of service, and to qualify for any of these, the member must reenlist or extend for at least three years and possess a critical skill. The bonus is paid on a modified lump-sum/installment basis.

Concern about retention and manning problems led to the SRB program being extended several times. The House Armed Services Committee, in House Report No. 100-58, Committee on Armed Services, 1987, p. 205, noted:

The enlistment (also covered by the extension) and selective reenlistment bonus programs have proven invaluable in recruiting and retaining high quality individuals for all components of the Total Force. The committee believes that these programs have permitted the services to selectively target their resources to meet service-unique accession and retention needs in a judicious and cost effective manner .

CONCLUSIONS AND FUTURE ISSUES

The preceding chapters have described the history of enlisted personnel management, chronicling the influence of external forces and the military's various management programs. This chapter summarizes the characteristics of that management system, presents some conclusions about it, and describes the framework for the follow-on work of this project.

CHARACTERISTICS OF THE CURRENT ENLISTED PERSONNEL MANAGEMENT SYSTEM

New missions, organization, and technology and changes in societal views about military service continue to demand a highly trained, highly specialized, highly motivated, well-led enlisted force. The combination of the volunteer force and other societal factors have significantly changed the composition of the enlisted force in the last 20+ years. The presence of more enlisted members with families and more single parents has created new management challenges.

At the same time, survey data suggest that needs and expectations of the individual members of the enlisted force are also changing. Our review of history and analysis of personnel practices of the services suggest certain defining characteristics of the current enlisted system that describe its members and reflect the current management processes which may or may not be the best practices for the future. We have organized them around requirements determination, management principles, and personnel functions: accessing, developing, promoting, and transitioning. They are listed below.

Requirements Determination

- Requirements determined by services. Although DoD has attempted in recent years to oversee the requirements process, the effort has been essentially reactionary. The services develop enlisted requirements.
- Requirements change slowly and independently from changes in personnel. The system does not respond rapidly to changes in mission, organization, and technology although such changes can be observed over long periods of time. Moreover, whether people are of higher aptitude, better educated, more experienced, or more productive tends not to change numerical requirements for manpower.

Management Principles

- Mix of uniformity and flexibility in policy. Little uniformity across services and/or skills exists in certain policy areas (e.g., promotion, retention), which means that the services have great flexibility to manage their enlisted work force as they deem best. In the interests of equity across the military, the Congress and the Department of Defense have imposed greater uniformity in other areas (enlistment screening, basic pay, retirement), which restricts the services' flexibility.

Accessing

- Primarily entry at Year 0 for those meeting enlistment screens. Although each service uses prior active service individuals to meet particular skill needs, the vast majority of entrants are non-prior service. All those who enter must meet rigorous enlistment criteria.
- Fixed contract periods. New entrants and those who elect to stay (reenlistees) are given "contracts" for service of a certain duration. Currently new entrants generally sign up for three- or four-year enlistment terms; however, in the past some services have had primarily two-year enlistments; and others have had high proportions of five- or six-year enlistees, particularly in skills

with long training times. Moreover, all entrants have a military service obligation of eight years, which implies either service in the selected reserve at the end of their initial active duty commitment or availability to be recalled to service if needed in emergencies.

- Acculturation and initial skill training of all entrants. Initial entry training consists of two portions. The first—“basic,” “recruit,” or “boot” training—focuses on general military skills and serves the purpose of acculturating individuals in the attitudes, values, and beliefs of each service as well as screening out those who are not likely to succeed. The second, initial skill training (e.g., Advanced Individual Training (AIT) in the Army), provides sufficient knowledge and ability to perform entry-level duties in a particular skill in a military unit. The first generally lasts eight weeks (it varies by service from six to twelve weeks); the second from about eight weeks to over a year depending on the skill.
- Emphasis on quality and trainability at entrance. The enlisted force contains the highest percentage of entering high school graduates ever—95 percent—and those who are above average in trainability—over 70 percent AFQT Category I–IIIA. This not only represents the services’ efforts to increase quality, it also suggests that military service (and a military career) is seen as a desirable occupation in itself or as a training ground for a different career or as a foundation before college. It might also underlie a shift from skill-specific standards to entry standards based on general employability.

Developing

- Rank in person. Although most civilian organizations compensate (and promote) individuals based on the position they occupy, the U.S. military promotes the individual based on past performance and future potential and will continue to compensate at that level independent of the position actually occupied or the work actually being done.
- Top 5 ranks and/or those with greater than four years of service constitute the career force. Some women and men enter the military service intending to make it a career. For most, how-

ever, the decision is made after a trial period—by both the individual and the service. The decision to make the service a career is frequently made at completion of the initial enlistment or after promotion to grade E5, events that normally occur between the third and fifth year of service.

- Family focused. The enlisted force today contains more married personnel than ever before, with the resultant needs and demand on the management system.
- Experienced and mature. The desire of the military has been traditionally for a “young and vigorous” force. However, the current force is the oldest in years and most experienced in seniority in history.
- Retraining. Newer, younger people cost less in wages and benefits but lack firm-specific knowledge that the military prizes. As a result, the military emphasizes retraining rather than new hiring as needs change.

Promoting

- Promotion based on combination of need and budget. In theory, promotion is based on service requirements in grade and specialty. Often, however, promotion is influenced by certain external constraints—budget or manpower ceilings.
- Compensation for seniority. The compensation system is tilted more toward attained levels of seniority than toward attainment of more competency and responsibility as represented by a higher pay grade.
- Military outcomes based on team performance; rewards based on individual performance. Much military work—especially that in operating units—is premised on performance of team tasks that contribute to mission success. However, the rewards system—promotion and compensation—is heavily dependent on individual accomplishment.

Transitioning

- Selective entry but high turnover. Although the services all use preenlistment testing, they still lose about 30 percent of each cohort before completion of three years service, with over 10 percent lost during initial training.
- Retention controls. Tenure and performance points are used to control continuation in the service.
- Most careerists serve 20 years. Among those who choose an enlisted career, most retire after 20 years of service.

CONCLUSIONS

The content, absolute and relative, of careerists in the total active enlisted force has been one of the most important measures of force management over the last 40 years. Intuitively, a relatively more experienced force seems to be a desired good, but this is not always true. Because of the arduous nature of many of the skills in the services, or because of the low skill content of some occupations in the services, or because of the greater costs associated with careerists, less-experienced (but well-trained) individuals may be preferable. Each service ostensibly strives for that balance of experience that is proper to meet its manpower needs. In some eras, the career force was managed to achieve greatest effectiveness and in other eras was controlled for cost reasons. If these are the right objectives, it is not clear that policies were ever as instrumental as events, e.g., rapid increases and decreases in force size, at achieving either. The case could be made that the career force just happens. It is strength- not policy-driven and subject to the ups and downs of national security needs. An open question is whether a more orderly enlisted management process would be in the nation's best interest for matching human capital to national security needs and whether such a system can be defined.

The adequacy of each service's career force objective has been evaluated on such factors as desirability (requirements for experienced personnel), achievability (current inventory and retention experience), sustainability (size of accession cohorts reaching the career

window), supply of high-quality accessions, state of the economy, and cost.

Although experience levels (career content) are more important from the effectiveness standpoint, grade in the past has been a key variable from the control of cost standpoint. Grade is the traditional nucleus of the enlisted pay and promotion system. In the aggregate force, grades are the result of requirements tied to traditional service expectations for performance at specific levels and tempered by personnel management considerations such as promotion flow. Grades result from requirements for people at certain levels of responsibility, decisions on career force size (experience levels), decisions on promotion policy (timing), and the status of the existing personnel inventory. Although grade content is an outcome of the enlisted management system, it is also an important lever by which the entire personnel management system and the cost of that system can be arbitrarily controlled. Decisionmakers can restrict grade content by fiat. This artifice leads to cheaper but not necessarily more effective forces, can change retention over time and can artificially induce NCO/petty officer shortages if requirements do not change when either inventory or authorizations do.

Each service has an enlisted promotion system unique to its traditions and needs. The manner in which the services select enlisted members for promotion has evolved over the last several decades. At one point, promotions were determined by unit commanders. This process gave way, in stages, to use of local promotion boards, then centralized boards, then centralized weighted factor (point) systems. What is valued in enlisted performance and behavior is to a great degree captured in the weighting schemes.

Some services keep selection opportunity nearly equal for all skills; some do not. OSD uses promotion timing (desired and minimum time-in-service requirements to each grade) as a policy variable. A rationale for promotion policy guidance is to foster uniform application of the equal pay for equal work concept across the services; to provide a fair and equitable relationship between military and civilian compensation for comparable work; to provide sufficient promotion opportunity to attract and retain the kind and number of people required; and to ensure efficient allocation of DoD resources to support service missions.

Total uniformity between service promotion programs is not a stated objective. The objective is to achieve reasonable similarity, taking into consideration differences in service missions and conditions. A waiver zone was established to motivate personnel by rewarding outstanding performance, to provide flexibility to meet operational needs and service differences, and to enhance retention in shortage specialties by allowing limited early promotion.

Over the years, research and exit and retention surveys have shown that the rate of promotion has a significant effect on the decision to stay in the service. This implies accelerating the point at which a person is promoted to increase retention. However, a promotion system that is designed to provide personnel of an expected level of experience at certain grades mandates stability in timing for promotion. Since promotion rate should affect retention, promotion policy has been used in an effort to induce greater retention or to cause more separations when that is needed. Promotion policy in each service is reviewed concurrently with the review and evaluation of the objective force in the service's Enlisted Force Management Plan.

Grade management appears straightforward: Determine requirements for experience levels, provide for traditional service promotion policy, and provide resources for the grade content of the effective force that results. It is not clear, however, that any of these are practiced consistently over time or across services. Thus, the specter of percentage or absolute grade controls mandated by fiat remains as an alternative to control of experience levels and promotions through personnel management policy.

Last, it is interesting to put the 40-year period from 1954 to 1994 in a final perspective by contrasting the experience distributions of two services. The Marine Corps in 1954 had the least experienced enlisted force of any service through the 40-year period. The Air Force in 1994 had the most experienced enlisted force of any service through the 40-year period. No two enlisted forces during this period have been more dissimilar. On the other hand, the experience distribution of the Air Force in 1954 is not at all dissimilar to that of the Marine Corps in 1994; in fact, they appear very much alike. Figure 10.1 shows these data. One might argue the need for youth versus experience; one might also conclude that outcomes merely happen in response to events over time. In any event, very dissimilar

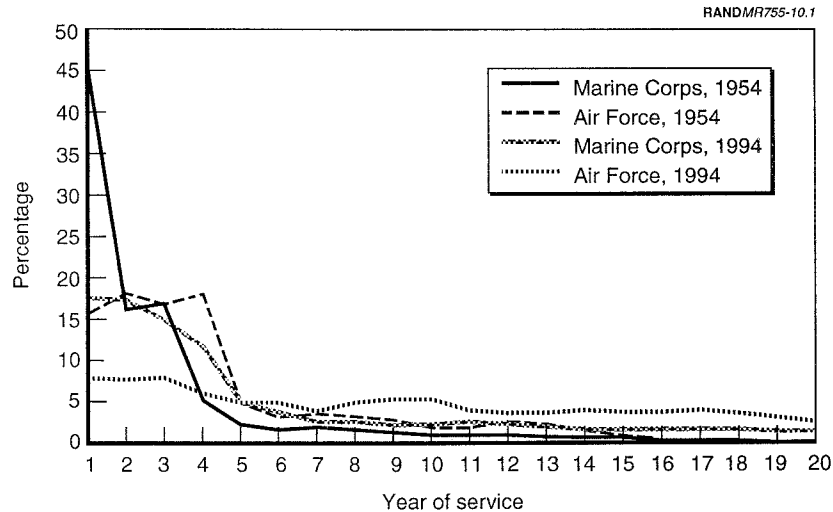


Figure 10.1—Marine Corps and Air Force Profiles, by Year of Service

and very similar outcomes could emerge from what is ostensibly a “common” Department of Defense centrally controlled personnel management system.

In all fairness, we should point out, however, that some of these trends are mirrored in the private sector. It is an open question as to whether part or all of the trend toward higher grade, more quality, and higher education is being driven by structural changes in the economy and ways of doing business rather than by inefficiency or lack of management. For example, studies in the private sector show similar effects of technology on jobs—redistribution rather than reduction, leading to a higher proportion of more highly skilled management jobs. Other organizational changes that affect the size and composition of the enlisted force include: switch to professional military; units of smaller size; more command and control; weapons of mass destruction (officers controlling—technology issue); and support specialization, including growth of the medical corps. Over time, enlisted jobs have shifted to higher skills, to higher grades, to longer required tenures. As in the private sector, jobs have gotten “better,” which requires that entrants into and members of the workforce have greater ability and motivation.

FUTURE ISSUES

Today the world environment is changing—and it is changing very rapidly in ways that could have significant effect on the future military operating environment and the enlisted force. For most of the past 50 years, the world was dominated by two major world powers. There was considerable uncertainty during this period, but there was also a relatively high degree of predictability and stability in the military operating environment. The military knew its likely adversary and the inherent risks and could manage people accordingly.

In looking to the future—into the early 21st century—the uncertainty remains, but now it is coupled with less stability and a greater variety of risks. These dynamic changes—and emerging risks—are having a significant effect on defining (and redefining) U.S. national interests and the future military operating environment. As a result, the enlisted force of the 21st century will have significantly different roles and responsibilities. Therefore, military managers face several critical questions.

One of the most important is forecasting manpower requirements. Determining manpower requirements—required numbers of people, of skills, of experience, and of grades—given likely changes in external events, societal concerns, mission, organization, technology, and budget will be a complex and difficult exercise, yet one that needs to be done with a high degree of accuracy. In addition, changes in the capital-labor, civilian-military, reserve-active, and enlisted-officer tradeoffs will need to be factored into the calculations. These changing requirements will create new challenges in the area of enlisted force management.

Given requirements, enlisted force managers need to seriously consider the objectives that a future management system must achieve and whether today's management system will be effective in meeting them. What kind of military personnel do we want? How should they be trained? Do we need smart soldiers or merely smarter weapons (Binkin, 1986)? What will the quality and composition of the future youth population be? As the youth population becomes increasingly ethnically diverse, how will recruiting be affected? What will be the cost of obtaining smart and motivated enlistees? Is the compensation system currently in place the correct one for the

future? If not, what different practices are needed? Should we try to manage more overtly by occupation, including linking compensation to occupations rather than to rank and years of service? What will be the effect of emerging social changes (e.g., an aging population and prohibitions against age-based decisions)? These are some of the questions to be addressed—albeit somewhat broadly—in the next phase of the larger project.

As we show in this report, the enlisted force has been largely shaped by exogenous events and societal concerns; budget and career force management have had a lesser effect. The question is whether the nation has paid a price for this and how high this price has been. Estimating the opportunity costs of this system would have been an illuminating exercise but one far beyond the scope of our current task. It is important, however, that we recognize that such costs exist and that a more orderly management process grounded in objectives would likely be in the nation's best interests. As we move into the future, there is little room for errors of either omission or commission. As a result, we need to bring a greater degree of rigor and understanding to both the requirements and management processes. Without this, enlisted force "management" could once again be overtaken by events without any assurances that desired outcomes—for example, experience and skill distributions, grade structures, and overall costs—would be achieved.

DATA/FIGURES BY SERVICE

In the body of this report, most data are aggregated to provide a snapshot of the enlisted force in the Department of Defense. This appendix provides data for each military service, similar to that provided in the report. This data should be of interest to those who would prefer cross-service comparisons.

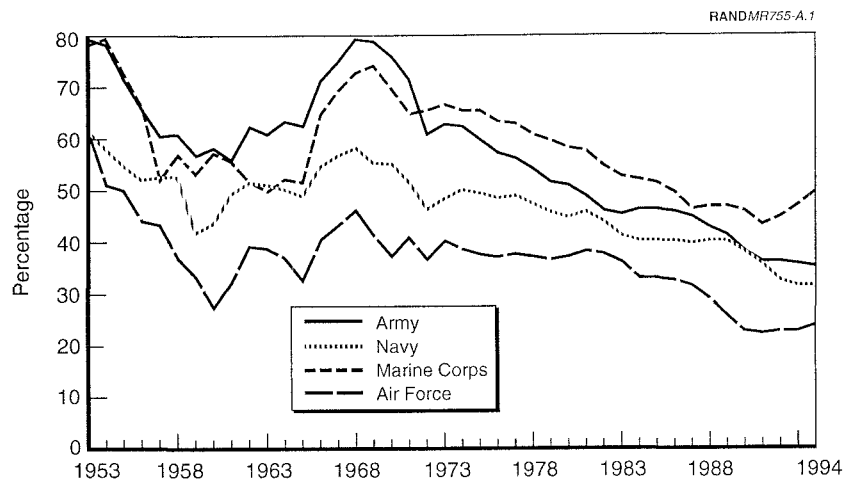


Figure A.1—Percentage in YOS 1, 2, or 3, 1953–1994

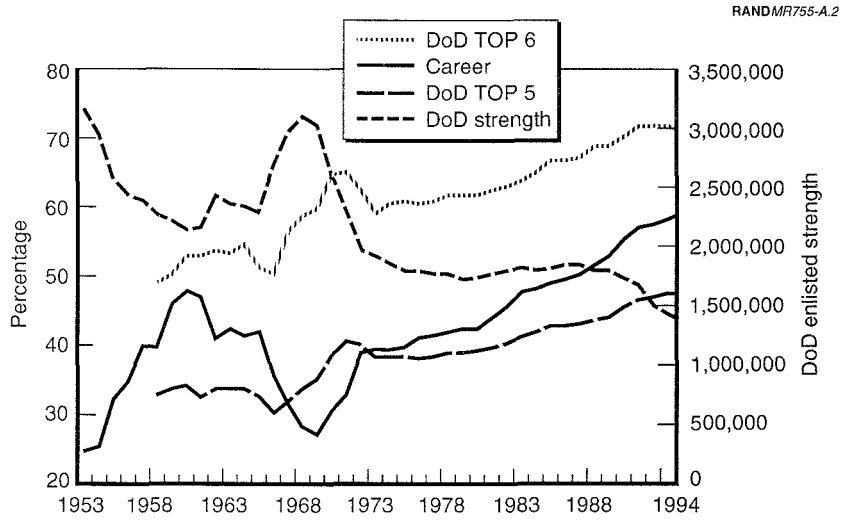


Figure A.2—Career Force, TOP 6 and TOP 5 As a Percentage of Enlisted Strength, 1953–1994

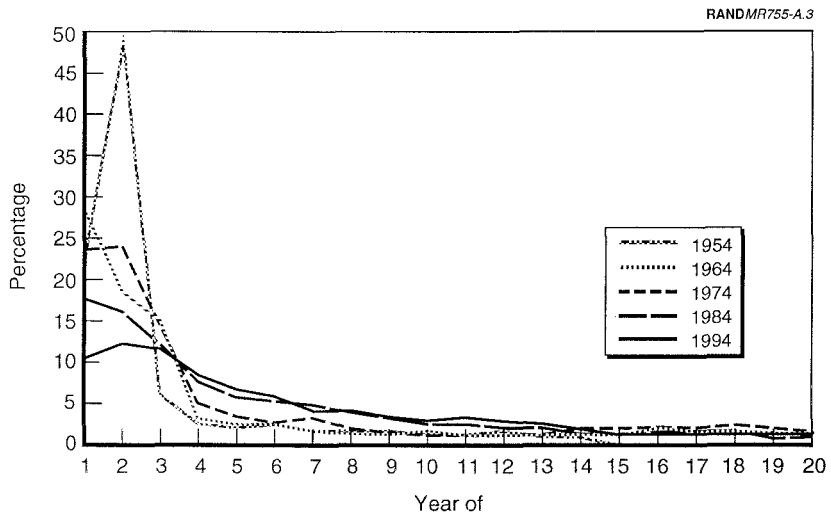


Figure A.3—Army Year of Service Profile, Selected Years

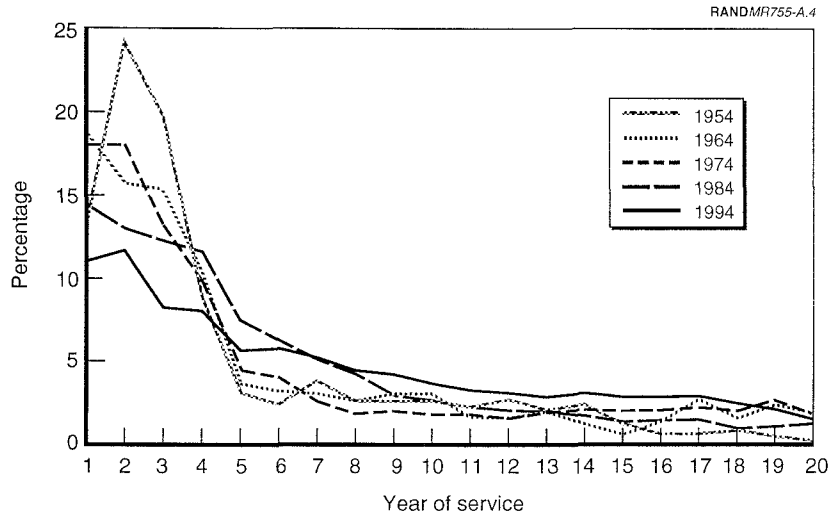


Figure A.4—Navy Year of Service Profile, Selected Years

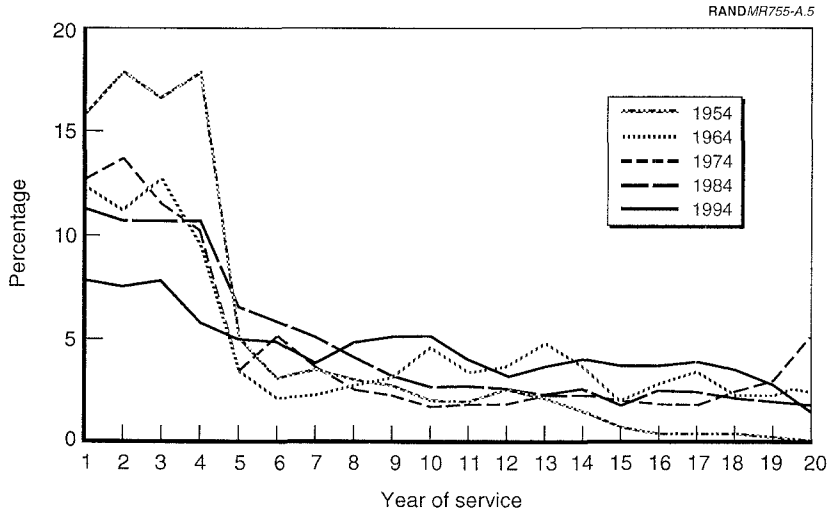


Figure A.5—Air Force Year of Service Profile, Selected Years

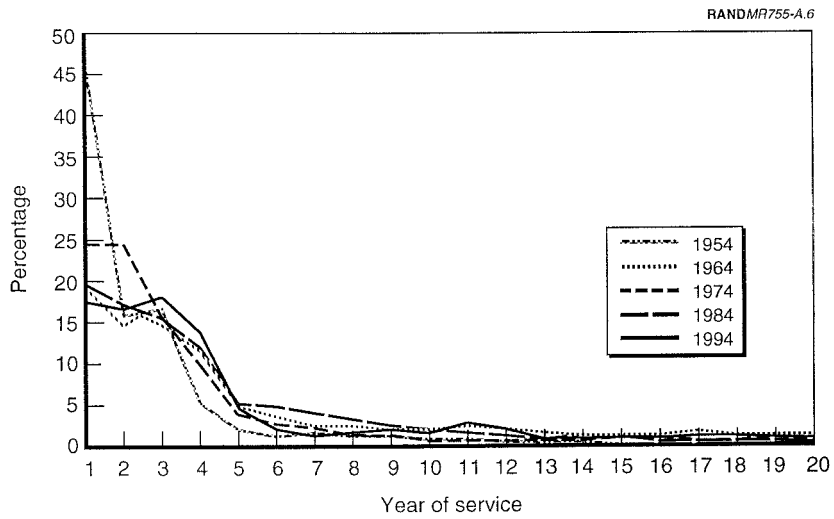


Figure A.6—Marine Corps Year of Service Profile, Selected Years

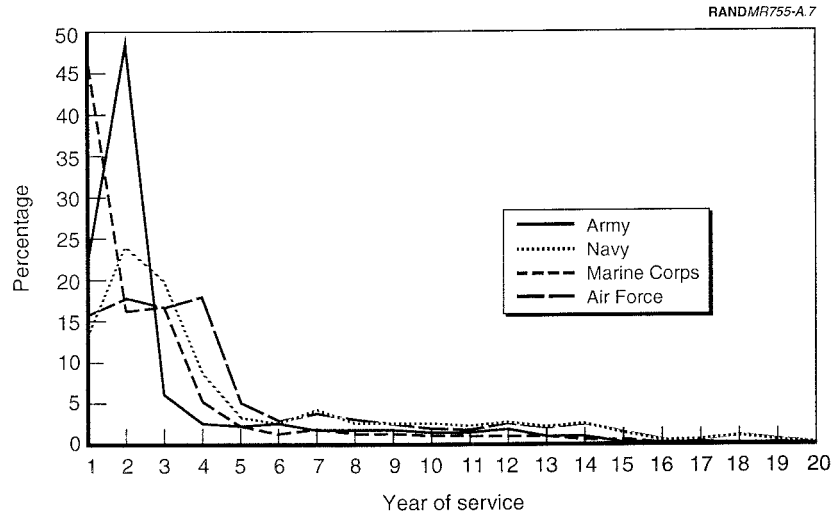


Figure A.7—1954 Year of Service Profile, Each Service

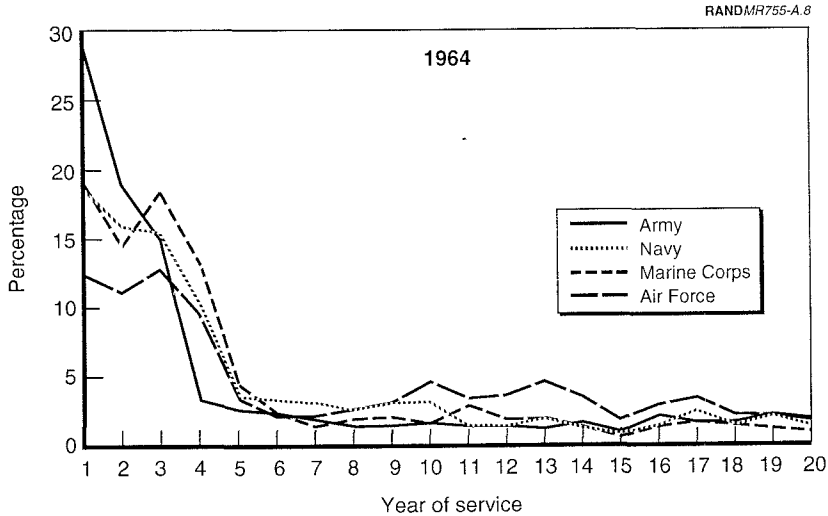


Figure A.8—1964 Year of Service Profile, Each Service

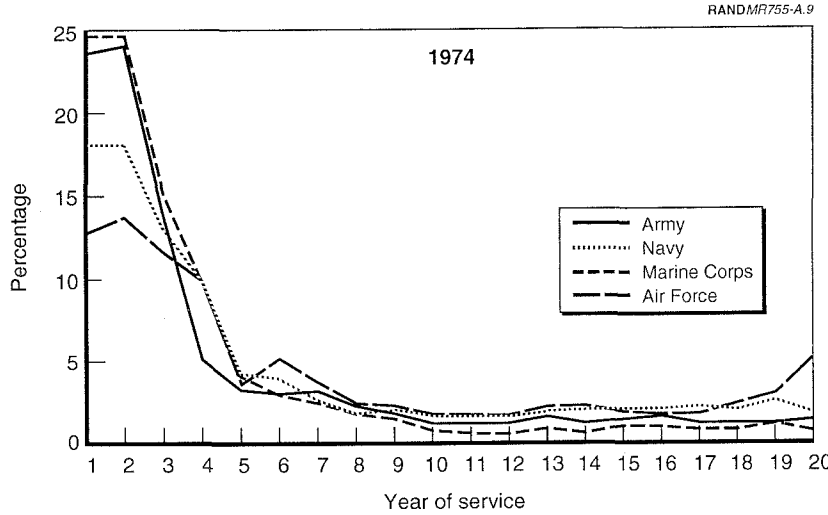


Figure A.9—1974 Year of Service Profile, Each Service

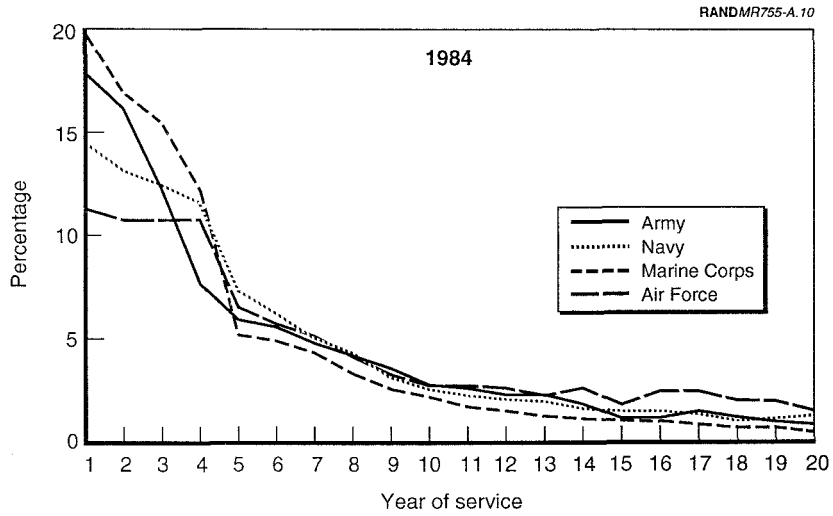


Figure A.10—1984 Year of Service Profile, Each Service

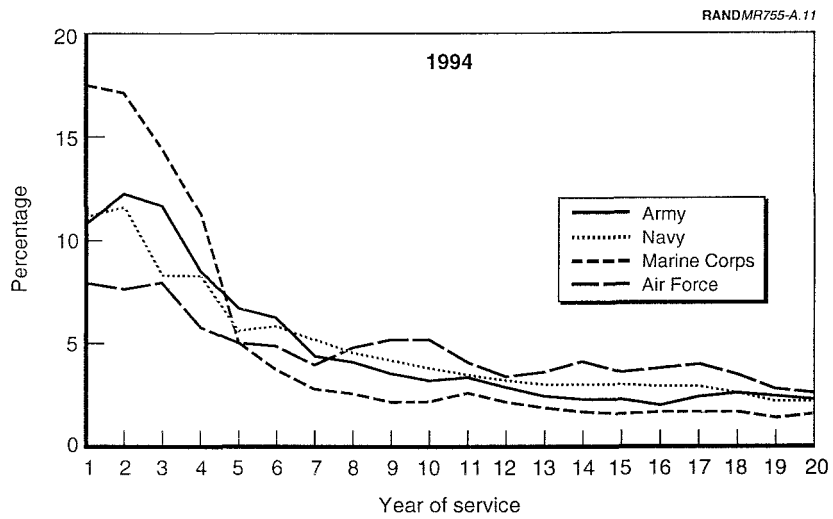


Figure A.11—1994 Year of Service Profile, Each Service

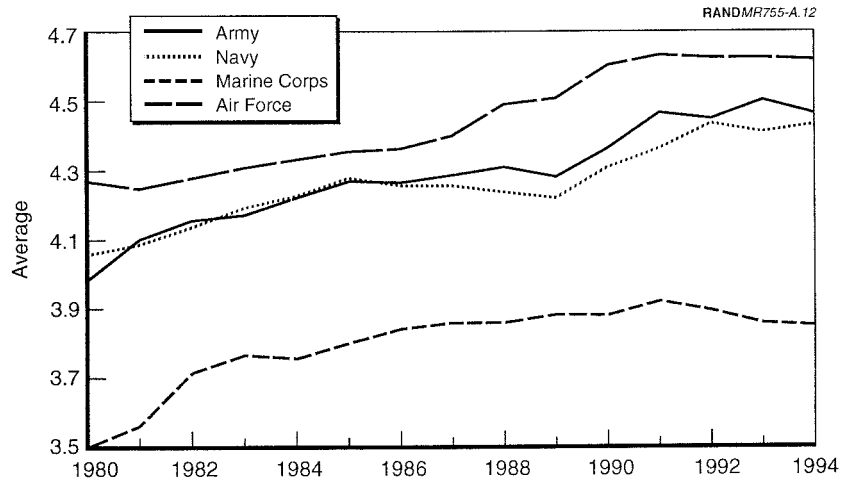


Figure A.12—Average Enlisted Grade, Each Service, 1980–1994

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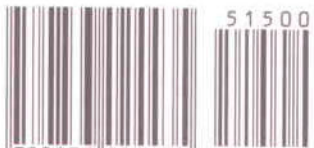
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