

LOW-APTITUDE MEN IN THE MILITARY

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WHO PROFITS, WHO PAYS?

Janice H. Laurence & Peter F. Ramsberger

Foreword by W. S. SELLMAN

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Foreword

Mention the military and many will think of Stealth Bombers, Cruise Missiles, M-1 Tanks, Sea Wolf Submarines, Apache Helicopters, and M-16 rifles. But behind the technology are people. Hundreds of thousands of fine young men and women are recruited into the Services each year to operate and maintain the equipment and to be prepared to defend the nation and its vital interests. The Directorate for Accession Policy, within the Office of the Assistant Secretary of Defense (Force Management and Personnel), is responsible for setting and monitoring enlistment standards, policies, and practices. Just as technology has shaped and altered the nature of warfare, military manpower events have left an indelible imprint upon recruitment and selection policy. All too often, however, the lessons, not to mention the details of historical events, are forgotten. History repeats itself, sometimes unnecessarily.

This book recounts two important periods for military manpower—Project 100,000 and the ASVAB Misnorming—when low-aptitude personnel were admitted into the military in substantial numbers. These are times the Services might like to forget, because troop quality suffered. For others, these periods represent important large-scale social welfare efforts of the modern military. This book analyzes what happened before, during, and, for the first time, after Project 100,000 and the Misnorming. It describes what became of the low-aptitude military veterans a decade or two later. The implications and reactions to these periods are necessarily drawn by blending fact and innuendo.

The authors, Janice H. Laurence and Peter F. Ramsberger, are both Senior Scientists with the Human Resources Research Organization (HumRRO). Both have a decade of experience in conducting military manpower and training research. Having recently completed a study of the long-term economic and social effects of Project 100,000 and the Misnorming, the authors have amassed an extensive collection of data, reports, memoranda, and notes from interviews and informal conversations about low-aptitude personnel and the military. They have synthesized this information into six chapters. Chapter 1 introduces these periods and provides a context for continuing interest in them. Chapters 2 and 3 chronicle Project 100,000 and the Misnorming, respectively. Chapters 4 and 5 describe the methodology and results of a recent look into the lives of the participants and compares their well-being with low-aptitude nonveterans. Finally, Chapter 6 discusses the aftermath and the lessons learned from Project 100,000 and the ASVAB Misnorming. These chapters have something to offer those involved in military manpower issues and novices alike. The information, thoughts, and impressions presented in the text are a valuable contribution to military psychology and beyond.

W. S. Sellman
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Defense (Force Management and Personnel)

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Although there are but two names on the cover of this book, the authors are well aware that without the support of numerous others the contents would truly be lacking. We are deeply indebted to Dr. W. S. Sellman, Director for Accession Policy, Office of the Assistant Secretary of Defense (Force Management and Personnel) not only for funding this work (under Contract No. N 66001-87-D-0085 Delivery Order 7J24) but also for providing us with useful ideas and materials. Dr. Sellman has been the driving force behind many projects aimed at improving America's military. Our biggest hope for this book is that it meets his high expectations.

The authors, together with our sponsors, owe a debt of gratitude to I. M. Greenberg. Before he retired from the Federal government, Mr. Greenberg was Deputy Assistant Secretary of Defense for Program Management in the Office of the Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics. Prior to serving in this capacity, he was Director of Project 100,000 under Secretary of Defense Robert S. McNamara and Assistant Secretary of Defense for Manpower and Reserve Affairs Thomas D. Morris. As Director of this 1960s War on Poverty Program, Mr. Greenberg was instrumental in designing and establishing a data base, implementing and monitoring the program, and reporting on the progress of Project 100,000. After leaving Federal employment, Mr. Greenberg continued his interest in military manpower issues. He was one of the first to analyze data on the performance of men erroneously enlisted as part of the misnorming of Defense's enlistment

screening test. In many ways, this book is but an epilogue to Mr. Greenberg's work on the military performance of low-aptitude recruits.

We are also grateful to the Human Resources Research Organization and in particular Mr. William C. Osborn, President, and Dr. Robert Sadacca, Vice-President, for their encouragement and support, both monetary and personal. Dr. Brian K. Waters, Manager of HumRRO's Manpower Analysis Program, believed in our ideas, sharpened our thinking, and otherwise pushed us toward publication. Ms. Lola Zook edited the book for us. While this may sound simple and perfunctory, nothing could be further from the truth. Ms. Zook reached in to her many years of experience as a journalist and technical editor and gave some of her soul. Ms. Monica A. Gribben diligently assisted us in previous analyses of data on Project 100,000 and the ASVAB Misnorming. Chapter 5 could not have been written without her. Ms. Emma James diligently typed the many versions of the draft document, putting up with the seemingly endless changes that are inevitable in an undertaking such as this.

We would certainly be remiss if we failed to mention those associated with the Department of Defense, the Military Services, and veterans' groups who, through personal accounts and as written documentation, provided insight into the eras discussed. We appreciate their candor and hope our words are true to their insights. Finally, we thank the veterans of Project 100,000 and the Misnorming for serving their country. We hope that the discussion contained in these pages will enable future veterans to profit as much as they were willing to pay.

CHAPTER 1

Military Selection and Social Welfare Issues

Twice upon a time, in the not too distant past, marginal manpower made military history. Beginning in 1966, under Project 100,000, some 300,000 low-aptitude men enlisted or were drafted into the rank and file as part of a social welfare program.¹ Responding to President Lyndon Johnson's War on Poverty, then-Secretary of Defense Robert S. McNamara launched this project with the hopes of equalizing the burden of wartime service, while turning the lives of the disadvantaged around through a tour of military duty. A decade later, quite by accident, even more of our nation's less-gifted youth were selected for service as a result of the "ASVAB Misnorming." An inadvertent error in the scoring of the enlistment screening test was responsible for a social experiment that no one knew was taking place. Project 100,000 was discontinued by the end of 1971 and the scoring error on the military aptitude test was corrected by late 1980, yet their legacies remain.

With little data to support hopeful claims, some outside the military herald these periods as proof positive that Defense can solve domestic ills. To the Military Services, these periods are anathema. Project 100,000 has been described as "a specter that hangs over the Services."² And, in some military manpower circles, the atmosphere gets pretty uncomfortable when the "M" (as in Misnorming) word is mentioned. These deluges of low-aptitude recruits actually happened upon disparate times—the first in the midst of the raging Vietnam war and the second as the peacetime viability of the new-fashioned volunteer force was being put to the test—yet motives of foresighted manpower planning have been

attributed to Defense for both occasions. Besides the suspicions over their antecedents, harboring men of marginal aptitude was—and is—feared as detracting from the military's national security mission and tarnishing its competent, able, and valiant image. Members of Congress and the press, as well as manpower planners, lamented troops as being dense and dimwitted, nitwits and nincompoops.

Bringing in and perhaps uplifting those of low ability may be noble, but Defense policymakers fear that it diverts attention from the military's primary mission. The Department of Defense (DoD) exists to secure the nation's survival and independence against hostile powers that may threaten our way of life. Defense's function is to preserve the freedom of the United States of America and protect its vital interests, thereby helping to create a prosperous environment. At a recent conference, one military officer wryly remarked: "The military exists to kill people and break things." While a little harsh, the message is that military personnel are primarily warriors (in waiting), not social workers and counselors. But, though the military may not wish such a role upon itself, the original question remains: Can Defense positively affect the lives of the disadvantaged, even after they leave service?

SOCIAL WELFARE AS A SECONDARY FUNCTION

The Military Services do not regard their roles as that of social welfare agencies or relish the image as employers of last resort, but others do. There are some who would like to see the modern military's doors left ajar to those of low ability once again, to make it thrice upon a time despite the military's protestations.³ In the mid-1980s, 83 percent of the American public voiced a strong opinion that the military should accept volunteers who lack the necessary basic skills and provide them with the education they need.⁴ Notions of a new war on poverty⁵ and poor literacy seem to be swelling and even White House officials are wondering whether Defense should have a role.⁶ There is a growing feeling that the nation's human resources are being depleted. Numerous reports are circulating today with alarming news of the erosion of skills and abilities on the part of America's youth, particularly at a time of technological growth. Even their titles are anxiety-provoking—*The Subtle Danger*, *America's Next Crisis*, *A Nation at Risk*.⁷

Nationwide, the functional illiteracy rate is around 30 percent. Youth are so deficient in basic English comprehension and mathematics that they are said to be unprepared not only for tomorrow's jobs but today's as well.⁸ In 1988, the Departments of Labor, Education, and Commerce

warned of an increasing “skills gap” in their report, *Building a Quality Workforce*.⁹ They found that two-thirds of 134 business representatives interviewed believed that entry-level workers lack sufficient basic skills or competencies, including reading, writing, mathematics, and communication. They also described youth as deficient in problem solving, teamwork, initiative, and adaptability. Labor, Education, and Commerce’s prescription was to strengthen the educational system. Corporations are not looking for high-level, job-specific skills but for *basic* reading, writing, and arithmetic functioning above a rudimentary level. Unfortunately, we don’t seem to be showing up well in terms of literacy levels either nationally or internationally, let alone meeting employers’ needs.¹⁰ Time was when a company had only to provide a little informal, on-the-job training to its new crop of fresh high school graduates. Now corporate America, with its fast-paced technology, must look far and wide to find enough workers from the declining youth labor pool. When it locates them, many businesses are finding it necessary to provide remedial basic education before their workers can become productive.

Demographic shifts are compounding the nation’s skills decline. Population projections indicate that by 1997, five of every six new labor force entrants will be female, minority group members, or immigrants. Between now and the year 2000, 29 percent of those new to the labor force will be nonwhites.¹¹ The problem is not the “browning of America” per se, but the fact that minorities (e.g., blacks and Hispanics) are more likely to receive failing grades in school and perform more poorly on literacy assessments.¹² Growing up in poverty dramatically increases a young person’s statistical chances of having weak basic skills. Nearly half of all poor youth score in the bottom fifth of the basic skills distribution, while over three-fourths of all poor youth have below-average basic skills.¹³ While certainly the most plausible reasons for minorities trailing whites are related to impoverished environments—in school and at home—the fact remains that unless some extremely dramatic health, education, and welfare steps are taken, these demographic trends do not bode well for this nation’s social and economic health and competitiveness. Why not solve these ills through the nation’s largest education and training institution? After all, advertising jingles proclaim that the Army, Navy, Marine Corps, and Air Force “don’t ask for experience, we give it.” What’s more, the Armed Forces are “a great place to start,” inculcating basic and vocational skills as well as traits such as dependability and discipline through its no-nonsense approach.

This is hardly a new problem or a novel solution. Project 100,000 wasn't the first time that the idea was tendered of using military service to ameliorate the educational ills of society. According to military manpower analyst and Naval Postgraduate School Professor Mark J. Eitelberg, the U.S. military has served as an instrument of both war *and* welfare for over a century.¹⁴ Included in Eitelberg's abbreviated list are the nineteenth-century military's use of Indians as scouts, guides, and soldiers; the Civil War era's provision of basic education to black soldiers; and the assimilation of immigrants through service to their adopted country. A notable twentieth-century example is Franklin D. Roosevelt's pride and joy, the Civilian Conservation Corps (CCC). From 1933 to 1942, the Army, despite what one topical scholar describes as "undisguised reluctance,"¹⁵ was put in charge of running the CCC camps, which housed unemployed young men (ages 18–25) whose families were receiving public assistance.¹⁶ Through the CCC, "Roosevelt brought together two wasted resources, the young men and the land, in an attempt to save both."¹⁷

A generation later the human resource situation was much the same. President John F. Kennedy's Task Force on Manpower Conservation gravely reported in *One-Third of a Nation* that nearly 35 percent couldn't even qualify for military service.¹⁸ This high incidence of rejection among the male population of military age led to Kennedy's Manpower Conservation Program, which was continued under his successor's War on Poverty. Ultimately such bad news inspired Project 100,000. Analogously, the Misnorming took place in a time of dire straits as well. At that time, news abounded of a "test score decline." Our country's test-taking youth were spiraling toward the nadir on standardized measures of ability and achievement. As President Dwight D. Eisenhower once said, "things are more like they are now than they ever have been before." This pearl of wisdom may be a bit hard to decipher but the point is: same old news, different decade.

If Defense actively fights the new war on poverty and ignorance, it will do so grudgingly. It's not that this mighty bureaucracy is heartless. In fact, the Services' prime manpower resource is those whom the Grant Foundation calls *The Forgotten Half*¹⁹—the millions of non-college-bound youth. The military has not at all forgotten such youth who suffer high unemployment and are struggling economically and socially. The Military Services, through the medium of the U.S. Military Entrance Processing Command, (MEPCOM), provide vocational counseling materials, including a version of the current enlistment screening test, to any interested high school, free of charge.

Requirements for service entry and the hundreds of enlisted occupations are described in colorful brochures and *Career Guides*. Today, over 1 million students in over 15,000 schools take MEPCOM up on its offer, and in return grant MEPCOM the opportunity to undertake military recruiting efforts.²⁰

What these youth and others find out is that while the Services don't ask for experience, they do require basic aptitude, physical fitness, and moral character. The military has nothing against admitting the disadvantaged, but it would prefer not to bring in the unqualified. Unfortunately, those typically rejected for service tend to be economically disadvantaged as well. To better understand the military's reluctance to take on a remediation function, particularly nonincidentally to its primary mission, it is important to understand the process and basis of screening for service.²¹

MILITARY MANPOWER AND SCREENING FOR SERVICE

In performing its role as an instrument of national security, DoD employs and deploys not only the power of weapons and tactics, but also military manpower—a legion of soldiers, sailors, marines, and airmen. The numbers have grown from the 672 enlisted active duty personnel in 1789 and even the 119,839 at the turn of the twentieth century.²² Wartime demands necessitated calling millions of men to arms and, if they did not heed the call voluntarily, inducting them through the power of the draft. Since 1973, our military forces have relied exclusively on “enlistees” as opposed to “draftees.” Though much reduced in comparison to the strengths under World War I, World War II, the Korean conflict, and Vietnam, still the selection task for today's standing army is formidable. At the end of fiscal year (FY) 1989, around 1.8 million enlisted men and women were on active duty in the Services. Further, though the dramatic developments in Eastern Europe have led to plans for a defense drawdown that is expected to culminate in a 25 to 30 percent reduction in this count over the next five years, 1.3 million is still a lot of uniforms.²³

To maintain today's peacetime manpower strength, the Services choose close to 300,000 new active duty recruits each year from about three times as many applicants. Accessions (as entering recruits are called) are drawn primarily from the nation's young and vocationally inexperienced. These recruits have to be selected not for just a single job but for hundreds of diverse military jobs. They serve as infantrymen, electronics techni-

cians, nuclear power specialists, electrical or mechanical equipment repairers, and in a multitude of other occupations.

Screening for Service entry is accomplished using a variety of criteria—aptitude, education credentials, physical fitness, moral character, age, and citizenship. Recruit quality, however, is generally indexed on the basis of the first two measures. Over 40 years of research have shown that recruit aptitude levels are strongly related to military training success and job performance.²⁴ In addition, decades of study results have demonstrated that those without a high school diploma are twice as likely as high school graduates to be attrition losses—that is, to leave the military before completing a full term of service.²⁵ Thus, the Services seek to enlist high school graduates over nongraduates. The latter are not automatically barred from joining the military, but they are required to meet more stringent aptitude standards (to ensure accepting only the “best” of such applicants), and congressional mandate places a ceiling on their enlistment.

Of all the selection screens, cognitive aptitude is the single most important determinant of who gets into the military and who does not. This wasn’t always the case. “The colonial forces of the Revolutionary War accepted almost any man who volunteered . . . as long as he could walk, talk, see, and hear.”²⁶ Selectivity wasn’t a big issue until midway into the twentieth century. Uncle Sam wanted “you” in 1940 if you had the ability to comprehend simple orders given in the English language. Today, considerably greater evidence of aptitude is required of military applicants. Aptitude standards for entry into the Military Services have become more sophisticated and stringent over the past 50 years as has military technology, and they have ebbed and flowed along with numerical requirements.

Drawing on the accumulating experience with standardized, group-administered paper-and-pencil aptitude tests—primarily measures of basic verbal and mathematics skills—military selection and classification have become increasingly efficient and effective. In World War I, the Army Alpha (and Beta, the oral and pantomime version for illiterates and non-English speakers) was developed and tried out on selected recruits to help meet the needs of rapid mobilization, training, and assignment. During World War II, an improved classification instrument—the Army General Classification Test (AGCT)—was introduced. This test, comprising vocabulary, arithmetic, and block-counting items, was used to sort “new arrivals according to their ability to learn quickly the duties of a soldier.”²⁷

Armed with such a powerful tool, the military moved the place of the test up in the selection process. Since 1950, the Armed Forces Qualification Test (AFQT) has been used prior to entry to select the required number of enlistees (and, prior to 1973, draftees as well) from among the multitude of examinees. Prospective accessions, following prescreening by recruiters for volunteers and by local draft boards for those examined for induction, were sent to the Armed Forces Examining and Entrance Stations (AFEES) for physical and aptitude testing. Upon taking the AFQT, the examinees' scores are reported in percentiles relative to a standard population, which permits a consistent interpretation. That is, a formula is applied to convert raw AFQT scores (the number answered correctly) into a measure relative to one's standing among the national youth population. A percentile score of 50, for example, would signify that the test taker did as well as or better than half of the "normative" population.

Originally, the AFQT was equated to percentile standing on the old AGCT, because an approximation to the national population of military age was available. This reference population is known as the Mobilization or 1944 Reference Population and comprised all men on active duty as of 31 December 1944 who had taken the AGCT.²⁸ Later, by having a sample of military applicants take both the AFQT and the AGCT, it was possible to have the score distribution from the latter affixed to the AFQT and assign percentile standing accordingly.

Percentile scores range from 1 through 99. AFQT percentile scores have been grouped into the following categories and subcategories:²⁹

AFQT Category	Percentile Range
I	93-99
II	65-92
IIIA	50-64
IIIB	31-49
IVA	21-30
IVB	16-20
IVC	10-15
V	1-9

Experience with personnel from all aptitude ranges has led to general recruiting rules of thumb. Individuals within AFQT Categories I through IIIA are actively sought; those within Category IV are enlisted sparingly

(with actual limits placed on the numbers allowed to enlist); and those within Category V are, by law, ineligible to enlist.

Though the Defense Department thinks of the AFQT as a test of general trainability and abhors calling it an intelligence test, such measures are no doubt highly correlated. As a point of comparison, one can loosely think of those scoring within the Category V range as those who would be labeled as mentally deficient or retarded on the basis of the Weschler Adult Intelligence Scale (WAIS). If the AFQT were equated with the WAIS, those in Category V would probably receive scores in the 70s and below. Category IVs might be expected to score in the 80s on the WAIS and would be termed borderline, with some even mildly retarded. While such individuals can certainly achieve social and vocational adequacy with proper education and training, clinical psychologists indicate that they generally need intense supervision and guidance, particularly under conditions of serious stress.³⁰

The Services did not abandon classification testing with the implementation of the AFQT. Additional test batteries, most notably the Army Classification Battery (ACB), the Army Qualification Battery (AQB) (a shortened form of the ACB), the Navy's Short Basic Test Battery (SBTB) and later the Basic Test Battery (BTB), and the Air Force's Airmen Qualifying Examination (AQE), have been administered at the point of or following selection. These tests have been used to appraise more specific vocational aptitudes (e.g., mechanical aptitude, automotive information, electronics information) for assigning recruits to Army and Marine Corps military occupational specialties (MOS), Navy ratings, Air Force specialties, or military jobs. Further, beginning in 1958, the ACB and later the AQB were administered at the selection point to supplement AFQT testing, because many of those who had been admitted from the Category IV range had proved to have difficulty in military skill training courses.

Though the AFQT has undergone numerous revisions over the years,³¹ and an interruption in its use between May 1973 and January 1976, it has remained the primary selection screen for entering recruits. Today, it is embedded within the Armed Services Vocational Aptitude Battery (ASVAB) used by all the Services for both selection and classification testing. The ASVAB has undergone modifications as well since its Joint-Service adoption in 1976. Every four years, the battery is updated and new, multiple forms are produced. And, in 1984, the standard population was updated as well; the same categories and percentile boundaries exist for the AFQT, but the scores are expressed relative to

the national population of young men and women who were 18 through 23 years old in 1980.

The current ASVAB comprises 10 subtests as follows:

Word Knowledge (WK)	Coding Speed (CS)
Paragraph Comprehension (PC)	General Science (GS)
Arithmetic Reasoning (AR)	Auto and Shop Information (AS)
Mathematics Knowledge (MK)	Mechanical Comprehension (MC)
Numerical Operations (NO)	Electronics Information (EI)

The first four of the listed subtests are combined as the AFQT. Other combinations of subtests are melded into composites by the Services for supplementary enlistment screening and job assignment purposes.³² While the actual tools of the trade—group-administered tests of verbal and quantitative abilities as well as more specific measures of vocational and technical skills—haven't really changed radically over the years, the entry standards have not remained invariant.

Selection standards are the criteria below which individuals may not be accepted for induction or enlistment into a Military Service. The basic purpose of such standards is to screen out potential enlisted personnel who are least likely to profit from training and those with lower levels of predicted job performance. Each of the Services sets formal minimum ASVAB standards and, depending upon numerical requirements and recruiting market conditions, specifies higher quality goals. Though the aptitude tests used by the military for selection have been subjected to considerable internal and external scrutiny, and have been rated high in terms of fairness, reliability, accuracy, and efficiency,³³ the setting of standards and quality goals is recognized to be somewhat arbitrary. Concerning the minimums for the AFQT when it was first introduced, Uhlaner and Bolonovich stated that "all cutting scores were administratively determined."³⁴ In the vernacular, this may mean that they were set "by guess and by gosh." According to an official Department of the Army publication, "minimum qualifying scores—cutting scores—for the Army's selection programs are set so as to reflect the supply of men available to the Army and the Army's need for manpower."³⁵

A relationship between aptitude and performance does not automatically establish a mandatory cutting score on the test. However, in light of this proven relationship, the Services try to set standards as high as applicant supply and recruiting resources permit. For no matter where

it is set, a higher standard will yield more productive recruits and a lower standard will yield less productive recruits.

Though rational, the strategy of setting standards and quality goals as high as supply and demand will allow inevitably affects individuals who aspire to become members. Military service is an appealing avenue to many of the underprivileged. The high enlistment propensity and voluntary participation rates (of those eligible) of low-aptitude personnel attest to this fact.³⁶ Unfortunately, stringent standards disproportionately deny enlistment opportunities (and thus access to the nation's largest education and training institution) to the disadvantaged, because undereducated persons of low socioeconomic status are likely to score relatively low on the enlistment screening tests. The current formal minimum aptitude standards (which vary by type of education credential) are presented in Table 1.1 On the basis of these rock-bottom standards alone—that is, without considering higher quality goals—Eitelberg estimated that 23 percent of young men and women would not meet the least restrictive Army standards.³⁷ This number may rise as the demographic changes in the youth population unfold or standards are raised.

NOT ON MY WATCH YOU DON'T

Since the mid-1980s the Services have enjoyed a quality bonanza. Over 90 percent of new recruits have had a high school diploma and about the same percentage have scored above Category IV. In FY 1990, about 94 percent of entering first-time (termed “non-prior service” or NPS) recruits had a regular diploma (97 percent counting alternative secondary school credentials) and 97 percent scored above Category IV. The Services have maintained quality despite being immersed in the low point of the declining manpower pool. And as Eitelberg claims: “In fact, 1990 may be the first year in almost four decades of record-keeping that the number of new recruits in Category I . . . exceeds the number of those in Category IV.”³⁸ If end strength and manpower requirements are scalped over the ensuing post-Cold War years, the Services will no doubt want to get choosier and choosier as to who dons a uniform.

Recruiters have scurried to attract those with the “right stuff.” It is quality recruits that the military wishes to contract with, for immediate service or a place in the delayed entry program (DEP) to come on board within a year. Of late, marginal applicants don't stand a good chance of being able to “be all that you can be” in the Army, going “full speed ahead” in the Navy, being one of the Marine Corps' “the few, the proud,” or “aiming high” in the Air Force. Prescreening on condensed versions

Table 1.1
Minimum Aptitude Standards for Enlistment by Service and Education Level
(FY 1990)

Education Level	Minimum Aptitude Scores ^a	
	AFQT Score	Other ASVAB Composites
ARMY		
High School Diploma	16	85 on any 1
GED/Alternative Credential	31	85 on any 1
No Credential	31	85 on any 1
NAVY		
High School Diploma	27	Varies by A-School ^b
GED/Alternative Credential	27	Varies by A-School ^b
No Credential	27	Varies by A-School ^b
MARINE CORPS		
High School Diploma	21	GT ^c =80
GED/Alternative Credential	31	GT ^c =80
No Credential	31	GT ^c =95
AIR FORCE		
High School Diploma	21	G ^d =30; MAGE ^e =133
GED/Alternative Credential	50	G ^d =30; MAGE ^e =133
No Credential	65	G ^d =30; MAGE ^e =133

^a Minimum aptitude standards are expressed as percentile scores on the AFQT and standard scores on the other ASVAB composites for all Services except the Air Force, which maintains the use of a percentile metric for its composites.

^b A-School is the Navy's designator for technical training school.

^c GT is the General Technical ASVAB composite, expressed in standard scores.

^d G is the General ASVAB composite, expressed in percentile scores.

^e MAGE represents the combined Mechanical (M), Administrative (A), General (G), and Electronics (E) ASVAB composites.

of the AFQT at recruiting stations diminishes the chances of many of lower aptitude being sent to the revamped AFEES (called Military Entrance Processing Stations [MEPS] or satellite Mobile Examining Team [MET] sites) to even take the ASVAB. The *New York Times* recently ran a front-page headline: "As Armed Forces Cut Back, Some Lose a Way Up in Life."³⁹ Because a score in the top half of the test is almost

essential for acceptance, "the Army's increasing selectivity is bringing with it a vexing social question: What does the nation lose if the military no longer serves as a channel for upward mobility for those at the bottom of the social ladder?"⁴⁰

Why have the standards gone up so much? Is it fair to have those of lower ability bear the burdens of wartime duty but be denied the benefits of peacetime service? There are no simple answers to these questions, but many contributing factors. Standards have risen over the years when conditions have permitted because accession policy representatives advocate assembling a force of the highest possible quality. As a rational employer, the military wishes to avoid poor performance in service, and higher standards and quality goals assist in this regard. Unfortunately, wartime scenarios require continual masses of manpower and all but the very "inapt" are susceptible to the call to arms by the Selective Service System. Even in war, the military has attempted to offset a deluge of lower aptitude personnel by requiring those who volunteered to meet somewhat higher standards than those who were drafted.

Today's military is free from heavy wartime demands. Further, there has been a great reduction in the proportion of personnel needed to fill general jobs that have little or no technical content. Over the years, MOS, ratings, and specialties have become increasingly specialized and technologically complex. Since World War I, the percentage of military jobs that can be classified as technical has increased from approximately 7 to nearly 30 percent, while general military skill occupations have decreased from 42 to 17 percent.⁴¹

Though some may assert that technological advances in weapon and communication systems will mean equipment that is more reliable and easier to maintain, Defense analyst Binkin argues:

The weight of the evidence is that both new and replacement weapon systems will demand ever-more-skillful operators and maintainers, especially if the capabilities of new systems are to be fully exploited. Thus prudent planners should anticipate that the services' requirements for bright, technologically literate individuals are unlikely to diminish in the years ahead, and it is more likely, given the present course, that the need for such people will grow commensurate with the complexity of the systems being fielded.⁴²

Later, Binkin succinctly stated: " 'smart systems' require 'smart' soldiers."⁴³ Attempts to enhance the military manpower effectiveness of the leaner armed forces revolve around recruiting the best-qualified youth who have the potential to absorb training quickly, perform well in their jobs, and become effective leaders. These days, Defense must rely on

its first string, for it is not going to have the luxury of a lot of extras sitting on the bench. Secretary of Defense Richard Cheney expressed his commitment to procuring quality recruits when he remarked to the press: "You can't run any organization, least of all the military, without being able to attract absolutely first-class people."⁴⁴

While higher ability personnel may cost more to recruit, such costs are offset by their in-service performance. The Defense Department spends in excess of \$5 billion per year to provide recruits with basic and advanced training in well over 1,000 enlisted occupations. However, training costs are not the only thing affected by inadequate selection and classification. After training, recruits are made responsible for operating and maintaining literally tens of billions of dollars worth of military hardware. And, it is argued, the costs of poor performance are not just monetary: "The military environment is in a sense more serious than the civilian because military personnel must be prepared to fight for their country and die in support of its defense. The consequences of inadequate selection and classification procedures, poor training, or bad equipment design are grave."⁴⁵ Poor quality can detract from the forces' ability to train and drill to maintain force readiness and avoid catastrophe. Marginal sailors were reputedly a factor in the disastrous turret explosion aboard the USS Iowa.⁴⁶

So go the arguments for the need for high-quality troops. While these arguments are basically sound, there are some other reasons why the Category IV count is well under 10 percent—in fact, has hovered at about 5 percent for the last four years. There is something of the "Quality go down? Not on *my* watch" mentality afloat among military personnel managers. If accessions don't look good, these managers don't look good, and so lower aptitude recruits are held at bay. Starting at the top of the quality hierarchy and selecting down is a firm strategy, but stating absolute quality requirements is done through a lot of "swamp gas and mirrors." When the Army indicates that it *requires* between 59 and 63 percent of entering recruits to score within the Category I through IIIA range and no more than 10 percent from Category IV (and the other Services state higher requirements), in reality these are *desires*.⁴⁷

While no one would argue that quality isn't a good thing to strive for, in the future the military may find it hard to achieve. Aside from the evidence presented earlier of an increasing decline in youth skills, accompanying and outlasting the "baby buster" numerical decline, force reductions brought on by the dismantling of the Berlin Wall and later events may cause a cutback in the recruiting resources that are vital for competing for quality youth in the employment market in which the

volunteer military operates. In addition, as *Newsweek* related in its article on "Warriors Without War," the military is being asked "to do less with less."⁴⁸ The branches are "now scrambling for a new niche in the post-Cold War environment."⁴⁹ "New missions" like the War on Drugs "that were once deemed secondary or even inappropriate have suddenly taken on high priority."⁵⁰

Defense may have to take a greater proportion of less able recruits and make good use of the resources available, as it has in the past. The "military as a remediator" constituency may gain momentum as a consequence of the drawdown of military might and educational power. A defense analyst recently testified before Congress:

While the Department of Defense policies emphasizing quality may be optimal from their perspective, those same policies may be less than optimal from the perspective of society. In an age of dramatically reduced threat the cost of even a scaled-down peacetime force may be too expensive for "national" defense to be its only product. Society may come to demand that the military assist in other national needs, such as providing large-scale manpower training [for] low aptitude men and women.⁵¹

Is there a bright side to the military even reluctantly attacking such social and educational problems? Despite high technology, there are roles for those with lesser abilities to play in the military. Though their performance in service may not gladden the hearts of their sergeants, they have been asked to defend the nation in past wars, and they may be asked to do so again, so why not continue to offer them the benefits of service in time of peace?

The lore is that military employment opportunities, discipline, and training can give the low-aptitude a leg-up in later life. Perhaps Project 100,000 and the ASVAB Misnorming can provide clues to the veracity of such arguments. For, in the words of Bernard Baruch, elder statesman and advisor to President Franklin D. Roosevelt: "If we are ever to master these forces, . . . and provide for the future better than the past, we must somehow learn from the experiences of the past."⁵² So, from here, the spotlight will be turned on these two occasions in the past 25 years when the Services witnessed—and survived—a large infusion of low-aptitude and thus generally disadvantaged youth.

CHAPTER 2 ---

Project 100,000

In September of 1963, President Kennedy established the Task Force on Manpower Conservation because, in the previous year, one-third of all 18-year-old men reporting for draft examinations had been judged unfit for service. Of these, nearly half were ineligible because of aptitude deficits. Deeply concerned, the President stated:

This situation must not be permitted to continue or its implications to go unattended. These figures are an indictment and an ominous warning. Many of these recent rejectees now are looking for work and unable to find it. They make up a large proportion of the present alarming total of unemployed youth. A young man who does not have what it takes to perform military service is not likely to have what it takes to make a living. Today's military rejects include tomorrow's hard-core unemployed.¹

The task force deliberators included the Director of the Selective Service System as well as the Secretary of Labor, the Secretary of Health, Education and Welfare, and the Secretary of Defense, Robert McNamara. They examined Selective Service records regarding rejection rates, and commissioned a nationwide survey of 2,500 "rejectees." Their report was submitted in January 1964, and it painted a rather bleak picture. Two out of five rejectees had dropped out of school to support their families or themselves; three out of ten were not working, and of those working three out of four had unskilled, semiskilled, or service jobs.

Among the committee's recommendations was that young men should receive their preinduction examinations at the earliest possible time (18 years of age) so that those with deficits or correctable medical problems

could be identified and helped. This in itself was an important step, because up until that time such men were simply told they were ineligible and sent on their way. Youth found to have physical problems would be advised to seek medical attention. "Mental rejectees" would be provided counseling about their educational and vocational needs. The task force thought that these efforts, in conjunction with already existing Federal programs entitled by the Youth Employment Act, the Manpower Development and Training Act, and so forth would do much to ameliorate the situation. At that time there was no suggestion that Defense would play a role in manpower conservation.

However, the issue appears to have stayed with Secretary McNamara. He began to think of ways in which DoD could play a role in fighting the newly declared War on Poverty. In 1964 and again in 1965, McNamara proposed the Special Training Enlistment Program, or STEP. He envisioned a period of "pre-basic" training for those with remediable skill or physical deficits; the help provided during this phase would then allow them to function successfully in the military. This program would have covered only voluntary enlistees scoring between AFQT 15 and 30, or those with medical defects that could be corrected within a six-week period. For the mentally marginal the training emphasis was to be placed on verbal, arithmetic, and mechanical abilities. The program was to be conducted at Fort Leonard Wood, at an estimated cost of \$31.5 million per year, with approximately \$1 million for military compensation of the trainees. At an annual input of 15,000 individuals for four years, the estimated price tag per trainee was \$2,100.

There was just one problem: Congress would have none of it. They disapproved STEP because they believed that remediation was not a military function and that such a program, if carried out, should be done under the aegis of a civilian agency such as the Office of Economic Opportunity. Legislators also felt that an attempt by the military to take on such a role while facing a buildup in manpower would place too great a strain on training facilities. Just to be sure, they attached a rider to the DoD appropriation for FY 1966, stating that none of the monies included in the legislation "shall be available for the expenses of the Special Training Enlistment Program (STEP) or similar programs."² Because of this proviso, STEP never got off the ground.

IF AT FIRST YOU DON'T SUCCEED . . .

McNamara's STEP proposal was nothing new. Similar ideas had been espoused by a number of military manpower analysts over the years. A

1959 report resulting from the Conservation of Human Resources project presented in vivid detail the difficulties the Armed Forces faced in World War II because of the huge influx of disadvantaged, low-aptitude, and illiterate personnel. The authors estimated that some 250,000 men were rejected from service for educational reasons alone, with an additional 122,000 prematurely separated for inaptness. "This loss is well in excess of all battle deaths suffered by the Armed Forces during World War II."³ Similar problems were experienced by the Services during the Korean conflict. This was part of the logic used to justify the STEP program:

During World War II and Korea, the Services were required to accept large members of men in this [low-aptitude] category at a time when they could least afford to experiment with training or utilization methods best adapted to this population group Our experience with this marginal group under these conditions was not good. Their training attrition rates were high, their discipline records poor, and many of them—if allowed to stay—became "career privates" without potential for advancement.⁴

Despite such experience, there was little incentive to experiment with classification and training procedures to determine efficient ways to turn marginal personnel into effective soldiers, sailors, marines, and airmen. As noted by Navy psychologist Edward A. Rundquist, "it is apparently not accepted by military management that allocation of small resources during peacetime to the study of problems that will inevitably recur during wartime will result in fewer crash programs and be less expensive in the long run."⁵

Coinciding with the discovery of a large population of young men deemed unfit for military service was an awakening to the fact that there were poor people in America. During the 1950s little was said or written about the size or status of the population of the underclass. Under the Kennedy administration this situation began to change. In 1962 Kennedy delivered his welfare address to Congress, bringing about the Public Welfare Amendments and the first Manpower Development and Training Act (the focus of which was the retraining of displaced workers). Lyndon Johnson gladly accepted the baton as a champion of the less fortunate in this country. His antipoverty bill of 1964 set in motion a huge Federal response, including public housing bills, job training, community anti-poverty programs, Medicare, Medicaid, and VISTA. Jobs and job training were a central focus, as the call came to provide not just a hand-out, but a helping hand-up. "By 1969 at least 17 programs were generating more than 10,000 manpower 'projects' of varying size and scope."⁶

In 1966 McNamara and his top aides were briefed by Marine Corps personnel regarding their experience with men of lesser ability. The Corps was proud of the fact that they were able to admit youth scoring as low as the 10th AFQT percentile and, through a program involving repetition of training and special remedial efforts, turn them into effective service members. They felt this was worth the Secretary's attention, and they got it. McNamara asked that senior DoD officials study the Marine Corps' techniques. The positive feedback he got excited him greatly.

In light of the compelling issue of poverty, armed with new evidence in hand, and undaunted by earlier rejections, McNamara reformulated STEP. On 23 August 1966 he announced the onset of Project 100,000 in a speech delivered in New York City to the Veterans of Foreign Wars. He began his address by indicating that the United States was firm in its commitments to allies around the world, including Vietnam and West Germany. Noting that administration policy in Southeast Asia was not unanimously supported in this country, he reminded his listeners that the freedom to dissent was one of the rights we were seeking to guarantee for all peoples. What the Secretary called "the growing incidence of internal conflict in the world" was attributed in part to the existence of poverty, which he called "a social and political paralysis that atrophies ambition, and drains away hope." He then turned his attention to "the pestilence of poverty [that] has infected our own plentiful nation."

Citing statistics that one of every six Americans was living far below the average standard of living in this country, McNamara declared his support for the programs initiated by President Johnson and the Congress to attack this problem. And then, in his role as Secretary of Defense, he asserted the position that "poverty abroad leads to unrest, to internal upheaval, to violence, and to the escalation of extremism." Further, he claimed, "it does the same within our own borders." Noting that the National Guard had in the recent past been called out to put down disorders in *this* country, he asserted that poverty was at least a partial cause in most of these instances.

It is not only the incidence of unrest that may occur as a result of poverty that should concern us, McNamara stated, but also the loss of "the performance potential of these millions of human beings, to that extent this nation's ultimate security is diminished." The one-third of the nation's youth who would not qualify for military service "are victims of faulty education or of inadequate health services" and "are part of America's subterranean poor."

The Secretary went on to discuss the extensive educational and training capabilities of the Department of Defense, noting that some 2,000

separate courses are offered by the Services, that DoD dependents' schools (DODDS)⁷ together made up the ninth largest American school district, and that over the previous five years an annual average of 95,000 servicemen had earned a high school diploma or its equivalent while in the military. The success of these efforts was credited to innovative and adaptive training mechanisms employed within DoD. The large number of youth who fail to qualify for military service, and therefore cannot benefit from these institutions, represented a failure of the entire educational system. "It is not because they do not possess basic—perhaps even brilliant—intelligence," McNamara claimed, "but simply because their cultural environment is so radically different from that assumed by the test-designers."

In announcing that the Services would accept 40,000 prior rejectees in the current fiscal year, and 100,000 each year thereafter (thus the name Project 100,000), McNamara stated:

The poor of America have not had the opportunity to earn their fair share of this nation's abundance, but they can be given an opportunity to serve in their country's defense and they can be given an opportunity to return to civilian life with skills and aptitudes which for them and their families will reverse the downward spiral of human decay.⁸

Beginning in October 1966 some of the omitted "one-third of the nation" would be given an opportunity to serve. This would be accomplished primarily by lowering aptitude standards, as well as opening the door to a relative few of those with readily remediable physical problems.⁹

Two years before the speech that launched Project 100,000, in August 1964 Congress passed the Gulf of Tonkin resolution, beginning the long and painful formal involvement of the United States in the Vietnam conflict. Approximately seven months later the first Marines arrived at Danang, and by the end of 1965 nearly 200,000 American troops were stationed in Southeast Asia.¹⁰

THE REAL REASON FOR PROJECT 100,000: SOCIAL WELFARE OR MANPOWER DEMANDS?

It is axiomatic that during times of war the need for individuals in the military increases. Since screening for service based on test results first began, standards had been lowered whenever a major mobilization was under way. In World War II, for instance, those with less than a fourth-grade reading capacity were initially barred from service. This criterion was quickly found to be too stringent. Concern over possible

manpower shortages, coupled with pressure from southern congressmen—whose constituents were being rejected at high rates—paved the way for a 10 percent illiterate quota system in August 1942.¹¹

Given that the Defense Department was aware of the potential for increased manpower demands, it has often been suggested that Project 100,000 was initiated not for the lofty aims outlined by McNamara, but rather as a response to increased manpower needs brought about by the U.S. involvement in Vietnam.¹² Standards were, in fact, lowered in the months preceding the initiation of Project 100,000. Were the Project's even more lax requirements driven by the administration's real concern with the needs of the less fortunate? Did they really believe that by involving America's largest training institution—the military—they could assist in winning the War on Poverty? Or did they just need more men for Vietnam? Although most projections of manpower availability suggest that there were sufficient numbers of youth for the war effort, there was also a recognition that a crunch was possibly in the offing. General J. P. Lampert, Deputy Assistant Secretary of Defense (Manpower), in addressing a Special Training Seminar on Category IV personnel conducted in September 1966, made the following point when discussing the importance of Project 100,000:

Under continued high draft calls—currently averaging 35,000 men per month—Selective Service Boards may find it increasingly difficult to meet our monthly requirements from the so-called prime draft pool—that is, single men 19 to 25 and those married after August 26, 1965. Unless we fully use the available 19 to 25 year old men, the Boards will progressively send for induction older married men and men aged 26 or older. While these men should take their turn, it is only fair that the men in higher orders of call be fully used first.¹³

In the face of these potential manpower demands, it is unclear what changes would have been required in deferment policies if standards were not lowered. Given the relative political power of the white middle and upper classes, whose sons were often protected from service in Vietnam by such mechanisms, lowering the standards and thus increasing the number of poor and disadvantaged young men brought into service may have been seen as the more expedient course. Although the evidence would certainly suggest that McNamara was concerned about those who were to be helped by this effort, whether it would have been undertaken without the impetus of a force buildup is impossible to know with certainty. And, as I. M. Greenberg, Director of Project 100,000, stated in a recent interview,

it is very possible that roughly the same results (lowered standards) would have occurred had we not had a program called Project 100,000. Thinking back now, if I had my preference, I would rather we went about our business and made decisions on standards based on pure military need and this might have meant quotas, it might have meant balancing manpower quality amongst the Services.¹⁴

All in all, it seems that there was no single, clear motivation for instituting Project 100,000; rather, its initiation can be attributed to a combination of aims. McNamara's view of DoD as an unparalleled training institution was certainly accurate. If the military were to bring its resources to attack the problem of unskilled youth, it is fair to say that no other organization in the country could match its potential impact. At the same time, there was a war developing and young men were needed to fight. Lowering standards under such conditions had been a common practice in previous eras, and in all likelihood would have been necessary during this period. McNamara, then, probably didn't deserve the Nobel Prize for a solely selfless interest in helping the country's young people, but at the same time Project 100,000 probably should not be viewed as an exclusively cynical idea carried out only to provide "cannon fodder" for Vietnam.

PURPOSES, POLICIES, AND A SKEPTICAL CONGRESS

The Department of Defense gave three reasons for initiating Project 100,000. First was that it would result in greater equity in the distribution of the benefits and burdens of military service. Previous standards resulted in a significant segment of the population escaping the obligations and missing out on the advantages that go with a tour of duty. The assumed advantages were also the focus of the second justification: the military training establishment would help culturally disadvantaged youth become fully satisfactory servicemen. Certainly an implied, if not stated, adjunct to this belief was that functioning well in the military would lead to a more fulfilling and productive civilian life after separation.

Finally, by lowering standards the Services would gain experience in training and using marginal-aptitude men that would be invaluable in the future should manpower requirements increase. As mentioned previously, there was a consensus that the Services were ill-prepared to cope with the large influx of men of lower abilities that occurred during World War II and Korea. The demands on the Services during these periods left little time to experiment with different selection and training methods to determine who among this group could serve well and what needed to

be done to bring about acceptable performance levels. Project 100,000 was promoted as such an opportunity.

To guide the program, four key policies were instituted. First, though induction and enlistment standards were reduced, minimum performance standards would not be reduced to accommodate the influx of men of lower aptitude. They were expected to meet the same in-service criteria as their higher aptitude peers; the requirements for successful completion of basic and skill training would go unchanged. Furthermore, the second policy mandated that the "New Standards Men" (NSM)¹⁵ would be treated exactly like others entering service at the time. This meant that there would be no special training programs, and every effort would be made to avoid singling these men out as somehow different than their peers. McNamara also insisted that a thorough record-keeping mechanism be put in place to trace the in-service progress of the former rejectees. Objective evidence would be needed to support the claim that with training, Category IV men could learn and perform adequately in the military. These data would also be there for future use should lowered standards again be required. Finally, the project developers decided that all Services should share in the program. Toward this end, quotas were put in place to distribute the new inductees or enlistees across branches.

McNamara remained determined and Congress remained suspicious. Was this simply an end-around move by the Pentagon to slip STEP in under a different name? In testimony before the House Defense Subcommittee on Appropriations, Maurice H. Lanman, then DoD Assistant General Counsel (Fiscal Matters), asked for the deletion of that little clause in the FY 1966 appropriations bill prohibiting funds for the STEP program. Representative Robert L. Sikes (D-FL) sought reassurance that this was not a repackaging of STEP.

Mr. Sikes: What became of that program [STEP]? Is it still floating around waiting for a chance to come to the surface?

Mr. Lanman: No, sir, we have a program now that is known as Project 100,000, which is substantially different from the STEP program in that it does not establish any special remedial educational program and is limited to individuals whose educational ability and mental aptitude has been found adequate to complete military training programs under approved procedures now in effect.

Mr. Sikes: Can you tell the committee that this is not another way of getting the STEP program approved?

Mr. Lanman: Yes, sir.

At another point in the proceedings, Representative Glenard P. Lipscomb (R-CA) tried to untangle the difference between STEP and Project 100,000 by suggesting substitute language for that concerning STEP.

Mr. Lipscomb: Mr. Chairman, I was just going to suggest language, "None of the funds provided in this Act shall be available for expenses of the Project 100,000." Do you have the same objection to that language as you do to the STEP language?

Mr. Lanman: We have no real objection to the STEP language other than that it does not strike at anything. What you just suggested, Mr. Lipscomb, would put a hole in a program that is probably of great value.

Written testimony submitted by DoD at the subcommittee's request assured Congress that "Project 100,000 is totally unlike the STEP program." Even if the wording denying the funds for the new program had been approved, there undoubtedly would still have been a Project 100,000. However, as will be seen, a variety of efforts related to the lowering of standards could not have been carried out without investing substantial financial resources.

INCHING THE STANDARDS DOWN

And so, with at least tacit approval by Congress, standards started downward. Table 2.1 shows the minimum standards at four points in time: two prior to October 1966, and at the start of Phases I and II of Project 100,000. The first thing to note is that minimum entry requirements were lowered about four months before McNamara addressed the Veterans of Foreign Wars. This was done by eliminating the GT requirement for non-high school graduates in the 21st to 30th AFQT percentiles. Actually, this was similar in scope to the changes that marked Phase I of Project 100,000. Overall, perhaps the most dramatic adjustment in standards over this period was that eventually all high school graduates scoring at or above the 10th percentile on the AFQT were qualified to serve. When it came to those with secondary school diplomas, the only ones ineligible were those barred from service by law (Category V).

Standards for Enlistment Varied by Service

The minimum entry requirements for each branch of the military before and one year after Project 100,000 was begun are shown in Table 2.2. The Air Force was clearly much more restrictive as to who they allowed to enlist, while the standards of the other three Services were very much alike. In all cases, the primary difference brought about by

Table 2.1

Minimum Standards for Induction: Comparison of Four Periods Before and After Project 100,000

Period	Education/Minimum Standards ^a			
	High School Diploma Graduates (HSDG)		Non-Graduates (NHSG)	
	Minimum AFQT	Additional Testing	Minimum AFQT	Additional Testing
<u>Before</u>				
Nov. 1965-March 1966	16 10-15	None GT \geq 80 2 AQB's \geq 90	31 10-30	None GT \geq 80 2 AQB's \geq 90
April 1966-Sept. 1966	No Change		31 21-30 10-20	None 2 AQB's \geq 90 GT \geq 80 2 AQB's \geq 90
<u>After</u>				
Oct. 1966-Nov. 1966	16 10-15	None 2 AQB's \geq 90	31 16-30 10-15	None 1 AQB \geq 90 2 AQB's \geq 90
Dec. 1966-June 1972	10	None	31 16-30 10-15	None 1 AQB \geq 90 2 AQB's \geq 90

^a GT is the General Technical composite of the Army Qualification Battery (AQB). Minimum aptitude standards are expressed as percentile scores on the AFQT, but as standard scores on the AQB.

Table 2.2
Minimum Standards for Enlistment^a: Comparison of Two Periods, Before and During Project 100,000, by Service

Service and Education	April 1966		October 1967	
	Minimum AFQT	Additional Testing	Minimum AFQT	Additional Testing
Army				
High School Graduates	16	None	10	None
Non-Graduates	31	None	31	None
	16-30	2 AQB _s \geq 90	16-30 10-15	1 AQB \geq 90 2 AQB _s \geq 90
Navy				
High School	16	None	10	None
Non-Graduates	31	None	31	None
	16-30	GT \geq 80 2 AQB _s \geq 90	16-30 10-15	1 AQB \geq 90 2 AQB _s \geq 90
Marine Corps				
High School	10	None	10	None
Non-Graduates	31	None	31	None
	16-30	GT \geq 80 2 AQB _s \geq 90	16-30 10-15	1 AQB \geq 90 2 AQB _s \geq 90
Air Force				
High School	21	2 AQEs \geq 25 or 1 AQE \geq 40	21	None
			10-20	2 AQEs \geq 25 or 1 AQE \geq 40
Non-Graduates	31	2 AQEs \geq 25 or 1 AQE \geq 40	31	None
			10-30	2 AQEs \geq 25 or 1 AQE \geq 40

^a Minimum aptitude standards are expressed as percentile scores on the AFQT and the Airman Qualifying Examination (AQE) but as standard scores on the Army Qualification Battery (AQB).

the reduction was the lowering of the minimum AFQT for non-high school graduates to the 10th percentile.

As noted earlier, all branches of the military were to share in this effort. Toward that end, quotas were derived for each Service. To ensure even-handed implementation across the Services, DoD established uniform definitions of New Standards Men based on education, AFQT

percentile, and other aptitude composite scores. These definitions are shown in Table 2.3 for inductees and Table 2.4 for enlistees. Again, the characteristics of draftees who could be considered program participants were the same across Services, while these characteristics varied somewhat between branches for those who volunteered.

It could be argued that these quotas were the source of Project 100,000's major impact on the Services. Quotas were nothing new in military manpower policy, having been used in World War II and during the 1950s to ensure an equitable distribution of recruit quality among the Services. However, since 1961 the quota system had been abandoned, replaced by a general agreement that each Service would take a small percentage of less-qualified candidates. Quotas were necessary as part of the New Standards effort largely because the Army was the only Service obtaining substantial numbers of its manpower through the draft. The other Services could afford to be selective, leaving the Army with the bulk of the lower aptitude personnel.¹⁶

The quotas for each type of recruit by Service are shown in Table 2.5. The quotas for the nine months of Phase I required the Army to accept 26 percent Category IVs and 30,400 New Standards accessions. In subsequent years the Category IV quota was lowered slightly for the Army, while for the other Services it increased through 1970. Starting in October 1967, an additional restriction was placed on accessions as reflected in the quotas. Concern that the Services would try to fulfill their requirements by seeking only candidates at the upper level of the Category IV range led to the introduction of additional quotas in FY 1968 requiring that half of the New Standards Men score in the AFQT 10-15 range (Category IVC).

Additional Avenues for Meeting Quotas

There were two other sources of accessions under Project 100,000. Because it was feared that, in the early stages, not enough Category IVs and New Standards Men would be found through normal enlistment procedures, Selective Service was asked to begin calling back individuals who had previously been classified as 1-Y. These were men who had, on the basis of their test scores, been found ineligible for service, but who could be called up in event of war or national emergency. They had scored above 10, but below the standard in effect for induction/enlistment at the time they were tested. The Director of Selective Service, General Lewis Hershey, sent a memorandum to each State Director specifying

Table 2.3
Uniform Definition of New Standards Inductees During Phases I and II of
Project 100,000

Education	AFQT Score Range	Aptitude Composites ^a
High School Graduates	10-15	Excludes those with 2 or more AQB _s \geq 90 and GT > 80
Non-Graduates	21-30	Excludes those with 2 or more AQB _s \geq 90
	16-20	Excludes those with 2 or more AQB _s \geq 90
	10-15	Excludes those with 2 or more AQB _s \geq 90 and GT > 80

^a Minimum aptitude standards are expressed as percentile scores on the AFQT and the Airman Qualifying Examination (AQE) but as standard scores on the Army Qualification Battery (AQB).

the number of 1-Ys meeting the reduced standards that they were responsible for inducting.¹⁷

Between October 1966 and September 1967, nearly 55 percent of the Army's New Standards Men were former 1-Ys. This was obviously an important resource for the Army to achieve the quotas imposed on them. One can only imagine the reactions on the part of these men—previously told they had failed to qualify for service—when they found out that the standards had been generously lowered for them by the Department of Defense.

Those planning and implementing Project 100,000 assumed that the test scores and educational attainment of the 1-Ys would be below the standards in effect prior to October 1966, and therefore they could legitimately be credited toward the NSM quota. When these men reported to the AFEES for processing, they were given tests necessary to complete their records. A study conducted by the Army found that for the month of February 1967, 36 percent of the 1-Ys inducted had scores higher than the New Standards criteria.¹⁸ Although upon reexamination most were still Category IVs, their test results indicated that they would nonetheless have been eligible for service even prior to the initiation of

Table 2.4
Uniform Definition of New Standards Enlistees During Phases I and II of
Project 100,000

Service and Education	AFQT Score Range ^a	Aptitude Composites ^a
Army and Marine Corps		
<u>Phase I</u>		
High School Graduates & Non-Graduates	10-15	
Non-Graduates	16-30	Except those with 2 AQB's ≥ 90
<u>Phase II</u>		
High School Graduates & Non-Graduates	10-15	
High School Graduates & Non-Graduates	16-20	Except those with 3 AQB's ≥ 90 and GT > 80
Navy		
<u>Phase I</u>		
High School Graduates & Non-Graduates	10-15	
High School Graduates	16-20	Except those with 3 AQB's ≥ 90 and GT > 80
Non-Graduates	16-30	Except those with 2 AQB's ≥ 90 and GT > 80
<u>Phase II</u>		
High School Graduates & Non-Graduates	10-15	
High School Graduates & Non-Graduates	16-20	Except those with 2 AQB's ≥ 90 and GT ≥ 80
Air Force		
<u>Phase I</u>		
High School Graduates	10-20	
High School Graduates & Non-Graduates	21-30	Except those with 1 AQE ≥ 90
Non-Graduates	10-30	
<u>Phase II</u>		
High School Graduates & Non-Graduates	10-15	
High School Graduates & Non-Graduates	16-20	Except those with 3 AQEs ≥ 90

^aMinimum aptitude standards are expressed as percentile scores on the AFQT and the Airman Qualifying Examination (AQE) but as standard scores on the Army Qualification Battery (AQB) including the General Technical (GT) composite of the AQB.

Project 100,000. Three reasons were given for this outcome: (1) some of the men may have "improved" due to additional education or simply because they were older than when they originally were examined; (2) the tests themselves were not perfectly reliable and therefore some variance in scores at different administrations would be expected; and (3) some of these men were rejected under standards higher than those in effect immediately prior to the implementation of Project 100,000. Whatever the reason, it is clear that at least in the initial stages of the

Table 2.5

Project 100,000 Quotas as a Numerical Quota or Percentage of Total Non-Prior Service (NPS) Enlisted Accessions, by Fiscal Year

<u>Service</u>	<u>Percentage Category IV Required</u>					
	<u>1967^a</u>	<u>1968^b</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972^c</u>
Army	26	25	24	24	24	24
Navy	15	17	18	18	15	15
Marine Corps	18	21	24	24	20	20
Air Force	15	17	18	18	15	15

	<u>New Standards Men^d</u>					
	<u>1967^d</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972^e</u>
Army	30,400	60,800	12	12	8	
Navy	3,400	8,900	9	9	6	
Marine Corps	2,600	7,800	12	12	8	
Air Force	3,600	7,500	9	9	6	

	<u>AFQT 10-15^f</u>					
	<u>1967^e</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972^e</u>
Army		30,400	6	6	4	
Navy		4,450	4.5	4.5	3	
Marine Corps		3,900	6	6	4	
Air Force		3,750	4.5	4.5	3	

Source: "Project One Hundred Thousand: Characteristics and Performance of 'New Standards' Men," prepared by the Office of the Secretary of Defense, Assistant Secretary of Defense (Manpower and Reserve Affairs), unpublished report, 1972 (hereafter referred to as "Project 100,000: Characteristics").

^a Includes last 9 months only.

^b The quotas shown for FY 1968 went into effect in October 1967. Those shown for FY 1969 went into effect in October 1968. The quotas for the first three months of each of these fiscal years were those in effect the previous fiscal year.

^c First half only.

^d For the first two years of the New Standards Program, quotas were expressed in terms of numeric goals. Starting in October 1968, a shift was made to percentage quotas so that the number of New Standards accessions would be more responsive to changes in total enlistment requirements. Note that this quota includes both medical and mental remedials.

^e Data unavailable.

^f No quotas were in place for AFQT 10-15 during the first phase of the project. Data from the first three months indicate that 3.1 percent of Army Category IV accessions were 10-15. Corresponding figure for the other Services: Marine Corps .1 percent, Navy less than .05 percent, Air Force none.

project a sizable number of the of those being admitted through the 1-Y avenue were, in reality, "Old Standards Men." Knowing this, the decision was nevertheless made to allow the Services to credit these accessions towards their quotas. As standards were lowered further, however, 1-Ys

basically ceased to exist, as did the Army's dependence on this means for meeting its goals.

Another method by which the Army met its quotas for New Standards Men was by including a portion of "Administrative Acceptees" in this group. These were individuals who scored, shall we say, suspiciously low (10 or below) on the AFQT and as a result were sent to talk to an AFEES psychologist. This evaluation resulted in a decision as to whether the young man was trying to get out of his military obligation by purposefully "blowing" the entrance test. The psychologist considered such factors as educational background, family history, personal appearance and demeanor, vocabulary, and apparent level of understanding. When the examiner concluded that an individual was "playing intellectual possum," he was admitted as an Administrative Acceptee. In FY 1966, just under 1 percent of Army's accessions were classified in this manner. Under the reduced standards any percentage of Administrative Acceptees above 1 percent were classified as New Standards Men. During the last quarter of 1966, fully 28 percent of those entering the Army under Project 100,000 were accessed through this channel.¹⁹ In later reporting periods no such breakout was provided.

As the Vietnam war progressed, more young men used various means to escape military service—leaving the country, becoming conscientious objectors, and so forth. Perhaps the most obvious route to achieving this goal would be to purposely flunk the entrance examination. Success in doing this would take a fair degree of intelligence—to give a wrong answer on purpose, you have to know (or at least have a pretty good idea) which answer is right. Inclusion of these individuals as New Standards Men—a policy approved by DoD—raises the possibility that a substantial number of the low-aptitude personnel were not so low-aptitude after all.

PREPARING FOR LOW-APTITUDE ACCESSIONS

Reducing standards was but one issue that had to be addressed in implementing Project 100,000. For starters, there was concern with possible efforts on the AFEES operations. Seminars were held in various recruiting districts in late 1966 and early 1967 to discuss the impact medical remedials would have on the processing procedure, and to make sure that the new standards would be applied uniformly. Seminars for test psychologists were held throughout 1967 to address a wide range of potential issues, including whether current procedures for presenting information (e.g., orientation, explanation of career opportunities) were appropriate for men of lower abilities; whether the protocols for classi-

fication interviews needed to be altered; the possibility of a greater need for personal counseling; and whether Category IV men would be able to adequately complete the tests and other assessment instruments currently being administered during processing, and what to do if or when they were not.

Training was another issue. Questions were raised as to whether the way basic training had previously been conducted would be suitable for the New Standards Men. Representatives from each Service gathered at a seminar in mid-September 1966 to discuss this point. The participants predicted that men entering under reduced standards would have little problem in this initial phase of their military career, because aptitude requirements at that stage were minimal. They recommended that any major restructuring of basic training practices be put off until they gained more experience with lower aptitude personnel. However, they did feel that new and imaginative training methods would have to be developed to accommodate those of lower aptitude in skill training courses. "For those Mental Group IV personnel assigned to formal training in occupational skills, much of their early success will depend upon the teaching practices and learning systems employed by instructors."²⁰

At another seminar, held in October 1966, participants recommended specific ways in which training practices for specialty jobs could be altered to accommodate those entering under Project 100,000. They expected that the principal difficulty the low-ability men would experience in entry-level schools would be with verbal skills, and that these skills should be a central focus of instruction. Again, the emphasis was placed on the attitudes and techniques employed by instructors, who would have to have the proper orientation when facing larger numbers of "slower" students. Suggestions included rewriting technical manuals for greater clarity and ease of presentation, and, to the extent possible, individualizing instruction. Self-paced instruction keeps brighter students from becoming bored by having to wait for slower learners, while those experiencing difficulty could take as much time as they needed to assimilate material without being stigmatized. Among the technologies highlighted as being potentially beneficial were programmed instruction, computer-based training, closed circuit television, audio notebooks with visual displays, and simulations of actual on-the-job performance.

Each Service was asked to select pilot courses for in-depth study and, if required, modification. Among the courses of instruction selected by the Army were Supply Clerk, Wheel Vehicle Mechanic, and Telephone Switchboard Operator. The Navy focused on three specialties: Commissaryman, Equipment Operator, and Structural Aviation Mechanic.

The Combat Engineer and Engineer Equipment Mechanic MOS were selected by the Marines Corps, while the Air Force identified 30 courses, including Machinist, Pavement Maintenance Specialist, General Accounting Specialist, Photographer, and Air Policeman. These courses were selected in keeping with the likelihood of Category IV personnel being assigned to that particular specialty.

As part of Project 100,000, the Services were asked to establish detailed tracking mechanisms to document the performance of the former rejectees (a term used to denote not only the 1-Ys, but all of those men accepted under reduced standards). On 23 September 1966, Thomas D. Morris, the Assistant Secretary of Defense (Manpower) issued a memorandum to the Deputy Under Secretaries of the Military Departments specifying the data to be collected on the New Standards Men, to ensure uniformity across Services. In the memo the Assistant Secretary of Defense (ASD) warned that "in collecting data prescribed in this directive, care should be exercised to avoid identifying these individuals in a manner which would result in singling them out to their fellow servicemen and supervisors."²¹ Initially, only four additional pieces of information were to be collected for Project 100,000 personnel beyond that which was obtained for all servicemembers: main full-time civilian occupation, number of months main civilian occupation, typical weekly income over the last six months, and total months of all civilian full-time employment. It was also stipulated that, for Project 100,000, this information would be consolidated on a single computer file.

The Services also had to select a sample of regular recruits to form a control group with which the performance of the New Standards Men could be compared. DoD gave the Services little guidance on how to draw their control groups, stressing only that they should be composed of individuals who would have qualified under the standards existing before 1 October 1966. Each of the Services came up with their own techniques for meeting this requirement. According to official records, control groups were selected as follows:

In the Navy, the control group was chosen by identifying the first 700 accessions at NTC [Naval Training Center] San Diego and the first 800 at NTC Great Lakes, regardless of AFQT, at the beginning of the second month of each quarter (November, February and May). The Army's control group consisted of a 10 percent random sample of all other accessions (all but New Standards Men) during each quarter. The Marines' control group was made up of all Category IV accessions other than Project 100,000 men who came into the Marines after December 31, 1967. The control group in the Air Force, effective with the 1967 cohort, consisted of 100 percent of the Category Is, 10 percent of the Category IIs, 100 percent of the Category IVs, and 100

percent of the medical remedials. Thus, the Services control groups varied drastically in their composition.²²

The differences between the methodologies used to select control groups rendered inter-Service performance comparisons tenuous at best. Both the definition of NSM and the characteristics of the groups with which they were compared varied by individual Service.

The Services were also asked to provide a monthly report of basic military training. This document would specify the status of New Standards Men in terms of the following: the number who were in training, entered training, or completed training during each month; for those who completed, the number who were recycled or who received remedial training; for those discharged before completing basic, the number who were recycled or received remedial training and the reason for the discharge. This information would permit an immediate assessment of the impact of lowered admission standards. Two other reporting requirements were instituted to support the project: A supplementary monthly report on pre-induction processing at AFEES was to provide a forecast of the eligible supply of Category IV men; an AFEES weekly report of accessions was used to monitor the Services' success in meeting their quotas of New Standards accessions.

Although those in charge of Project 100,000 initially stressed the need for maintaining the data bases outlined above, it appears that interest waned as the years went by. The final official statistical reporting about the program was in 1969, two years before its eventual demise. An updated report, covering the period through 30 June 1971, never made it to press. Furthermore, a review of the data bases indicates that the Services themselves became more and more lax about meeting their reporting requirements. The amount of missing data grew with each year. The fact that the United States was involved in a war may have overshadowed the need to collect and report data about the performance of low-aptitude personnel. Also, because the individual Services weren't enthralled with this idea to begin with, once McNamara left DoD in early 1978, the level of commitment probably suffered. Whatever the cause, it seems that the diligence with which this enterprise was first undertaken soon began to diminish.

Another element of Project 100,000 involved the funding of four broad areas of research: (1) Selection, Classification and Assignment; (2) Measurement of Educational Upgrading; (3) Job Restructuring; and (4) Modification of Training Courses. Research efforts included determining optimal utilization of Navy Category IV personnel, assessing on-the-job

performance of lower aptitude Army recruits, developing a test of vocational maturity, and assessing the utility of predictors of New Standards Air Force recruits. Funds allocated for these and similar projects in FY 1967 totaled nearly \$1.25 million.²³

REMEDIAL SKILLS EDUCATION FOR THE NEW STANDARDS MEN

Perhaps the most direct way in which military service could have benefited those who came in under Project 100,000 was through programs designed to increase literacy levels or provide those who entered without a high school diploma the opportunity to obtain one. The Navy's Remedial Literacy Training (RLT) program began in January 1967. Those having problems in basic training due to poor reading ability were sent to RLT. After the four-week course they were returned to basic training units. The Air Force established the Reading Proficiency Program (RPP) in December 1967. The objective of the eight-week course was to bring recruits up to a 6th-grade reading level. Those entering had been diagnosed as having reading problems sufficient to hinder their performance in basic or skill training. Beginning in April 1968, the Army established Army Preparatory Training (APT), which included reading, arithmetic, social studies, and military training. Initially recruits entered APT after basic, but in September 1968 they began taking the course before going to their initial training units. To qualify for APT one had to be unable to read at the 5th-grade level, which was also the criterion for graduation. After getting up to speed—which took three to six weeks—recruits joined units in their second week of basic.²⁴

Between April 1968 and June 1971, 23,983 men entered APT. By June 1971, 1,600 had dropped out, 428 were still in the program, and 21,955 had completed it.²⁵ The average reading grade improvement was two grades, with 12 percent showing no improvement at all. Of those who made it through the program, some 79 percent reached the 5th grade level; 74 percent of these people met the goal within three weeks (60 hours of instruction). Between January 1967 and August 1971, just under 4,500 sailors entered RLT, 13 percent of whom were discharged for unsuitability or medical reasons. Less those men still in at the time the data were assembled, 3,733 completed the training. Some 87 percent of these men finished the program, with the majority of the remainder being dismissed from service. With a mean training time of 146 hours, the average reading level at the time of completion was between 5th and 6th grade. Of the 7,155 airmen who entered RPP between October 1967 and

June 1971, 910 dropped out. (Over 90 percent of those who didn't complete were subsequently discharged.) The average gain in grades for those who finished the course was 1.7 years, with a mean reading level of 6.3 years.

Few would argue that the Services' attempt to upgrade the functional literacy of the New Standards Men was a bad thing, even if the motives were not totally altruistic (the main goal being to enable these men to function better within the military). However, a number of questions do arise. For instance, were the newly gained skills of the former rejectees likely to be retained without constant reinforcement? After an intensive three to eight weeks of training, reading scores did go up. However, it could be argued that since so many of these men were assigned to jobs with low literacy requirements, such improvement would be difficult to maintain over the long haul. Although only suggestive (the sample was not restricted to those who attended APT), data reported for a sample of 2,986 Army New Standards Men showed an average increase in literacy level after 24 months of service of less than one-half grade. To be fair, it would seem idealistic to expect a permanent or drastic change in reading level after three or even eight weeks of remediation when many of these individuals had gone through 12 years of formal schooling without achieving even a 6th-grade proficiency.

The second question that arises concerns just how much value a 5th- or 6th-grade reading ability has in the civilian world. Due to time and financial constraints, the Services could hardly have set their goals much higher. However, some will argue that an individual even at an 8th-grade reading level is basically functionally illiterate in today's society. Again, any efforts made in this regard were to be applauded but the expectation that this type of intensive training would make a real and lasting difference in the lives of these men would seem to be unrealistic at best.

Another option available to the non-high school graduate New Standards Men was the General Educational Development (GED) program. They could take classroom or correspondence courses with the goal of achieving the equivalency of a high school diploma. These courses were administered by the U.S. Armed Forces' Institute, or by school systems located near military bases. After a man was assigned to his unit, he could volunteer for this program, although completion was subject to the exigencies of military service (i.e., combat duty, transfers, etc.). The data provided by DoD on participation in the GED program for this period were for Army only, covering those with AFQT 10-19 who left service between July 1968 and December 1969. Nearly 37,000 of these men were non-high school graduates, 35 percent of whom had volun-

teered for the GED program. Of those who participated, 35 percent, or 4,508, actually obtained a diploma. Among a control group of those entering during the same period with AFQT greater than 20, 61 percent of nongraduates participated in the program, and 72 percent of those participating actually “graduated.”

Again, it would be difficult to argue that obtaining a high school equivalency while in service is not a good thing. Although the numbers are small, those who took this course clearly received a measurable benefit from their military service.

WHO WERE THE NEW STANDARDS MEN?

Who were the men who entered the military under Project 100,000, and in what ways besides aptitude were they different than their fellow servicemen at the time? First, it is important to understand just how poorly these men did on the AFQT—63 percent were Category IVCs, 34 percent IVBs, and only 3 percent IVAs. The median AFQT score for the NSM who entered between October 1966 and September 1969 was 13. Fully 87 percent of the reference population would do better than half of Project 100,000 participants. To put it bluntly, these were not very bright individuals.

In all, more than 350,000 men entered under reduced aptitude and physical standards over the life of the project. The overwhelming majority—over 320,000 or 90 percent—were admitted under revised aptitude standards. The Army took the majority of the lower aptitude men—about 66 percent. The Air Force took the fewest—about 10 percent—with the Marine Corps and Navy not far ahead with 11 and 12 percent respectively.²⁶

The background characteristics of the NSM and their control group are summarized in Table 2.6. Slightly over 70 percent of the New Standards accessions to the Army were inductees rather than enlistees.²⁷ Just under 9 percent of the Marine Corps Project 100,000 personnel were drafted, while neither the Navy nor the Air Force resorted to induction during this period. During the first nine months, the percentage of voluntary enlistees into the program was relatively low—just one-third. Over the years this number grew, reaching a peak of 61 percent in FY 1969, and remaining well over 50 percent throughout the life of the project. Of course it is unknown what percentage of these were draft-induced enlistments motivated, in part perhaps, by being able to select one of the more “desirable” Services.²⁸

Table 2.6

Characteristics of New Standards Men and Control Group Accessions Entering Service October 1966 Through June 1971 (Percent)

<u>Characteristic</u>	<u>New Standards Men</u>	<u>Control Group</u>
Method of Accession		
Enlistment	54.0	^a
Induction	46.0	^a
Geographic Region		
South	47.6	27.7
Non-South	52.4	72.3
Race		
Black	38.2	10.1
Nonblack	61.8	89.9
Age at Entry	20.0	20.2
High School Degree Status		
Graduate	46.9	76.4 ^b
Nongraduate	53.1	23.6
Average Number of Grades Completed	10.7	11.9

Source: "Project 100,000: Characteristics."

^a These data were not reported for the control group.

^b Based upon numbers shown in AFEES Qualitative Distribution Report for accessions entering October 1966 to June 1969 less NSM.

From 1 October 1966 through 30 June 1971 just under half of those who entered the military under Project 100,000 were from the South, as compared to about 28 percent of the control group. Blacks were disproportionately represented in the New Standards group, comprising 38 percent. The control group, by comparison, was only 10 percent black. The average age at enlistment was the same for both Project 100,000 and the controls—about 20 years.

Statistics for high school graduation rates for the control group are based on all accessions, October 1966 through June 1969, minus the New Standards Men. Overall, a little over three-quarters of this group were high school graduates when they entered service. This compares with just 47 percent graduates among Project 100,000 participants. There was a large disparity in educational status by race, with over 60 percent of black NSM and only 37 percent of white NSM having completed 12

years of schooling. These figures are heavily influenced by the fact that entrance standards for high school graduates were lower than for nongraduates. Blacks who had failed to obtain their diplomas, therefore, were at a distinct disadvantage, despite the fact that they may have been the group most in need of assistance. The Air Force had the most success in attracting graduates, with 64 percent of whites and 78 percent of blacks entering service with a secondary school diploma. In contrast, only 26 percent of the whites and 52 percent of the blacks who entered the Marine Corps were graduates.

Though there was a 30 percentage point difference in the proportions of high school graduates between the NSM and the controls, there was only about a one-year difference between them in terms of number of grades completed. The control group completed just about 12 years, and Project 100,000 members slightly under 11.

It is interesting to note that whereas for total DoD only 3 percent of those entering under lowered standards had completed grades beyond the high school level, in the Air Force this figure was almost 7 percent (8.5 percent for blacks). This is due in part to the higher standards the Air Force had in effect. However, it may also reflect the oft-heard charge that recruiters for the Navy and Air Force were able to "cheat" on their Category IV quotas by coaching brighter men to "score low" on the entrance tests. This possibility will be addressed in greater detail later in this chapter.

Perhaps a good indicator of the types of learning problems most of the NSM brought with them to the military lies in a comparison between the number of grades they had completed in school and their reading grade levels. Beginning in July 1967, reading ability tests were administered to the New Standards Men. Between that time and September 1970, 154,000 accessions were tested. The results showed that although the average number of grades completed by this group was 10.7, they were reading at just above a 6th-grade level (6.4). When the same test was administered to a sample of fully qualified accessions in April 1968, this difference was found to be about one grade (average grades completed = 11.9, reading ability = 10.9). In both the NSM and the control group this difference was somewhat larger for minorities than for whites.

It is a well-documented fact that those who enter service without completing high school experience many more problems than do their graduate peers. The high percentage of nongraduates among the Project 100,000 population, therefore, did not bode well for the ultimate in-service success of this group. Perhaps even more ominous was the fact that, even with relatively high levels of education, these recruits failed

to demonstrate a strong ability to learn. This is indicated by the finding that as a whole their reading levels were nearly four years behind their formal education as represented by the highest school grade completed.

Other data were collected from the New Standards Men that were not obtained from members of the control group. Their moral standards can be gleaned from the fact that 91 percent of them entered service with no civil convictions, 6 percent had one, and 3 percent were found to have two or more. However, since this is such a low base-rate behavior, these numbers reveal little. Nearly half (44.5 percent) of those accessed under this program were unemployed when they joined the military. Of those who did have jobs, 42 percent earned less than \$100 a week.

Another interesting comparison of the New Standards Men and their fully qualified counterparts concerns the occupations to which they were assigned while in the military. At the outset of Project 100,000, much ado was made about the training opportunities available to servicemen, and the potential for transfer of skills to the civilian world once their military obligation was fulfilled. A relevant question, then, is what *did* McNamara's men do during the war?

The occupational area assignments of NSM for overall DoD and each of the individual Services are shown in Table 2.7 for those entering between October 1966 and March 1970 who had assignments as of the end of September 1970. As might be expected given the military stance in this period, the area with the highest concentration of both Project 100,000 and control group personnel was Infantry. In the Army, New Standards Men were commonly assigned to jobs in Infantry (21.8 percent), Artillery (6.5 percent), Combat Engineering (4.6 percent), and Armor (2.2 percent). These same classifications were prominent in the Marine Corps, but a much higher proportion of Project 100,000 personnel were assigned to the Infantry. In the Navy, the percentage of NSM assigned to Infantry-type jobs (38.5 percent) was nearly eight times that of the control group. In this case, nearly a third of these assignments are accounted for by the Seamanship group—primarily Boatswain's Mates.

Of the nine broad DoD occupational areas, it is generally recognized that Infantry specialties have the least potential for inculcating skills that will be transferable to civilian life. This is not to suggest that those in the Infantry will learn nothing that may be of use to them after their military careers are over, only that it would be less obvious to a potential civilian employer what advantage someone who was in the Infantry may have gained from military service, as compared to someone who was in, say, an Electronics or Medical position.

Table 2.7
Occupational Distribution of Project 100,000 New Standards Men^a and Control Group^b (Percent)

DoD Occupation Area ^c	DoD	Service				Control Group
		Army	Navy	Marine Corps	Air Force	
Infantry, Gun Crews & Seamanship	34.4	34.5	34.9	56.5	--	23.1
Electronic Equipment Repair	1.8	2.3	1.4	0.1	0.2	7.5
Communications & Intelligence Spec.	4.0	5.3	3.1	0.8	--	5.7
Medical & Dental Spec.	1.4	1.6	0.1	--	3.0	4.0
Other Technical & Allied Spec.	0.4	0.4	0.1	0.2	1.0	2.3
Administrative Spec. & Clerks	12.8	11.8	7.9	4.4	32.6	17.7
Electrical/Mechanical Equipment Repair	16.1	16.6	30.0	4.7	9.7	22.0
Craftsmen	6.2	4.9	6.8	1.6	18.0	4.8
Service & Supply Handlers	22.9	21.3	14.8	29.7	35.5	22.9

Source: "Project 100,000: Characteristics."

^a New Standards Men entering Service during October 1966 through March 1970, with assignments as of 30 September 1970. Excludes those with no occupation.

^b Assignments as of 30 June 1969, for control group men entering service during the following time periods:

Army	July 1967–December 1968
Navy	January 1967–June 1968
Marines	October 1966–June 1968
Air Force	April 1967–December 1968

^c Military occupations are coded on one-, two-, and three-digit levels, moving from general to specific. Data reported here are at the one-digit, or broadest level.

Critics of Project 100,000 have pointed to the assignment of large numbers of its participants to the Infantry as both a sign of discrimination within the military toward recruits of lower aptitude and a failure of the program in general. However, it must be kept in mind that the country was involved in a war during this period, and the need for trained personnel—particularly in the Infantry—was quite real. The fact that more of the “slower” soldiers were assigned to Infantry occupations than were those in the control group most likely reflects the lower training requirements for these jobs (requirements that those of lower aptitude were more likely to be able to meet), as well as the relative lack of skills and abilities the New Standards Men brought upon entering the military.

Also often forgotten is that Infantry classifications account for only one-third of the assignments of the Project 100,000 men. They were, as Table 2.7 shows, frequently assigned to Administrative positions, Service and Supply Handling jobs, and Electrical and Mechanical Repair occupations. In the Air Force, where Infantry-type positions are almost nonexistent, over two-thirds of those entering under reduced standards were classified in Administrative and Service/Supply specialties. These data raise a relevant question: For individuals entering service with real educational deficits, what potential did these jobs have for giving training that would provide the boost these people needed once they reentered the civilian world?

This is difficult to answer with the limited data available. However, some insight can be gained by examining the more detailed occupational data displayed in Table 2.8. The second most frequent classification for Army NSM was Service and Supply. Over three-quarters of those so classified were in Food Service and Motor Transport—they were cooks and drivers. The same is generally true in the Marine Corps. Over two-thirds of Air Force Project 100,000 personnel were in Administration and Service and Supply—they were police and clerks. The good news is that in the Navy a significant percentage of those in Seamanship occupations were in such jobs as shipboard propulsion repair, aircraft repair, and power generating equipment repair.

Of course it must be acknowledged that being in an occupational category guarantees neither that one learned to be proficient in all job aspects nor that the skills for which one was trained were actually used while in the military. Anecdotal evidence suggests that, in some cases at least, NSM were “protected” by their higher aptitude peers who were on constant guard lest they be jeopardized. It could also be argued that even when the occupational assignments of the lower aptitude men had civilian equivalents, they were largely low-paying, dead-end jobs. How-

Table 2.8**Assignment of New Standards Men by Service and Occupational Group: Five Most Common Assignments**

<u>Service/Occupation Code^a</u>	<u>Occupation Title</u>	<u>Percent Assigned</u>
ARMY^b		
01	Infantry	21.8
80	Food Service	10.1
55	Supply & Logistics (Clerical)	8.1
04	Artillery, Gunnery & Rockets	6.5
81	Motor Transport	6.0
NAVY^c		
06	Seamanship	31.4
65	Shipboard Propulsion (Repair)	16.8
60	Aircraft Repair	8.0
80	Food Service	6.9
82	Material Receipt/Storage/Issue	4.6
MARINES^c		
01	Infantry	44.6
82	Material Receipt/Storage/Issue	9.4
81	Motor Transport	8.6
83	Military Police	8.4
03	Combat Engineering	7.7
AIR FORCE^c		
51	Administrative (Clerical)	22.9
83	Military Police	16.0
82	Material Receipt/Storage/Issue	10.8
78	Firefighting/Damage Control	5.2
55	Supply & Logistics (Clerical)	5.0

Source: "Project 100,000: Characteristics."^a Data are reported at the two-digit occupational classification level.^b New Standards men entering service October 1966–March 1970 with assignments as of 30 September 1970.^c New Standards men entering service January 1967–March 1970 with assignments as of 30 September 1970.

ever, because nearly half of these men were unemployed before they joined, any military job could be considered an improvement over their prior status.

So what conclusions can be drawn from examining the occupational assignments of the New Standards Men? First, it seems that to a large degree they reflect the real manpower needs of the military at the time. The United States was fighting a conventional war, and to a great extent that war was being fought on the ground. The military's needs could not be sacrificed to spend extensive training time bringing lower aptitude

people up to par in higher level jobs. In making occupational assignments, the potential for after-service benefit to the New Standards man *had* to be balanced by the complexity of the available jobs, and therefore the corresponding difficulty inherent in training someone to perform that job. In justifying Project 100,000, McNamara made much of the fact that there was a place in the military for those of lower aptitude. What may have been somewhat disingenuous about this statement was the implication that this would lead to higher-paying (or at least other-than-bottom-rung) occupations in the civilian world.

THE PERFORMANCE OF PROJECT 100,000 PERSONNEL

A central contention of those who initiated Project 100,000 was that those accessed under the program would be able to function effectively in a military environment and therefore would make a contribution toward the successful completion of its mission. As anyone who has been in the Armed Forces knows, service members are probably one of the most researched groups in the country. If anything, the New Standards Men may represent the most studied of this overstudied group. What follows is an examination of some of the major efforts undertaken to assess the relative performance of those in Project 100,000 as compared to their counterparts accepted under standards in place before 1 October 1966.

A key problem in answering the question, "How did the New Standards Men actually do while in service?" is determining what criteria should be used. The fact that a variety of yardsticks are available has led to a variety of conclusions in this regard: from "AOK" to "NVG" (not very good). The performance indicators surveyed here include the rather global in nature, such as attrition, punishment rates, and whether or not basic/skill training was completed. Also, the results from a number of specific studies of Project 100,000 participants will be reviewed to form a more complete picture of their performance.

As mentioned before, those entering under lower aptitude standards were not expected to have much trouble successfully completing basic training. After all, the cognitive requirements were low, with even reading demands held to a minimum. The primary activities associated with this early training are physical and indoctrinational, so there was no reason to expect that those of lower aptitude would be overly challenged.

The data in this regard are reported for two periods: October 1966 to June 1969 and July 1969 to June 1970 (see Table 2.9). Official DoD

Table 2.9

Basic Training Discharge Rates for New Standards and Control Group Men

Service	Percent Discharged			
	Entered Service October 1966 - June 1969		Entered Service July 1969 - June 1970	
	New Standards	Control	New Standards	Control
Army	3.7	2.0	5.5	2.5
Navy	8.6	2.8	17.0	5.9
Marine Corps	11.1	4.4	37.8	14.1
Air Force	9.2	3.0	14.4	3.8
DoD	5.4	2.5	12.4	4.4

Source: "Project 100,000: Characteristics."

documents presented the figures in this manner because of the tremendous jump in basic training discharges in the second period. The reason for this increase is not explained in the accompanying text, but the fact that there was a reduction of some 60,000 troops stationed in Vietnam may help to explain DoD willingness to eliminate greater numbers of those who were not performing well even at the very start of their military careers. This is borne out somewhat by the fact that the quotas for NSM were lowered for FY 1971 (beginning July 1970). The reduction in troop strength in Southeast Asia apparently had an impact on the need to help the disadvantaged through military service.

During the first three-plus years of Project 100,000, the attrition rates for NSM in the several Services were one and one-half to three times as high as they were among the control group. These ratios remained fairly constant during the second reporting period, although New Standards Air Force attrition increased somewhat as compared to the controls. The smallest differences between the two groups occurred in the Army, which coincidentally took in the largest number of former rejectees. It should also be noted that more recent analyses of the Project 100,000 data base reveal differences between the NSM and the controls that are in the same direction but of varying magnitudes.²⁹ These data show a greater similarity in discharge rates in the Army (NSM 2.13; control 1.92), while the magnitude of the differences was comparable to DoD official reports for the Air Force (NSM 11.48; control 3.98). However, discharge rates were much more sizable for NSM in the Marine Corps (18.89 vs. 1.29 for the controls) and Navy (9.50 vs. 1.23 for the controls).

One of the tenets of Project 100,000 was that the participants would be held to the same performance expectations as others in the military during this period. Furthermore, they would not be afforded any special help or attention over and above that already available to new recruits. Thus, the only recourse for those who were experiencing difficulty was to be recycled or to receive remedial help. Recycling meant that they were sent back to an earlier phase of training, typically with another unit that had begun that training at a later point in time. Remedial training involved assignment to a Special Company, where the physical, motivational, or academic aspect(s) of the course were reinforced. Length of assignment to such a company varied with the individual depending on his needs. DoD reported that for those men requiring remedial training who entered service between October 1966 and June 1970 with current data as of September 1970, the average remediation time was 12 days. Both forms of assistance were available to all recruits and, although augmented to some degree to meet the influx of lower aptitude individuals, both were in existence prior to the onset of Project 100,000.

A recent report on the performance of New Standards Men showed that their recycling rates were 1.35 (Army) to 11.12 (Navy) times higher than were those of the controls, depending on the particular Service.³⁰ The percentage of low-aptitude recruits requiring remedial training was 8.75 in the Army, 15.8 in the Air Force, and 22.4 in the Navy. (Data on Marine Corps remedial training were judged to be unreliable, because information on so many men was not available.) Approximately 1 percent of Army and Navy control group personnel required remedial training, while slightly more than 3 percent of Air Force controls were sent to Special Training Companies.

Another evaluation tool was performance in skill training. Most recruits get instruction in a specific job, usually immediately after completing basic. However, not everyone receives such formalized classroom instruction, with many getting their occupational training on the job. For instance, nearly all of the Navy low-aptitude accessions went directly to the fleet after basic. This reflects the Navy's greater dependence on hands-on training at the time, as well as classification patterns; Navy NSM were more likely to be assigned to occupations where attendance at "A" schools (sites where technical training is given after basic has been completed) was not required. In the Army and the Marine Corps, skill training was typically provided for all job classifications. As a result, the vast majority of NSM in these Services did attend some form of advanced training. In the Air Force approximately 30 percent of the former rejectees were assigned to positions that required formal training

after basic. According to DoD statistics, the Army opened up 145 different types of skill courses to the former rejectees, while 55 were available in the Navy, 80 in Air Force, and 16 in the Marine Corps.

When the skill course drop-out rate for the NSM is compared with the rate for others attending the same course, the patterns that emerge are much like those seen in basic training. Those of lower aptitude do not do as well. The percentage of Project 100,000 participants dropped from skill training courses for academic, medical, or administrative reasons ranges from two to three times higher than that of other men attending the course with them, depending on the particular Service. This is pretty much what one would expect, considering the deficits these men brought with them to the military. Skill training typically involves reading requirements that in many cases may have surpassed the capabilities of the former rejectees. The fact that a high percentage—87 to 93 percent—actually made it through such courses is seen by many as testimony to their potential as Servicemembers.³¹

Success in achieving advances in pay grade provides another performance index. In interpreting this variable, it is important to know that promotions in the early grades were often automatic when a certain milestone had been reached (e.g., basic training completed). The point to keep in mind is that achieving E-2 or even E-3 should probably not be taken as a sign of great success, but rather as an indication that someone has simply survived to that stage in their military career.

With this in pattern mind, the data shown in Table 2.10 are somewhat surprising. New Standards Men clearly did not perform as well as those in the control group when pay grade is used as an indicator. Project 100,000 participants were twice as likely to be at or below the E-3 level in the Marine Corps at the time of separation, and almost three times as likely in the Navy. The difference for Air Force personnel is somewhat less pronounced—which is most likely because data were reported for those still in service at 19–24 months—in contrast to the other Services, which reported on men who left during this same time frame. It is also noteworthy that the percentage of NSM achieving E-4 and E-5 is substantially higher in the Army and Marine Corps. This may well reflect the greater number of assignments to less technical occupations (e.g., infantry in these Services).

A variety of factors go into promotion decisions, many of which are not stated in official Service policies. In the case of Project 100,000, these varying influences are confounded by the possibility that those who entered under the program were identified somehow by their superiors, and promotion recommendations were tarnished by this knowledge.

Table 2.10

Percentage of New Standards and Control Group Men at Various Pay Grade Levels After 19-24 Months of Service^a

Service	Accession Group	Pay Grade			
		E-1 & E-2	E-3	E-4	E-5 and above
Army	New Standards	4.7	9.6	65.4	20.3
	Control	1.6	4.3	51.2	42.9
Navy	New Standards	31.0	56.0	13.0	--
	Control	2.3	27.6	60.2	9.9
Marine Corps	New Standards	8.8	16.1	68.8	6.3
	Control	3.4	9.2	70.3	17.1
Air Force	New Standards	7.3	76.2	16.5	--
	Control	1.8	68.1	30.0	0.1
DoD	New Standards	9.1	24.2	53.1	13.6
	Control	1.9	16.5	52.3	29.3

Source: "Project 100,000: Characteristics."

^a For all Services except Air Force, these figures are based on those men who entered service in calendar year 1968 and received normal separations after 19-24 months of service. The Air Force data are based on those men who entered in calendar year 1968 and were still on active duty with 19-24 months of service.

Promotion history, for instance, plays a part in the ultimate decision as to whether someone will be recommended for reenlistment. If some individuals in the ranks wanted to "get the dummies out," denying promotions may have been the first step in this process. Perhaps the only conclusion that can be drawn from these data is that the New Standards Men had a considerably poorer promotion history, on the whole, than did those in the control group. How much this was due to factors beyond their control remains a question.

Perhaps the harshest criticism aimed at Project 100,000 was that it disrupted military order by bringing into the Services a large number of people with backgrounds that were disabling in terms of their ability to adapt. The means by which the military functions is based in no small degree on the control it exercises over its members, and the influence it can bring to bear in developing a well-disciplined cadre of Servicemembers. In such an environment, large numbers of individuals who resist or are unable to conform in such an environment threaten the order that must exist if everyone is going to work effectively toward a single mission.

Basic and advanced training are important not only in imparting skills that must be obtained to perform a particular job, but also in weeding out individuals who will most likely not contribute to the cause. Drop-out rates from both levels of training were higher for the New Standards Men than for those who were fully qualified under the prior standards. And yet, in both cases, the vast majority of the former rejectees did survive and went on to take their places in the military manpower force. The question of "what happened then" is best addressed by exploring two factors that speak to the level of disruption these men may have represented: offenses they committed while in the military, and failure to complete their entire term of service.

The percentages of New Standards and control group men with 22–24 months of service at the time the data were assembled, who received nonjudicial punishments or court-martial convictions, are shown in Table 2.11. Again there are variations by Service, with both types of actions much less common in the Navy and Air Force than in the Army or Marines Corps. Overall, the rates are low for both groups, but they are higher for the New Standards men than for the controls.

The nonjudicial punishment rate was nearly twice as high for the former rejectees in the Army and Navy as it was for the controls. In the Air Force it was nearly three times higher. Assuming that the individuals reported on here were like the remainder of the Project 100,000 cohort, a nonjudicial punishment rate of 18 percent in the Army would represent over 39,000 personnel actions of this type from the inception of the project through its final full year (1971). The rate of court-martial convictions was low across Services but, again, was higher in the Army and Marine Corps than it was in the Navy and Air Force. In the Army, the percentage of NSM courts-martial was double that of the control group.

Attrition data for the New Standards Men and the control group are shown in Table 2.12. These data are broken down so that attrition rates can be seen as a function of the number of months in service. For instance, the attrition rate in the Army control group with 13–15 months of service as of the end of 1970 was noticeably lower than for the NSM. However, when those with 22–24 months of service are compared, the attrition rates are much more similar. Except for the Air Force, this same pattern generally holds for the other Services. Logically this would suggest that the longer the NSM were able to "hold on," the less likely they would be to leave later in their careers.

The greatest differentials between Project 100,000 participants and the controls in regard to attrition occur in the Marine Corps and Air Force.

Table 2.11

Percentage of New Standards and Control Group Men Committing Offenses in Service (22–24 Months of Service)^a

<u>Service</u>	<u>Non Judicial Punishment^b</u>		<u>Court-Martial Convictions^c</u>	
	<u>New Standards</u>	<u>Control</u>	<u>New Standards</u>	<u>Control</u>
Army	18.1	10.3	3.2	1.6
Navy	6.9	3.5	1.0	0.3
Marine Corps	23.8	18.2	5.3	4.7
Air Force	4.1	1.4	0.2	^d

^a For all Services except the Marine Corps, the base includes New Standards Men who entered service January–March 1969 and were still in service 31 December 1970. The Marine Corps data are for New Standards Men who entered service July–September 1967 and were still in service 30 June 1969. Control group men have same length of service.

^b Light punishment and other corrective measures imposed by a commanding officer for minor offenses and rules infractions.

^c Includes special, summary, and general court-martial convictions.

^d Less than 0.05%

For all accession cohorts, 24 percent more of the Marine Corps NSM left prematurely than did the controls, with a corresponding figure of nearly 17 percent in the Air Force. Although these differences are smaller in the Army and Navy, they still favor the control group members. In pondering these results, keep in mind that the percentage of non-high school graduates was *much* higher in the Project 100,000 population than it was in the control group (54 vs. 24 percent). Historically it has been shown that nongraduates are much more likely to make an early exit from the military than are those who received their diploma.

For all Services the predominant cause of NSM attrition was unsatisfactory performance or behavior. In the Marine Corps and Navy this was at the root of about 75 percent of the cases, while about 60 percent of the NSM attrition in the Army and Air Force was the result of less-than-acceptable achievement.

Among the other general performance variables that have been examined in the past are reenlistment eligibility and supervisory evaluations. In both cases, there are substantial problems with interpreting these data as indicators of whether people were or were not successful in the military. Many New Standards Men were not allowed to reenlist. A requirement to pass three aptitude tests to be eligible for reenlistment

Table 2.12

**Attrition Rate from Service by Quarterly Entry Group as of 31 December 1970
(Percent)**

Service	Date of Entry into Service				Total 1/69-12/69
	1/69-3/69 (22-24)*	4/69-6/69 (19-21)*	7/69-9/69 (16-18)*	10/69-12/69 (13-15)*	
Army					
New Standards	11.1	11.6	11.4	11.6	11.3
Control ^b	10.0	10.3	9.1	8.1	9.5
Navy					
New Standards	10.2	13.7	11.6	13.2	12.0
Control ^b	6.0	5.3	4.6	3.9	5.0
Marine Corps					
New Standards	31.0	32.8	35.2	43.4	34.8
Control ^b	11.8	10.7	11.0	8.5	10.5
Air Force					
New Standards	23.1	24.0	21.7	19.2	22.4
Control ^b	7.5	5.4	4.2	5.6	5.8
DoD					
New Standards	13.9	17.3	17.1	18.9	16.2
Control ^b	9.3	9.0	8.0	7.2	8.4

^a Months in service.

^b Control group data are based on a representative sample of men with the same length of service as the New Standards Men. It should be noted that for all Services except Army, the control group consisted of men entering during the period July 1968-June 1969. Since attrition rates, in general, have risen, the actual differences between New Standards and control are probably smaller than those that appear here.

eliminated two-thirds of Army's NSM. It is well documented that supervisory ratings tend to be skewed toward the high end.³² The restrictions on reenlistment and the lack of validity of supervisory evaluations substantially reduces the value of these variables as performance indicators.

SERVICE-SPECIFIC AND BASIC RESEARCH STUDIES ON THE PERFORMANCE OF LOWER ABILITY MEN

Aside from the information contained on the Project 100,000 data base about how the New Standards Men performed, a variety of special studies were done by each of the Services. In some cases these were undertaken to provide Service-specific data. For instance, the Air Force examined

the records of 14,215 Category IV and 12,700 non-Category IV airmen who entered between April 1967 and March 1968.³³ Again, the Air Force's experience was that Category IVs had lower basic and technical training completion rates, more disciplinary actions, more unsuitability discharges, and were less likely to attain grade E-3 or higher. Army researchers compared recruits of lower and average/higher aptitude in 22 Army Basic Combat Training (BCT) companies.³⁴ The Category IV personnel scored lower on performance measures and were rated lower by peers and superiors in terms of leadership potential.

An overall measure of effectiveness based on first-tour completion and recommendation for reenlistment was developed.³⁵ This was applied to 1,260 Category IV Navy personnel who entered the military in the early 1960s. Although these individuals tended to be in the upper ranges of Category IV, only 65 percent of them were found to be effective, according to these criteria. Four pre-enlistment factors were significantly related to whether one was effective: years of school, number of expulsions or suspensions from school, AFQT score, and number of pre-service arrests. When the same methodology was applied using data on Marine Corps low-aptitude members, an even higher noneffectiveness rate of 39 percent was found. In this case, using regression analyses to determine what characteristics of lower ability men were related to success even revealed that Catholics who dated (a little) prior to entering service, had been in school longer, and were older were more likely to be effective.

The list goes on. Lower supervisor ratings of the shipboard performance of Category IV personnel were found in such areas as ability to perform watch duties and general adaptation to Navy life and responsibilities.³⁶ A study of 16 different Navy ratings found that higher aptitude people obtained superior evaluations on such dimensions as time to learn the job, amount of supervision needed, confidence in work performed, and overall performance.³⁷ These differences were major in only three of the ratings, however. The results of a series of studies designed to determine which Navy jobs Category IV men could perform well indicated that commissaryman, steelworker, and equipment operator training were suitable, but that low-aptitude sailors required more individual help and counseling and finished with lower class rankings.³⁸ Storekeeper Class A school training was simply too difficult for these men.³⁹

Perhaps the most extensive job-specific research undertaken during Project 100,000 was conducted by Vineberg and colleagues.⁴⁰ Four jobs were selected on the basis of level of complexity, density of lower aptitude

personnel in the MOS, and whether they had civilian counterparts. The jobs were armor crewman, general vehicle repairman, unit organizational supply specialist, and cook. Job sample performance tests were developed along with paper-and-pencil knowledge tests. In general the researchers found that performance was related to both aptitude level and experience. Those of lower aptitude tended to perform less well on both written and hands-on tests initially and over a period of some 30 months. After that time about 90 percent of job incumbents were performing in the upper ranges of the distribution, regardless of aptitude.⁴¹

Reading, listening, and arithmetic skills were found to be related to job performance. In fact, in the repairman and supply specialist MOS, reading requirements exceeded the abilities of both low- and high-aptitude men. Those who were less proficient in literacy skills were more likely to depend on listening as a means of learning about the job or in solving problems. (This would certainly explain the finding that lower-aptitude individuals required more attention and counseling in performing their jobs.) Supervisor ratings were found to have only a slight relationship to the knowledge and performance test indicators of proficiency.

Based on the results of these studies, the authors concluded that "those men who would be excluded from the military on the basis of their AFQT scores include a considerable number of men who perform well." In addition, they felt that other measures besides the AFQT should be employed during the selection and classification process. "Given the relatively moderate relationship between AFQT and performance and the limited amount of diagnostic information provided by such a general aptitude test, it is desirable to consider other types of instruments that, in addition to screening at least as well as the AFQT, are better suited for providing information about specific strengths and weaknesses that focus more directly on the kinds of remediation that may be necessary."⁴²

A variety of studies were undertaken during Project 100,000 to determine the effectiveness of various training strategies with Category IV men. Programmed texts were developed to train personnel to use an Electronic Multimeter to take voltage and current resistance measurements.⁴³ In this case, it seemed lower aptitude personnel simply weren't up to the task. Three-quarters failed to demonstrate adequate learning whether they were taught in a traditional classroom setting or by the newly developed text. Workbooks were found to be effective in teaching instrument reading skills to men of lesser ability, and in fact were the most efficient of the three methods evaluated.⁴⁴ An Air Force correspondence course in fire protection was redesigned to lower reading require-

ments and incorporate more visual aids.⁴⁵ An alternate version of the course also included audiotape support. The latter version was found to be best for middle and lower aptitude airmen, although, as usual, Category IV men did not match the performance of their counterparts on postinstruction examinations. An attempt to introduce instructional films for teaching soldering skills showed that it had no impact on training outcomes.⁴⁶ Although low-aptitude men were able to learn this skill, it took them twice as long. Finally, peer instruction was found to be highly effective in a field wireman's course,⁴⁷ although Category IVs still dropped out at twice the rate of those of greater ability.

One of the more informative studies done in conjunction with Project 100,000 was carried out by Fox, Taylor, and Caylor,⁴⁸ who selected a variety of tasks judged to involve different types of learning processes. These included stimulus and response association, procedural task learning, the ability to discriminate between words and symbols, and more complex concept learning. Samples of high (90–99 percentile), middle (45–55 percentile), and low (10–21 percentile) AFQT men were given instruction/training in performing one of these tasks. Data were collected on the number of trials each group took to reach a preset performance criterion.

For example, in the military symbols task, subjects were shown a series of cards, each of which contained a common military symbol with its meaning written under it. An instructor would hold up each card and read the name aloud. When all symbols had been covered, the instructor gave the cards to the student who had 3 minutes to study them. Following the "training" period, the subject was given a written test in which he was to write the correct symbol meaning next to its representation. (Oral responses were allowed from those who were unable to write clearly.) When the subject had finished the test, the instructor would correct his mistakes, and the entire process would be repeated. The performance criterion was 100 percent correct for 2 trials or until 12 trials had been completed. The authors reported that the high- and middle-aptitude groups reached the criterion by the third trial, while fewer than half of the low-aptitude subjects had done so. In fact, out of 25 low-aptitude subjects, 5 failed to meet the criterion after 12 trials.

In summarizing the results of the entire series of studies, the authors concluded that "depending on the particular task, low-aptitude subjects required from 2 to 4 times as much training time, from 2 to 5 times as many trials to reach criterion, and from 2 to 6 times as much prompting as did the high aptitude subjects."⁴⁹

The finding that such a variety of studies, conducted using different methodologies and, in some cases, different subgroups of NSM, all reach the same basic conclusion serves to verify one basic fact: those of lower aptitude do not learn as quickly and, for the most part, do not perform as well as their smarter counterparts.

THE TRANSITION PROGRAM

Concern over the readjustment of former soldiers, sailors, marines, and airmen to civilian life led DoD to establish the Transition Program, which was open to the New Standards Men. Called for by President Johnson, it was originally set up specifically for those "whose training does not lead directly to civilian employment,"⁵⁰ but was in reality open to all departing Servicemembers. Policy guidelines included the following: the program was available to enlisted personnel with one to six months' service left; top priority was given to combat-disabled personnel, combat personnel with no civilian-related skill, others with no previous civilian occupation, and those ineligible for reenlistment; it was to be voluntary and after-hours; counseling would be provided; strengthening basic skills would be emphasized for those without a high school diploma; job-oriented training would be made available; private-sector assistance would be welcomed; job placement assistance was to be offered with the help of the U.S. Employment Service; and systematic follow-up and evaluation would be included.

Despite the good intentions, few separating New Standards Men took part in the Transition Program. Data for those receiving normal separations between July 1968 and December 1970 show that only 4.7 percent participated. There were a number of reasons why this happened. The men who had top priority—combat veterans—often received early discharges immediately upon returning from Vietnam; no provision was made to extend their terms for the sole purpose of participating in this program. Another problem was that it was a decentralized effort, and its success depended largely on the interest and involvement of local commanders. Thus at one base great efforts may have been made to smooth the transition of those leaving the military, and at another little or nothing was done in this regard. The fact that Servicemen are stationed all over the world also created problems, particularly for those in remote locations or smaller units. A shortage of trained counselors presented another hurdle to successful implementation. Attempts were made to train military personnel to perform this function, but there is no evidence as to the impact of such efforts. Despite the plan to conduct follow-up

investigations, there are no data on how successful the program was with those who actually did attend. All in all, it was a good idea that never really got the attention or input essential to making it work on a large scale.

THE DEATH OF PROJECT 100,000

Project 100,000 was initiated with great fanfare by Secretary McNamara in 1966. By early 1968 he was head of the World Bank, sent there by Lyndon Johnson, reportedly because of the President's increasing dissatisfaction with his Defense Secretary's contrasting views of the U.S. role in Vietnam. Perhaps it was because the man behind the mission was now gone that interest in Project 100,000 began to dissipate.⁵¹ Or it may have been the increased demands placed on the military by America's involvement in Southeast Asia that made this social program pale in importance. Maybe it was just the opposite: when the war effort eventually began to abate, manpower needs (and as a result the need for those of lower aptitude) lessened. Or in the end it may have faded because the Services were never enthusiastic about the idea in the first place. While they did capitulate to its requirements, they all hoped it would go away.

Whatever the cause, quotas were reduced, data collection efforts seemed to fall off, and little if anything was done to plan for follow-up research on the impact that being in the military had on these men. Manpower demands continued to decline—by 1971 troop levels in Southeast Asia were approximately one-quarter what they were at the height of American involvement in 1968. With lessening requirements on the Army for troops for the war effort, all of the Services began to feel that they could meet their manpower goals with higher quality personnel.

DoD officials also sensed this, as well as the end of the draft. According to I. M. Greenberg, Director of Project 100,000, DoD did discuss ending the program. But the Services didn't wait for the Pentagon to act. Going directly to Congress with assertions that quotas were no longer needed, they succeeded in having Project 100,000 put to death. Section 744 of the DoD Appropriations Act for 1972 included the following proviso: "None of the funds in this Act shall be available for the induction or enlistment of any individual into the Military Services under a mandatory quota based on mental categories." Project 100,000 was history.

PROJECT 100,000—GOOD IDEA OR BAD?

There are a plethora of statistics regarding the performance of the New Standards Men. Viewing these data as a whole, it is difficult to come to a “thumbs up” or “thumbs down” conclusion on the contribution (or lack thereof) that these low-aptitude men made to the military while serving. On the one hand, they were from two to three times as likely as their higher-aptitude counterparts to leave basic training before completion. On the other hand, this still means a success rate of between 88 and 95 percent, depending on the branch of the military in which they served. Similarly, skill training data show that those admitted under reduced standards were 1.5 to nearly 3 times more likely to drop out—but between 77 to 93 percent, depending on the particular Service, did complete their courses. Although they were 1.3 to 3 times more likely to experience nonjudicial punishments, 75 to 96 percent had none.

Occupational performance data generally indicate that those of lower aptitude were able to function in military jobs, just as McNamara predicted. They took longer to reach the same skill levels as their higher aptitude counterparts, and in many instances they never achieved the same proficiency standard. There was also evidence that there were certain occupations to which they should not have been assigned.

The fact that the New Standards Men did not do as well as their higher ability counterparts would hardly come as a surprise to anyone. After all, these individuals were very near the bottom of the aptitude curve, in most cases had not graduated from high school, and read at a 6th-grade level on average. Certainly, no one should have expected them to do as well as their higher scoring service peers.

Given these levels of expectation and results, what is surprising is the vehemence with which many express the opinion that Project 100,000 was a catastrophe—an experience to be avoided at all costs in the future. John Burlage, writing for the *Navy Times*, stated that “Project 100,000 is almost universally remembered by military people as a disaster that caused the military services tremendous grief.”⁵² Such a judgment is puzzling in that the data presented here, although certainly demonstrating that lower aptitude servicemen did experience difficulties, do not point in any way to a “disaster.” Are those who think in these terms simply wrong? Or were things going on in the field during this period that are somehow not reflected in the wide range of “objective” evidence that has been assembled and that demonstrates that Project 100,000 wasn’t, by any stretch of the imagination, a debacle for the military?

Perhaps it is a little bit of both. In terms of the perceptions of those serving at the time who now view this program so bitterly, a variety of mechanisms could be operating. For instance, it is possible that the close association of Project 100,000 and Vietnam in so many people's minds casts a negative shadow on the former because of factors that should more rightly be attributed to the latter. The unpopularity of the war seemed to have tinged the general view of the military and those who served during the period. It could be that the negative feelings about the Vietnam era in the minds of some of Project 100,000's most ardent critics are somehow transferred to this, the other major "project" at the time. After all, it is quite a stretch when some claim—as they have—that the United States would have prevailed in Southeast Asia had the quality of the force been better, and that that quality was compromised by the New Standards Men. It may be that Project 100,000 has, for some, become an easy target for the ills of the military during this period, ills that should rightfully be laid at other doorsteps.

Questions may also be raised regarding the validity of at least some of the data on the performance of those of lower aptitude that have been reviewed here. A couple of things should be kept in mind. For one thing, many analysts tend to view this program as some kind of grand experiment—all conditions were held constant, standards were lowered and nothing else was changed, data were collected and analyzed, and *voilà*, the incontrovertible results emerged. However, the military wasn't a laboratory in some university psychology building, and its members were not rats in mazes. The fact is, despite the policies and procedures handed down from above, despite the monitoring that went on, much occurred in the field that was beyond the control of those in charge of the Defense Department or Project 100,000.

Take recruiting: military recruiters routinely operate under a great deal of pressure to fill billets and make their quotas, thereby determining their own fate. During Project 100,000, this pressure was compounded by the need to obtain set numbers of people within aptitude ranges (Category IV, NSM, and AFQT 10-15), rather than just people above a given standard. Recruiters are very clever people. Imagine the following scenario. A young man enters an Air Force recruiting station where he is given the AQE. The test is scored, and the recruiter is a little disappointed to find that this particular fellow is quite bright. The slots for those of average and above-average intelligence have all been filled. What the recruiter needs now is a CAT (category) IV. The kid is anxious to get in the Air Force so he can avoid the possibility of having to serve in ground combat units. Should he just be turned away?

There is another possibility, of course. By giving the young man an idea of what percentage or number of questions to get wrong on the AFQT (to be taken at the AFEES), the recruiter has a shot at filling a CAT IV billet. A little coaching and he is on his way. Nobody is the wiser. The kid is happy. And the Air Force has obtained a higher quality recruit under the guise of a New Standards Man.

How common were such practices? Again, there are no hard data in this regard. A former Marine recruiter who freely admitted to coaching "potential CAT IVs" (but chose not to be directly quoted) indicated that he filled some 10 percent of these slots this way. (He also complained that it was almost impossible to instruct someone on how to take the test so that they would score in the AFQT 10-15 range.) This became a less viable option for him after 1968 and the Tet offensive, when the Marines experienced heavy and well-publicized losses. Being a member of the Corps suddenly lost a good deal of its sheen, and recruiting in general became a more difficult task.

The impact of this type of "fudging," to the extent that it did occur, would be to potentially inflate the in-service performance outcomes for the lower aptitude men. That is, the overall statistics would be rosier than they should be because an unknown number of those entering under Project 100,000 really belonged in the control group. Again, no one will ever know the true magnitude of such effects, but the possibility should be kept in mind.

If there was pressure to meet quotas for recruiting Category IV and other low-aptitude personnel, it mirrored a general drive to make Project 100,000 work. This program was not presented as an experiment by McNamara, one to be evaluated and then either discarded or maintained depending on the outcomes. He stated directly that those brought in under reduced standards *would* be able to contribute successfully. Lyndon Johnson, in an address on Selective Service in March 1967, stated that "this will be a continuing program. The Nation can never again afford to deny to men who can effectively serve their country the obligation—and the right—to share in a basic responsibility of citizenship." It almost seems that the efforts to monitor the program were undertaken not so much in the spirit of scientific inquiry, but rather to provide evidence that McNamara and Johnson were right.⁵³

A key part of the policy of the program was that performance standards would not be lowered to accommodate those of lower aptitude. And yet there was a war on, and during much of this period personnel requirements for that war were substantial. The heat was on to get men trained and into the field. One Army basic training commander at the time

indicated that he received what amounted to a quota for those who would successfully pass the course. Under that kind of pressure, it is not difficult to imagine that standards were allowed to slide somewhat in order to meet the demands. It is reminiscent of a situation described by one former recruiter who visited the high school of a prospect upon finding that, although he had a diploma, his reading abilities were rather limited. School officials explained to him that they were not allowed to hold back any more than 2 percent of a given class because of overcrowding and the unwillingness of the local taxpayers to pay the bill to expand facilities.

It seems entirely possible that this kind of “passing along” happened during various phases of military training as well. If a Basic Training Commander is told to make sure that a certain percentage of his men succeed, they will succeed—even if standards have to be compromised. It should be stated that this pressure, to the extent that it was applied, was probably more attributable to the situation in Vietnam than to the existence of Project 100,000. The fact that basic training attrition rates jumped sharply once troop levels in Southeast Asia started falling would seem to confirm the notion that minimum requirements in training varied as a function of the need for manpower.

A key assumption in the implementation of Project 100,000 was that those entering under reduced standards would not be identified, therefore they would be treated by others—superiors and peers alike—just as other comrades in arms. Even when special testing was to be conducted, instructions were given to do so in such a manner that the individuals involved would not be stigmatized in any way. The fact that they were there anonymously was supposed to guarantee that they would be treated on a par with their higher aptitude counterparts.

Whether this was ever feasible was apparently a subject of some debate. Rundquist, writing in 1967, suggested that “it is well nigh impossible to conceal the identification of the marginal, even if one desired. There is too much information on personnel records, too much rotation of the knowledgeable, and the topic itself breeds discussion.”⁵⁴ There is substantial evidence that Rundquist was right. Many in the field at least felt they had the ability to distinguish who had entered under Project 100,000 and who had not. In the early stages of the program, in fact, NSM were given service identification numbers beginning with 67, and they became widely known as the “sixes and sevens.” This practice was ended when it was discovered that the meaning of 67 was becoming common knowledge and discrimination was occurring as a result.

In talking about Project 100,000, not one of the veterans of this period interviewed doubted their ability to identify who was in service as a result

of the program. Particularly in training environments, they felt sure that the inferior performance of the lower aptitude men quickly “gave them away.” A number of labels (besides sixes and sevens) were derived: “McNamara’s Million,”⁵⁵ “McNamara’s Moron Corps,” and the “Stupid and the Super-Stupid.”⁵⁶ There is no evidence of how accurate such efforts at identification were—how many NSM were never “found out,” and how many other enlistees were at some point labeled incorrectly. However, it could be argued that by making such a public announcement of the lowered standards and the program, McNamara inadvertently created an atmosphere in which individuals were branded, and perhaps discriminated against, for a characteristic that they may or may not have possessed. Further, the publicity given to the program undoubtedly alerted many from the top down that trouble was coming and measures had to be taken to compensate. Being ever resourceful, those down the line who had to make the whole thing work found their ways.

One veteran of the period said that he was known as the “professor” because it was his responsibility to read general orders to the illiterates in his unit. He would do this repeatedly, until they had memorized them. He indicated that many were quite good at this, often reaching the point where, if you pointed to a particular spot on a page, they could “read” what was there, having also memorized the location of each instruction. In another example, a recruiter recounted how he would tell his lower aptitude charges to return to him when they got home from basic training. When they did so, he would take their orders from them and tell them the date and time to come back. Before that day he would secure them an advance, knowing that any money they had would be gone after a period of leave. He felt that, if he hadn’t made these efforts, many of them would not have shown up to continue their terms, whether out of ignorance or by design.

The point of these various anecdotes is to indicate that the numbers don’t tell the whole story. Special efforts *were* apparently made—up and down the line—so that Project 100,000 would be, or at least appear to be, a success. Many of these efforts were outside the official policies and procedures handed down from the Pentagon. They represent a high degree of creativity and resourcefulness on the part of all involved. However, they also cast doubt on the notion that lowering standards in this manner resulted in no strain to the Services. Through initiative everyone survived. Whether this was because Project 100,000 was a good idea, or because those in the Services at the time did their best to make it work, will always be a subject of some debate.

It is these intangibles that make the ultimate assessment of Project 100,000 difficult. However, one conclusion can be derived with little doubt: those who entered under reduced standards did not, on the whole, do as well as their fellow servicemen at the time. Most succeeded and many—many more than those of higher aptitude—did not. This in and of itself, let alone in combination with the anecdotal evidence provided above, suggests that Project 100,000 is not something that should be repeated if the best interest of the military is the ultimate criterion. But there is a flip side. What if McNamara and others were correct and military service provided a gain to those of lower aptitude, helping to “reverse the downward spiral of human decay”? Would this, balanced against the negative impact (or at least inconvenience) experienced by the military, make such a program worthwhile? It is this question that will be addressed in later chapters.

But first there is another era of interest. A decade later, low-aptitude recruits were back in great numbers. But this time they were not there at the behest of the Secretary of Defense.

CHAPTER 3

The ASVAB Misnorming

In the aftermath of the Vietnam war, the time was ripe for ending the draft and relying on a volunteer recruitment scheme. It was a good opportunity to put conscription asunder, not only because this long, deadly, and unpopular conflict had taken its toll on the attitudes of the public toward Defense and the Selective Service System, but because plenty of baby boomers were coming of age. In fact, after a few years of discussion and planning under the auspices of the President's Commission on the All-Volunteer Force,¹ not only were the Services relying exclusively upon volunteers to staff their billets, but the draft was actually abolished.² On 31 December 1972, the final draft call was issued. In military manpower lore, Dwight Elliot Stone bears the distinction of being the last man officially called to arms. The young Mr. Stone, a typical Category IIIA high school graduate, was inducted into the Army and began his obligated tour on 30 June 1973.

So, in that year the fledgling All-Volunteer Force (AVF) was launched. Initially it was thought of as an experiment. Predominant among the notions to be tested were: Could Service recruiters canvass our nation's youth and come up with enough young men? And would these men be of good caliber? Despite pay increases for enlistees, guaranteed assignments, and other perquisites offered to entice prospects into the barracks, many, and in particular congressional skeptics, anxiously awaited the Pentagon's statistics in the early years of the AVF for signs of failure—

missed recruiting goals and poor-quality recruits. According to Martin Anderson,

the opposition to ending the draft was powerful and widespread. It was opposed by most senior military men, by many congressmen and senators, by much of the National Security Council staff, by the editorial board of the *New York Times*, and by a substantial part of the public.³

Surely, they thought, it was next to impossible to fuel a large volunteer standing force of over 2 million, let alone attract youth who weren't dimwitted or in some way misfits. This pessimism led to the requirement by the Senate Armed Services Committee that the Department of Defense submit a monthly report on recruit quality as indexed by aptitude and high school graduation status.⁴

Though many market and recruiting adjustments needed to be made, it seemed that, by the mid-1970s, DoD had liftoff on the AVF. The numbers were looking good, as were the characteristics of recruits. Only 10 percent of enlisted accessions scored within the Category IV range in FY 1974. In FY 1975 they comprised only 6 percent of new recruits, and in FY 1976 only a token 5 percent were in this marginal category. Yes, the Army and the Marine Corps had missed their recruiting objectives in FY 1976, but not by much, and this was due to their overzealous attempts to curtail the enlistment of non-high school graduates. Many were still looking to put an end to the AVF experiment but proponents were lining up as well. All in all, things continued to look pretty good. But little did they know.

As it turned out, the continuation of the relatively rosy statistics was due in large part to a big testing glitch, which some said was at least partially responsible for keeping the AVF concept alive.^{5,6} From 1976 through 1980, the Services were selecting recruits on the basis of a test that was seriously flawed—not in terms of the actual content, but in the norms, its basis for interpreting scores. As a consequence, the Pentagon was recording fairly good quality among its new enlisted accessions but in reality that quality was not up to par. While manpower officials behind their desks in Washington were delighted, commanders and their “first shirts”⁷ were frowning in the field.

ERRONEOUS ENLISTEES: WHAT YOU SEE IS NOT WHAT YOU ACTUALLY GET

In January 1976, the Armed Services Vocational Aptitude Battery became the common measure used across all Services to screen enlist-

ment applicants. With the implementation of that test came artificially inflated scores. That is, an examinee's raw score was reported as being indicative of a higher percentile standing relative to the existing reference population (all men under arms at the height of World War II) than was actually the case. In other words, because the ASVAB was "mis-scored," the military thought it was accessing smarter recruits than it actually was. For about four years straight, DoD was reporting substantial gains in Category IIIs and a small, steady stream of IVs. Reality was 180 degrees different.

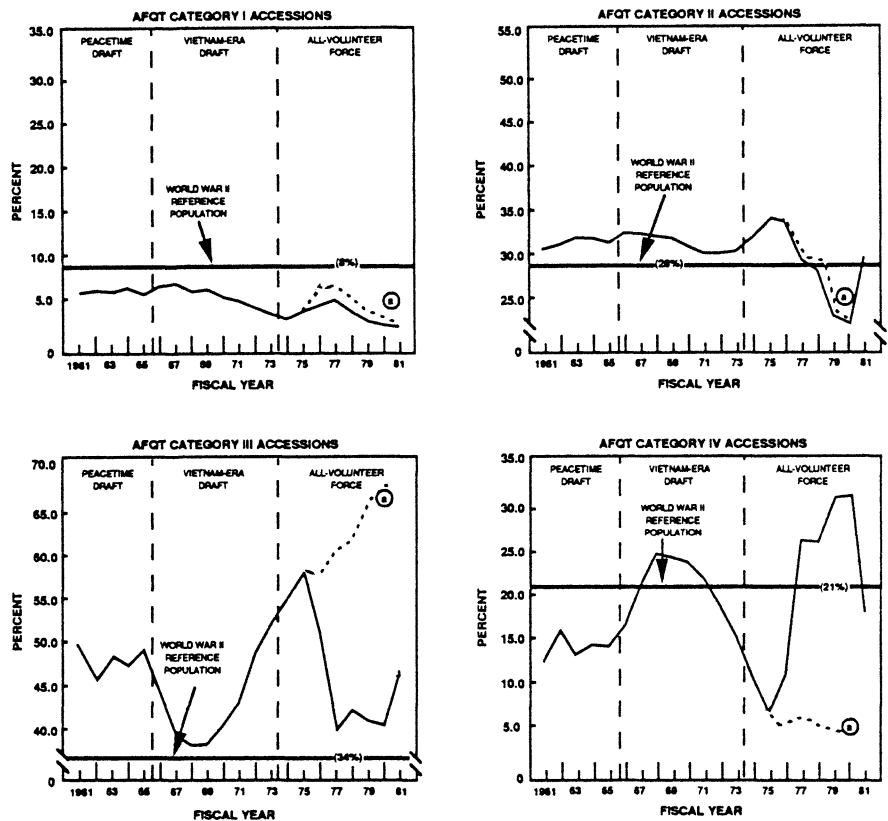
The extent of the problem is typified in the sets of figures (See Figures 3.1 and 3.2) for Defense as a whole and for the largest and hardest hit Service—the Army. The most startling impressions are the great incongruencies between the reported and actual percentages of accessions scoring in Categories III and IV. Table 3.1 highlights the Category IV discrepancies for the four full fiscal years of the accident. In FY 1979, for example, DoD reported that 5 percent of its new recruits were within the Category IV range, when in fact 30 percent scored between the 10th through 30th percentiles on the AFQT. Most dramatic is the 42 percentage point difference in what the Army thought it got and what it actually got in 1980 (reporting 10 percent in Category IV but realizing 52 percent).

This faux pas resulted in the enlistment of some 423,590 Category IV recruits between 1 January 1976 and 30 September 1980. This number represents one quarter of all new active-duty enlisted accessions (1,663,478) for that period. The overwhelming majority (about 95 percent, or over 400,000) of these low-aptitude recruits were men. More Category IVs came into Service during the four years and nine months of the Misnorming⁸ than had come in during the six years and two months of Project 100,000. Figures 3.1 and 3.2 also highlight this manpower comparison. According to a prominent military manpower analyst, "the misnorming episode turned out to be the Project 100,000 nobody knew about."⁹

Like Project 100,000, most (about 67 percent) of the low scorers served in the Army, and only a scant 5 percent became airmen. A "by the numbers" as well as a percentage distribution by Service are displayed in Table 3.2.

The broad occupational areas to which the Category IV personnel were assigned are shown in Table 3.3. About one-quarter of these unbeknownst marginal recruits were assigned to combat-type jobs. Approximately 21 percent were not in specific occupations, which means that they were prisoners, patients, students, or trainees¹⁰ who left service before being

Figure 3.1
Total DoD: Percentage Distribution of Non-Prior Service Accessions by Armed Forces Qualification Test (AFQT) Category, Fiscal Years 1961–81

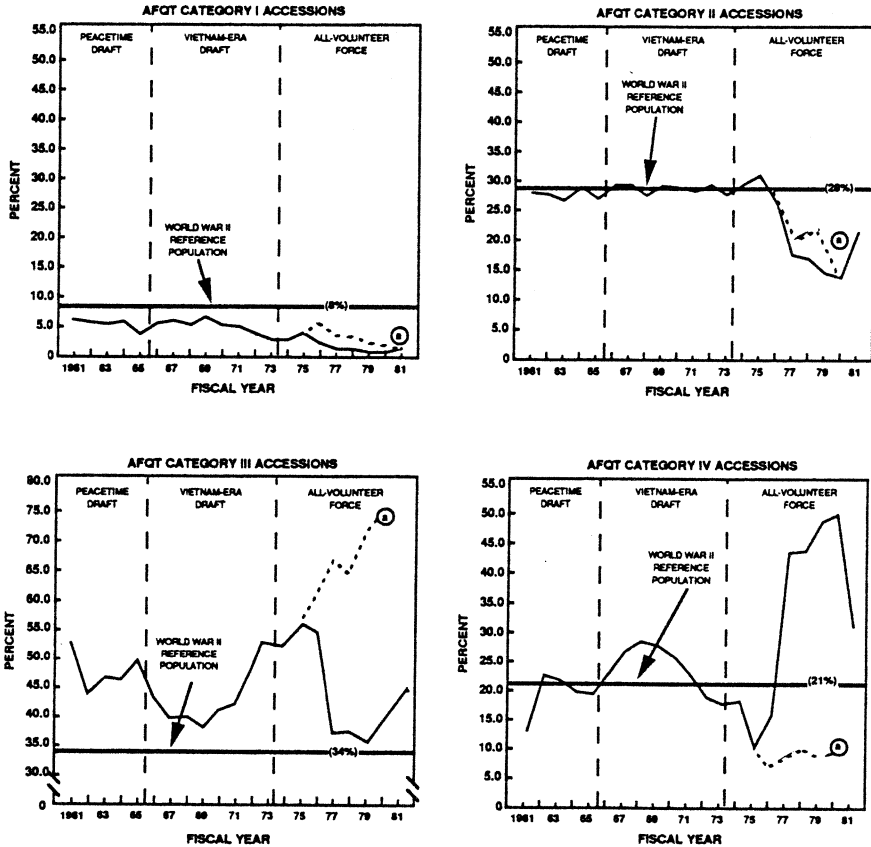


Source: Data on 1961–70 accessions are from Office of Assistant Secretary of Defense Manpower, Reserve Affairs, and Logistics. Data on 1971–81 accessions provided by Defense Manpower Data Center.

^a Broken lines show the percentage of accessions scoring within the respective AFQT category, as originally reported prior to the discovery of test miscalibration. Solid lines for this period (FY 1976–80) reflect the percentage of accessions based on test scores that were later renormed.

Figure 3.2

Army: Percentage Distribution of Non-Prior Service Accessions by Armed Forces Qualification Test (AFQT) Category, Fiscal Years 1961-81



Source: Data 1961-70 accessions are from Office of Assistant Secretary of Defense Manpower, Reserve Affairs, and Logistics. Data on 1971-81 accessions provided by Defense Manpower Data Center.

* Broken lines show the percentage of accessions scoring within the respective AFQT category, as originally reported prior to the discovery of test miscalibration. Solid lines for this period (FY 1976-80) reflect the percentage of accessions based on test scores that were later renormed.

Table 3.1
Reported Versus Actual Percentage of AFQT Category IV Non-Prior Service
Enlisted Personnel Accessed During the ASVAB Misnorming, by Service and
Fiscal Year

Service	Fiscal Year ^a			
	1977	1978	1979	1980
Army				
Reported	9	11	9	10
Actual	44	39	46	52
Navy				
Reported	2	3	4	2
Actual	21	16	18	17
Marine Corps				
Reported	4	4	4	4
Actual	27	27	26	27
Air Force				
Reported	0	0	0	0
Actual	6	6	9	10
Total DoD				
Reported	5	5	5	6
Actual	30	25	30	33

Source: Department of Defense, back-up book prepared for congressional testimony.

^a Excludes nine months of FY 1976.

assigned jobs. Another 18 percent of these CAT IVs were placed in the Electrical/Mechanical Equipment Repair areas and just over 10 percent were in Service and Supply.

Unfortunately, this rather broad occupational categorization does not indicate the specific nature of the job duties these recruits fulfilled. These rather important sounding functional areas include many soft skill specialties, and especially at the lower levels may require merely "helpers" and "gofers."

About 42 percent of these below-average accessions were black and about one-third (34 percent) did not hold a high school diploma. Unlike Project 100,000, over half of the Category IVs who entered the military in connection with the Misnorming were within the upper part of this AFQT category range (remember, 63 percent of the NSM were in Category IVC). The subcategory breakout was: IVA—53 percent, IVB—

Table 3.2

Number and Percentage of Category IV Personnel Who Enlisted During the ASVAB Misnorming (1976–80) by Service

Gender	Service				Total DoD
	Army	Navy	Marine Corps ^a	Air Force	
Men Only^b					
Number	269,505	72,902	47,071	19,141	408,619
Percent	66	17	12	5	100
Total^c					
Number	282,231	73,248	46,431	21,680	423,590
Percent	67	17	11	5	100

Source: The data for males are from Janice H. Laurence, Jane G. Heisey, Barbara Means, and Brian K. Waters, *Demographic Comparison of Law Aptitude Military and Nonmilitary Youth*, FR-PRD-85-1 (Alexandria, VA: Human Resources Research Organization, February 1985). The total data are derived from special tabulations provided by the Defense Manpower Data Center.

^a As a result of including somewhat different time periods, the number of male Category IV recruits exceeds the total number of Category IV recruits.

^b The data for men cover FY 1976 through FY 1980. The Misnorming actually began in January 1976, thus an extra six months of accessions are included here, FY 1976 began 1 July 1975.

^c The "Total" data begin with January 1976 accessions and end at the last day of FY 1980—30 September 1980.

33 percent, IVC—14 percent. So, although more Category IVs entered under the Misnorming than under Project 100,000, there were fewer very, very low-aptitude enlisted personnel among those who slipped into service in the late 1970s.

Not only was there an influx of low-aptitude or Category IV personnel, but on the basis of formal minimum aptitude and education standards in existence over this period, Eitelberg estimated that 359,403 young men entered the military who weren't actually *eligible* to do so.¹¹ These "Potentially Ineligibles (PIs),"¹² as defense analyst and former Director of Project 100,000 I. M. Greenberg called them, were not all of low aptitude. They just didn't meet the standards in effect *at the time*. Also, some recruits may have met the AFQT minimums but would have been ineligible on the basis of their true scores on other ASVAB composites.¹³ And, some Category IV recruits were eligible for enlistment. The minimum ASVAB requirements in effect during most of the Misnorming years are shown in Table 3.4. The Air Force, for example, had very high standards for nongraduates—requiring an AFQT score of 65 or higher.

Table 3.3

Occupational Distribution for AFQT IV Personnel Who Enlisted During the ASVAB Misnorming (January 1976 through September 1980)

DoD Occupational Area	Number	Percent ^a
Infantry, Guncrew, Seamanship	107,383	25.7
Electronic Equipment Repair	7,292	1.7
Communications & Intelligence	27,596	6.6
Medical & Dental	9,584	2.3
Other Technical	4,803	1.1
Functional Support & Administration	40,770	9.8
Electrical/Mechanical Equipment Repair	75,187	18.0
Craftsman	13,546	3.2
Service & Supply	44,864	10.7
Nonoccupational ^b	86,799	20.8
Total^c	417,824	100.0

Source: Special tabulations provided by the Defense Manpower Data Center.

^a May not sum to 100 due to rounding.

^b Specific occupation not assigned.

^c Excludes those with unknown occupational area.

Considering only the minimum AFQT standards in effect at the time, roughly 217,000 young men would have been potentially ineligible.¹⁴

All in all, had the test been correctly normed, not only would hundreds of thousands have been barred from enlisting, but the additional Category IVs who were technically eligible would have been enlisted sparingly, given the generally higher operational cutting scores and quality goals existing during that period.¹⁵ That is, recruiters would have had to try harder to keep quality up and the proportion of low-scoring recruits “manageable.”

DoD: DUMB OR DISHONEST?

Needless to say, Congress was not pleased upon hearing of the Misnorming. On 19 February 1980, then-Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics, Robert B. Pirie, officially broke the news to the House Committee on Armed Services that ASVAB scores were erroneously inflated. Three weeks later, on 10 March 1980, Pirie along with witnesses—Richard Danzig, Principal Deputy Assistant

Table 3.4
Service Enlistment Aptitude Standards for Men During the Misnorming Period

Education Level	Minimum Aptitude Standards ^a	
	AFQT Score	ASVAB Aptitude Composites
Army		
High School Diploma	16	90 on Any 1
GED	21	90 on Any 1
No Credential	31	90 on Any 2
Navy		
High School Diploma	21	None
GED	31	None
No Credential	31	None
Marine Corps		
High School Diploma	21	GT ^b =80
GED	21	GT ^b =80
No Credential	31	GT ^b =95
Air Force		
High School Diploma	21	G ^c =45; MAGE ^d =170
GED	21	G ^c =45; MAGE ^d =170
No Credential	65	G ^c =45; MAGE ^d =170

Source: Adapted from Mark J. Eitelberg, Janice H. Laurence, and Brian K. Waters, *Screening for Service: Aptitude and Education Criteria for Military Entry*. (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Installations, and Logistics], September 1984), pp. 40–152.

^a Minimum aptitude standards are expressed as percentile scores on the AFQT and standard scores on the other ASVAB composites with the exception of the Air Force, which uses a percentile metric for its composites.

^b GT is the General Technical ASVAB composite.

^c G is the General ASVAB composite.

^d MAGE represents the combined Mechanical (M), Administrative (A), General (G), and Electronics (E) ASVAB composites.

Secretary of Defense (Manpower, Reserve Affairs, and Logistics), and A. J. Martin, Director for Accession Policy—informed the Manpower and Personnel Subcommittee of the corresponding Senate Committee.

Congressional reactions to what amounted to bogus quality reports varied somewhat, but all were distrustful of Defense. Skeptics thought that DoD was saying “oops” at a very opportune time, but different camps

were impugning different motives. For example, Pirie's announcement coincided with President Jimmy Carter's request to reinstate draft registration (for both men *and* women) following the Soviet invasion of Afghanistan. Against this backdrop, some thought that by dropping the bombshell of the Misnorming, Defense officials were bolstering Carter's claim that registration was necessary. Actually the announcements of the resumption of registration came as quite a surprise to DoD manpower officials and even to Bernard D. Rostker, then Director of the Selective Service (personal communication, February 1991). Equally as implausible, others suspected that DoD had planned the Misnorming, or at least had been covering it up for a long time, to keep the volunteer force afloat.

W. S. Sellman, then an Air Force officer and chairman of the ASVAB Working Group that dealt with the technical issues involved in the Misnorming,¹⁶ tells DoD's version of the story: "According to DoD, the miscalibration was inadvertent, it took a considerable length of time before it was discovered, and the fact that it was announced around the time of requests for draft registration was purely coincidental."¹⁷ Sellman quipped that "together these plots are known as the great ASVAB controversy over whether DoD was dumb or dishonest." The evidence presented in the next section mostly points to the Service personnel researchers being just plain dumb. Some might even say they were negligent if not incompetent. Once the psychometric blunder was discovered and dissected, DoD officials set out aggressively to right the wrong. But how could a technical mistake of this magnitude happen, and persist for almost five years?

HOW THE ASVAB WAS MISNORMED

The ASVAB Misnorming was a "tragedy of errors," a travesty of sound psychometric practice and common sense. Rather than being attributable to one technical mistake, this five-year period was nurtured by reactionary decisions, Service disagreements, haste, a multitude of testing and sampling mistakes, test compromise, and inexperience with what the results of the recruiting of volunteers should look like.

The seed for this infamous 1976-80 period actually was planted around the summer of 1972, when Assistant Secretary of Defense for Manpower and Reserve Affairs, Roger T. Kelley, relieved the Services of the obligation to administer the AFQT. Kelley thought that the AFQT would unnecessarily deny enlistment to many potentially successful Servicemembers and believed that selection decisions were best left to more specific vocational or trade tests and recruiter judgment.¹⁸ Though

he claimed that his decision did not reflect an antitest bias, it is widely thought that Kelley's former position as the Vice President of Industrial Relations for Caterpillar Tractor Company made him wary of using a general ability index. He had probably been exposed to antitest sentiments and the then popular view that test validity was situation-specific. His proclamation to end recruit screening with the common AFQT and instead rely on the vocational aptitude composites from the Services' own test batteries was welcomed by the individual branches. This action loosened control of selection policies and practices by the Office of the Secretary of Defense and afforded substantial autonomy to the Army, Navy, Marine Corps, and Air Force. This freedom also reduced their paranoia over a possible return to DoD-imposed personnel quality quotas like those used in the Korean war era and during Project 100,000.

The Assistant Secretary capitulated somewhat over the AFQT issue in response to the insistence by his staff that a common measure of recruit quality was necessary for tracking historical trends and for reporting purposes. The ultimate solution was that the AFQT was "out" and Service-specific selection and classification batteries were "in," but each Service was required to concoct a surrogate AFQT score from their own tests. So instead of relying on the AFQT and the supplemental aptitude batteries such as the Army Qualification Battery,¹⁹ at the centralized Armed Forces Examining and Entrance Stations, the Services could use their own batteries either at the AFEES or at their own recruiting stations, which the Navy and Air Force opted to do. In theory, all that was required of the Services was to keep the Office of the Secretary of Defense (OSD) informed of their policies and procedures and to translate the scores of their recruits into an AFQT equivalent. In reality OSD learned of Service policy changes quite after the fact, and today there is considerable question as to how equivalent the Service-derived AFQT "equivalent" scores really were. DoD was playing catch-as-catch-can with the Services.

By 1973, each of the four military branches had switched over to its own brand of selection and classification testing. The Army used a new version of its former Army Classification Battery known as ACB-73; the Navy employed the Short Basic Test Battery (SBTB) and later the Basic Test Battery (BTB), while the Marine Corps and Air Force used version three of a test originally created for recruiting and counseling purposes with high school students, known as the ASVAB.

This decentralized situation began to change in 1973 under Kelley's successor, William K. Brehm. The new manpower secretary recognized the shortcomings of the potpourri of tests, and by May 1974 work was

authorized on a Service-common selection and classification instrument. Among other things, a multitude of tests was a barrier to enlistment. With a joint test a prospective recruit need only participate in one multihour session and "try out" for different Services on the basis of attained scores. Because the ASVAB was already used as a recruiting and counseling tool in high schools by all Services, and was the production or operational test for recruit screening in the Marine Corps and Air Force, the ASVAB was chosen as the model for the "military test."

With the Air Force serving as executive agent, development began. Two groups were soon organized to manage the process of readying new ASVAB versions for operational implementation. The first was known as the ASVAB Steering Committee and comprised senior personnel policy officers from each Service, with the chair being the Deputy Assistant Secretary for Program Management within the Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs). The second group was the ASVAB Working Group, whose membership consisted of testing policy staff and psychometricians from each of the Services. Despite this management system, since none of the Services welcomed the idea of a DoD-ordered joint selection battery, development and implementation were approached with much reluctance.

Initially a 1 September 1975 date was set for the new ASVAB to be ready for administration to all Service applicants at the AFEES. The Navy balked. They wanted to make sure that the new test was valid for Navy and asked for an implementation reprieve until 1 June 1976. They were refused this date but an extension to October 1975 was granted, which did not entirely placate the Navy. The wrench which the Air Force threw in was insistence on totally new items for the battery rather than borrowing from formerly used selection and classification tests. Implementing a test by committee wasn't going to be easy. And thus began the Service disagreements, slippage of dates, changes in key personnel, and the Working Group's eventual frenetic activity to get a new joint ASVAB in place so as to satisfy Brehm and his deputy, Donald W. Srull, who "could not understand why it took so long to develop a test."²⁰ Brehm was determined to get the new test in place to restore credibility as to recruit quality with Congress and the public. He pressured Srull to keep the "heat" on the Services, to avoid foot dragging.

As late as July 1975, the Army raised a new concern, which led to yet another delay. Army technicians believed that the ASVAB items were too difficult. They held up printing of the test until easier items could be substituted, items that would permit better selection decisions at the low end of the ability distribution. Inadvertently the test developers seemed

to be saying, "If you want it bad, you'll get it bad." Though Service bickering continued to slow the pace, Brehm set a new firm, fixed, unbending, in-granite implementation date—1 January 1976. So from July 1975 until this date, the Working Group had to change the test items, print the test booklets and administration manuals, administer the new test together with a reference test to appropriate "norming" samples, and then equate the new test to the old test so that recruits would still be selected on the basis of their scores relative to the reference population—all this plus coordination with the AFEES and the top brass, now in just under six months.

Well, ASVAB form 6/7 was indeed implemented on 1 January 1976. Both hell and high water arrived with it, but nobody noticed, at least for a while. Actually, three months after implementation, in April 1976, the Navy picked up on the first problem. Too many enlistees were scoring within the Category I and II ranges—a lot more than had been entering before the ASVAB. After some checking by each of the Service personnel research laboratories, it seemed that a recalibration or new conversion table was called for, but only for the upper end of the distribution. Despite the Marine Corps' insistence, in July 1976, that there were problems up and *down* the scale, the other Services did not yet note any anomalies in their accession data. Therefore a new conversion table was adopted in September 1976, fixing the high-end problem only.

The Marine Corps, through analysts at the Center for Naval Analyses (CNA), pursued the miscalibration issue further. They produced evidence in early 1977 that the initial "fix" overadjusted scores downward for Category I and II recruits and they insisted that scores were inflated to some extent in the lower end.²¹ Bad news travels slowly in a bureaucracy and this was no exception. But, inspired by a few analysts who were convinced of a psychometric blunder, A. J. Martin, then Director for Accession Policy, set to work to uncover the exact magnitude and nature of the problem. Martin and those above him were determined to expose and rectify the situation, but first they needed all the facts.

Because of the implications of a "miscalibration," especially in the lower end, Defense asked CNA to repeat their study, which they did by 1978.²² The second investigation, again a "re-equating" of the new AFQT with a former version that had been anchored to the reference population, was not entirely consistent with the first. The inconsistency and the need to know *for sure* whether there really was a problem, and exactly how big of a problem it was, prompted DoD to commission two more studies, one by a psychometrician at the Army Research Institute (ARI) using a sample of military applicants (in contrast to the recruits

used in the earlier sample), and another by the Educational Testing Service (ETS) using a sample of high school juniors and seniors from the High School Testing Program version of the ASVAB as the anchor.

By June 1980, when the ARI and ETS studies were completed, the verdict was in. ASVAB 6/7 had indeed been miscalibrated. However, though the CNA, ARI, and ETS studies all agreed that the scores in the lower end were grossly inflated, they differed significantly in their suggested new “correct” scores. To settle the issue, DoD sought the counsel of three testing experts—Drs. Robert Linn, Richard Jeager, and Melvin Novick from the Universities of Illinois, North Carolina, and Iowa, respectively. The “three wise men” confirmed that a grave calibration error had been made and determined that score corrections were best made on the basis of the ARI study, because its sample of applicants was the most appropriate for DoD’s testing purposes.

By the time everyone agreed on the problem and the solution, only about three months remained before new ASVAB forms were scheduled to replace the old ones. Rather than cause confusion in the field, the Working Group decided against adopting the new norms for ASVAB 6/7. Instead, they would continue in error for just a while longer until the development of ASVAB 8/9/10, which had been in the pipeline since 1978, could be expedited, with every conceivable safeguard. The improved test provided salvation on 1 October 1980. The new norms for ASVAB 6/7 were used only retrospectively to correct the inflated scores.

TECHNICALLY SPEAKING, WHAT WENT WRONG?

Now you know why the Misnorming took almost five years to discover, assess, and overturn. But just what went wrong with the original calibration of ASVAB 6 and 7? That answer is far from simple and much of it still remains a Gordian knot. There was a report put out in 1983 that tried to untangle the knot. This account of the Misnorming was entitled *Original Scaling of ASVAB Forms 5/6/7: What Went Wrong*.²³ A better question is what didn’t? This unraveling of the conundrum could serve as a text on how not to calibrate a test—from soup to nuts.

When the ASVAB was implemented in 1976, it was important to interpret scores on the new test in the same way that AFQT scores of old were interpreted—in terms of the World War II mobilization population, an approximation of the national military age population. DoD wished to gauge quality on a consistent yardstick, not a rubber ruler.

When a new test is introduced, you can’t just discard the old one. Tests differ in terms of content, the number of items, difficulty level, and so

on. If you don't want such changes to sneak through the back door and affect aptitude standards and wreak havoc on your ability to consistently interpret the relative standing of test-takers, then you have to equate scores on the new with scores on the old. The basic idea is to give a representative group two tests in addition to the operational test (the one now being used for making actual enlistment decisions). Under the same conditions as the operational test, you also administer an already normed earlier test version and the new test version. Then you equate or calibrate the latter two.

The military has typically performed an equipercentile equating. The raw scores on the *new* test are converted into percentile rankings within the sample. For example, a raw score of 5 correct out of 100 items might put you at the 10th percentile relative to the rest of the test takers—90 percent of the sample scored higher. The raw scores on the *old* test are converted into percentiles relative not to the current sample, but to the earlier reference population. A score of 7 out of 90 correct on this test might put you at a percentile of 10 relative to the norming group. Therefore, you can equate a raw score of 5 on the new test to a raw score of 7 on the old because these different raw scores put you at the same percentile rank.

In trying to equate scores on the new ASVAB to scores on the old AFQT, and hence back to the normative base, too many shortcuts were taken by the ASVAB Working Group.²⁴ Two different samples with two different reference tests were blended into one. To match up scores at the high end of the AFQT distribution, the Navy and Air Force provided a sample of their recruits. These “already accepted” sailors and airmen took two tests—the new ASVAB and an old ASVAB version not then in use (form 2). To set correct scores for the low end, Army *applicants* were tested at the AFEES with the new test and the operational test—ACB-73—serving as the anchor. Using the operational test as the tie-back for new scores as well as to qualify applicants saved the Army the burden of giving three tests.

The little problem at the upper end of the aptitude distribution probably resulted from failing to properly score the old test. To score the AFQT component of the ASVAB 2 properly, it was necessary to correct for guessing by subtracting a fraction of the number answered incorrectly from the number answered correctly.²⁵ This was not done.

The problems in the lower half of the distribution were more extensive. AFEES testers were required to have a set number of applicants participate in the calibration. They got credit only for providing examinees who scored below the 50th percentile on the AFQT and each

applicant's testing was limited to one day. These conditions probably caused AFEES staff to circumvent instructions to counterbalance the order of test administration. By giving the operational test first, they could more easily fill the quota of applicants scoring below 50 and save valuable testing time. In many cases testing was expedited by getting people from the delayed entry program (DEP) who had scored below 50 at an earlier time and were now returning to the AFEES for final enlistment processing; all they had to do was to take the new test. This sounds efficient, but by using the operational test that had been in existence for some time, the Army inadvertently set up unequal testing conditions. Some applicants were probably coached on the operational test by recruiters. In addition to such outright compromise, which was later verified, individuals seeking to enlist were probably more motivated to do well on the "real" test than on the "other" test.²⁶ Also, by relying heavily upon those in the DEP, who were qualified in terms of aptitude standards, the Army failed to sample enough persons at the very low end of the ability distribution. This affected the ability to properly determine the score boundaries for low percentile standing. All of these factors and more contributed to inflated scores on the new AFQT.²⁷ A given score was thought to be indicative of a higher standing relative to the reference population than was actually the case. Table 3.5 shows the original results of the equating together with the recomputed raw-to-percentile score conversions for the AFQT portion of ASVAB 6/7.

In the long run, initial Service hesitation and then the scurry to meet Brehm's fast-paced schedule caused a five-year delay in implementing a sound, Service-common selection system. Finally, with the implementation of the correctly calibrated ASVAB 8/9/10 on 1 October 1980, the beginning of a new fiscal year, DoD had achieved what it had been trying to do since 1976.

IT AIN'T BROKE, SO DON'T FIX IT

Recovering from the Misnorming was not so easy. The advent of the new selection and classification tool was not welcomed by all. The Air Force recruiting command, for example, insisted that the *new* ASVAB norms weren't right. They fought the personnel planners, who were in essence making standards—and hence the job of meeting accession quality and quantity goals—tougher. No doubt the recruiting communities in the other Services were concerned about the new test as well; while quality may have suffered under ASVAB 6/7, the Services looked good and recruiters could have some semblance of a normal existence.

Table 3.5

Original and Recalibrated ASVAB 6/7 Raw Scores Corresponding to AFQT Categories and Percentile Boundaries

AFQT Category	Percentile Score	ASVAB 6/7 Raw Score (Number Correct Out of 70)	
		Original Miscalibrated	Recalibrated
I	93-99	64-70	65-70
II	65-92	52-63	52-64
IIIA	50-64	42-51	46-51
IIIB	31-49	31-41	39-45
IVA	21-30	28-30	34-38
IVB	16-20	26-27	30-33
IVC	10-15	23-25	24-29
V	1-9	0-22	0-23

Source: Adapted from a table in Richard M. Jaeger, Robert L. Linn, and Melvin R. Novick, "Review and Analysis of Score Calibration for the Armed Services Vocational Aptitude Battery," *Aptitude Testing of Recruits*, a Report to the House Committee on Armed Services (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Reserve Affairs, and Logistics], July 1980).

But at least recruiters in the Army, Navy, and Marine Corps got a "heads-up" warning about the changes, as Service members of the ASVAB Steering Committee coordinated with their recruiting commands. These recruiters knew what to expect. The Air Force personnel planner and Steering Committee member decided that "mum's the word" to recruiters. He reasoned that the Air Force hadn't been affected much by the Misnorming owing to its relatively high standards and operational cutting scores, so why not seize this opportunity to increase quality even further? Because the Air Force recruiting squadrons had not anticipated tough times ahead in procuring acceptable recruits, when they eventually did learn the truth the pressure led them to mount a campaign to discredit the new test norms. They felt desperate, and so they were trying to prove that the sun came up in the West—it wasn't broke, so don't fix it.

Earlier, the ASD's office had anticipated the effects of a more stringent ASVAB selection system. The number of youth turning 18 was declining and the Services were worried about filling the ranks with both the requisite quantity and quality of recruits. DoD officials were concerned about the expected recruiting crisis but did not want it to become an issue in the 1980 election campaigns. They knew it was broke and had to be

fixed—kind of. Their fix was to have standards on the new, correct test set at levels that would qualify the same type of people as had come in during 1976 to 1980. This sounds sort of nifty—have a correctly calibrated ability measure but take less than optimal ability anyway. There was blood in the halls of the Pentagon over this idea. Memos flew back and forth between the Services and OSD. Representatives of the personnel policy offices of the Armed Forces wanted OSD to stay out of their business—they would set standards as they saw fit! With a little help from the Office of General Counsel (Manpower, Health, and Public Affairs), DoD provided proof that standard setting was within its purview. The Secretary of Defense has the authority to establish enlistment standards and this responsibility is assigned to the Assistant Secretary for Manpower, Reserve Affairs, and Logistics.²⁸ A memorandum from the Assistant General Counsel's office concluded: "It is our opinion that in the event of a failure to agree upon mental standards applicable to persons enlisting in the Military Departments that the Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics) has authority to establish them for all of the Military Departments."²⁹ This confrontation was finally diffused when the incumbent ASD and Deputy ASD left office to make way for the new Republican administration. The Services had won. Fiscal Year 1981 standards were not forced down by OSD.

While the Services and DoD were engaged in their arguments over setting standards, Secretary of the Army Clifford L. Alexander, Jr. had a different twist—it's broke, but don't fix it. Though William Peacock, Assistant Secretary of the Army for Manpower and Reserve Affairs, had concurred with DoD's 1980 report to Congress concerning the miscalibration, he was told to retrieve the coordination or agreement memorandum that he had signed and to "unsign" it.³⁰ Imagine a high-level political appointee having to track down a memo in the Pentagon and, having found it, offer the excuse, "I signed it but I really didn't mean it."

Secretary Alexander was not a fan of aptitude testing for recruits. He believed that the "problem" ran deeper than scoring errors in the enlistment screening test. He questioned the need for the test at all. He asserted that the soldiers who had come in during the purported "Misnorming" were doing fine on the job, or at least many of them were. This proved "that the tests were unscientific and unfair." The Army General Counsel convened a working group, which suggested "that the Army do away with the Armed Forces Qualification Test."³¹ Alexander was particularly concerned that the AFQT, especially one with tougher norms—scheduled for implementation on 1 October 1980—would deny

enlistment opportunities to minorities. His general counsel prepared a report that levied many just criticisms of the ASVAB and military testing in general. However, many of the blunders over which the report deliberated (e.g., too few easy items, poorly conceived and written items) had been corrected under the new and soon-to-be-released ASVAB 8/9/10. The Lister report,³² as it came to be known, recommended either that the ASVAB (or at least the AFQT component) be eliminated and, if not, that mental categories be done away with and standards be tied to actual job performance rather than being set capriciously. Some of these recommendations were ultimately taken up, though the AFQT and mental categories remained. Alexander's legacy in this arena seems only to be that the term "mental category" was replaced by the less pejorative "test score category" in the Army and later by "aptitude category" across all four Services.

WHAT WENT RIGHT AFTER THE MISNORMING

For the new and improved ASVAB, calibration studies were done at a more leisurely and professional pace. Anticipating the eventual need for new ASVAB forms, to prevent or at least retard the effects of compromise, a new test had been constructed and calibrated well before the implementation date. Because "the main lesson is that the construction of score scales for enlistment tests should be done right in the first place,"³³ the equating strategy was greatly improved.³⁴ And, at the behest of Congress, to make sure that a misnorming did not occur again, DoD formally established and supported the Defense Advisory Committee (DAC) on Military Personnel Testing in April 1981. The DAC comprises a rotating group of testing experts from the civilian academic, business, and research worlds. This group not only reviews the periodic development and calibration of new ASVAB forms but assesses the validity and integrity of this instrument and other military selection devices as well.

One important fallout of the Misnorming was the dawning awareness that the military was choosing today's recruits on the basis of a 1944 quality metric. It was getting pretty embarrassing for DoD to admit to Congress that recruit quality was assessed on the basis of how they compared to all men (officers and enlisted personnel) serving in the Armed Forces as of 31 December 1944. There was good reason to believe that this World War II sample was representative of the military-aged population then, for the military was at peak strength and deferments were minimal. But in 1980, inquisitive minds wondered just *what* was

known about this group and whether it was representative of the current youth population. Nobody really knew, and nobody was likely to find out almost 40 years later. The 1944 mobilization population never actually took an AFQT, let alone an ASVAB. They took the Army General Classification Test (AGCT) or the Navy General Classification Test (NGCT) and the AFQT, introduced in 1950, was assumed to be a parallel measure. The first DAC, which included the "three wise men," endorsed the OSD staff's recommendation for a more contemporary and definable reference population or normative base for the ASVAB. With test content changing over the years and the characteristics of the population changing as well, it was time to find a new and sounder basis for norming the ASVAB, even if it meant severing historical ties and dusting over the quality audit trail. And by 1984, Defense did just that.

The Department of Defense subsidized the testing of a nationally representative sample of almost 12,000 youth, ages 16 through 23, with the ASVAB (form 8a) throughout the summer and fall of 1980. This sample was part of the 1979 base year of the Department of Labor's National Longitudinal Survey (NLS) of Youth Labor Force Behavior. Because the Services primarily recruit individuals who are at least 18 years of age, analyses of the 18- to 23-year-old subset of this sample were undertaken and have come to be known as the *Profile of American Youth*. The *Profile* Study provided new national norms for the enlistment screening test. Recruits would soon be compared against a sample of 9,173, representing the population of over 25 million men and women born from 1957 through 1962.³⁵ With the introduction of ASVAB forms 11/12/13, in October 1984, this quantifiable, contemporary population replaced the mysterious World War II referent. For the first time in 40 years, recruit quality could be described relative to today's youth (including women along with men), not men under arms from yesteryear. Someone scoring at the 50th percentile would be known to do better than half of 18- to 23-year-olds who took the test in 1980. What's more, other ASVAB composites now could be tied directly to the score distribution in the reference population.

An interesting sidelight to the switch in population bases for interpreting AFQT scores is that it didn't make much difference. A collection of papers presented in symposium format to the 93rd annual convention of the American Psychological Association unanimously concluded that

the 1944 and 1980 distributions look remarkably similar From all the data, we see that the change to the 1980 reference population did not substantially alter the AFQT categorization of military contracts and accessions [T]he conversion resulted in practically no change in the proportion of scores within Category IIIA for

the FY 1985 applicant pool The fact that the distributions of scores from 1944 and 1980 are *so* close—considering the effects on test performance of age, education, geographical region, social and economic status, and race or ethnic group—and considering that the two tested populations, separated by a span of almost thirty-six years, are *so* unlike—is truly remarkable.³⁶

Another eye-opening bit of news that Congress received during its ASVAB inquisition was that the military selection and classification device was validated against training success, not *job* performance. This bothered many, including the three wise men and members of Clifford Alexander's ASVAB-bashing ad hoc committee. The Department of Defense had recognized that job performance was the "ultimate" criterion for judging recruits, but this was easier to say than to do. Even if one could adequately define "job performance," that would be of little consolation because the Services did not have job performance tests for most military specialties—and the costs of developing such indexes for every job in the military would be staggering. Training course grades provided a readily available and reasonable surrogate. After all, a recruit wasn't likely to perform well on the job if he couldn't get through training.

By 1980, the state of the art in criterion development and validation dovetailed nicely with the political climate, and DoD embarked upon a Joint Service effort to link enlistment standards to on-the-job performance. Each military department was to carefully draw a sample of its jobs and develop performance measures that covered the jobs' domains. It would then be possible to ascertain the relationship between ASVAB scores and job performance. This Job Performance Measurement (JPM) Project is endorsed by Congress, chaired by DoD, coordinated by a Joint Service working group, assessed by the Committee on the Performance of Military Personnel, National Research Council of the National Academy of Science, and is ongoing today.³⁷ Now that the ASVAB has been shown to be a valid predictor of performance in the jobs sampled across Services, work is currently under way to extend this relationship to other military jobs and to determine the necessary personnel quality levels within and across jobs.

Aptitude testing in the Department of Defense has come a long way since the Army Alpha of World War I. Today a battery of ten subtests of proven validity is used to make decisions as to which young men and women get to serve their country and what role they will play in the nation's defense. Selection and classification measures are continually updated to prevent compromise and to better assess military performance. Strides are being made on both the predictor and the criterion ends of the process. And this process together with the results—recruit

quality—is under the watchful eye of many. The onlookers include the individual Services, DoD, Congress, contractors, independent scientific advisory groups, and the public.

THE POTENTIALLY INELIGIBLES: WHO KNEW?

The ASVAB Misnorming has been called a “natural experiment.” The droves of Category IVs including the erroneous enlistees were not branded upon entry as were the men of Project 100,000 fame. Commanders were blind to their true aptitude status—there was no Pygmalion in the Platoon.³⁸ They were nobody’s morons and, other than what the recruiters and advertisement schemes at the time professed, nobody had promised them a better life. They marched into service, unnoticed. From their test scores they looked average—like every GI Joe. Because labels were not affixed to their personnel jackets and identifying service numbers were not inscribed on their helmets, the retrospective performance of the multitude of anonymous Potentially Ineligibles provided a good basis for assessing entrance standards. Many personnel managers and researchers wondered just how well these low-aptitude men had performed in their modern military roles. Picking up on Clifford Alexander’s claim, the implicit question was: If they were performing at an acceptable level, then why not change enlistment policy and welcome them as volunteers?

There is anecdotal evidence that the Misnorming was discovered out in the field well before the Pentagon’s psychometricians agreed that there had been an inadvertent lowering of standards. The Services were officially informed of the mistaken entry of marginal manpower in November 1979. But early in 1977 the Marine Corps modified its General-Technical composite requirement because they were convinced that the operational score scale was incorrect. More compelling evidence comes from the Army, which raised its aptitude composite prerequisites in over 50 skills courses in response to excessively high failure rates in technical schools.³⁹ Though the Army was voicing concerns over the quality of the troops, neither they nor OSD pointed a finger at the test as the culprit. The Army was lobbying for increased recruiting funds to procure higher aptitude recruits. OSD simply discounted the Army’s claims at first. They assumed the Army was “crying wolf” in hopes that rumors of a quality gap would undermine the AVF and bring back the draft.⁴⁰

Charlie Schill, a former Army officer and reporter for the Times News Service, believes that “the field knew before the number crunchers.” In

his secondary job as an infantry officer, he found that soldiers could not read the maintenance manuals and could not fill out even the simplest requisition forms.⁴¹ Brian Waters, a retired Air Force lieutenant colonel, was the Director of Evaluation at the Air War College in 1978. Many of his students were from the Army and had previously been battalion commanders. Waters remembers them griping, "What's wrong with the troops? We tell them 'column right' and they turn left." According to W. S. Sellman, "by 1978, the floodgate on all the anecdotal information really opened wide."

One outgrowth of the Misnorming was a greater focus on basic skills and the numbers attending the Services' training courses in basic skills swelled.⁴² Beginning in the late 1970s, training and maintenance manuals were made simpler and, in some cases, comic-book-like. In a column appearing in late 1981, Jack Anderson described the training problems resulting from the Misnorming as follows: "In desperation, the brass hats have revised their training manuals down to junior high school levels and have even used comic books to simplify instructions. Millions have been spent on elaborate educational programs to raise the literacy levels of our all-volunteer recruits."⁴³

While the marginal men may have come into service unnoticed and even enjoyed a couple of years "incognito," once word was out that the military was mediocre at best, the bars were down. Even Art Buchwald, armed with his rapier wit, took shots at the military. "Sarge" had to explain to "chowderheads" like "Klaus" and "Slocum" what a tank was. After Slocum knocked down the PX, he exclaimed, "Hey, Sarge, this is fun." Then it was on to the officers' club, giving new meaning to "getting tanked." As far as this columnist was concerned, having a large number of soldiers in AFQT Category IV "means they could hardly read the instruction manuals that accompany the complicated weapons, much less understand how to fire them."⁴⁴

Congress believed that the aptitude mix of the forces had been so diluted that, effective 1 October 1981, they imposed quality floors. The number of non-prior service enlistees who score at or above the 10th percentile and below the 31st percentile on the AFQT may not exceed 20 percent of the total number of non-prior service enlistments per fiscal year, according to 10 United States Code, Section 520(a). This same mandate rules that a person who is not a high school graduate may not be accepted for enlistment with an AFQT score below the 31st percentile. Furthermore, it stipulates that at least 65 percent of Army non-prior service male accessions must be high school diploma graduates. When these marginal personnel came up for reenlistment in 1980 and beyond,

many of them were barred in subtle ways in an attempt to improve the image of the military (particularly the Army) and promote an "Army of excellence."⁴⁵ General Maxwell Thurman, when he was Vice Chief of Staff for the Army in 1983, expressed his intention to recruit and retain as many highly qualified soldiers as possible. He wanted the Army to "be all it could be."⁴⁶ Luckily for the Army, the recruiting crisis of the late 1970s had abated and banner recruiting times lay ahead. The Army did reduce its Category IV content, because it could.

MILITARY PERFORMANCE OF THE POTENTIALLY INELIGIBLES

Anecdotal evidence and firmly held beliefs and biases aside, just how did the Potentially Ineligibles do in service? How costly had this calibration mistake been? While the research reports following Project 100,000 could fill more than one bookshelf, there have not been many studies dealing strictly with the performance of the PIs. And because the impetus for measuring actual job performance resulted from the Misnorming, surrogates or proxies are all anyone had to go on in trying to evaluate the success of the PIs.

The first study devoted to determining how well the PIs showed up against their fully eligible Servicemates was performed by none other than I. M. Greenberg.⁴⁷ Under contract to OSD, in 1980 Greenberg examined skill training attrition in 34 technical training courses, Skill Qualification Test (SQT) scores for MOS, first-term attrition, reenlistment eligibility, and promotion or pay grade achievement for the FY 1977 Army male cohort.⁴⁸ Admittedly, the criterion measures, while readily available, were not perfect. For example, the understanding of training attrition could be distorted by the fact that those who had been weeded out in boot camp weren't available for assessment at this subsequent training point. Further, information on neither recycling during training nor time to complete was captured.

The SQT was about as close as one could come to a job performance measure at the time. SQTs were MOS-specific, performance-oriented tests administered for training diagnostic purposes. They comprised a written or job knowledge component, a hands-on component, and a supervisory rating at the job site component. Unfortunately for PI assessment purposes, the critical tasks to be assessed "hands-on" were publicized and highly practiced beforehand. In other words, this wasn't a pop quiz. It didn't measure "typical" performance in a representative sample of job tasks. Also the job site aspect was plagued by supervisor

rating leniency and an inability to control for specific task difficulty across different soldiers.⁴⁹ Soldier Smith might be rated higher than Soldier Jones simply because Smith had easier forms to fill out. In short, many factors could and probably did reduce the variance in performance.

Despite these deficiencies, which were noted and not ignored by Greenberg, he set out to make do with what was available. After all, these were the measures on which the Army itself was basing its personnel decisions. He summarized his results by saying: "It is clear that the PI group did not perform as well as the 'All Other' group."⁵⁰ He explained that the PIs had a slightly higher probability of failing training and that this tendency was more pronounced the more difficult the training was (though in some less demanding courses, PI vs. non-PI performance was a dead heat). For those who made it through training, the PIs had lower total SQT scores than those in other aptitude categories. First-term attrition was higher for the erroneous enlistees, but this was primarily a function of their educational status—the PIs were overwhelmingly high school nongraduates, who are known to have excessively high attrition. Fewer PIs were eligible for reenlistment, and of those who survived their first term, fewer made Corporal (E-4) or Sergeant (E-5). Greenberg added: "Although the performance of the PIs was not equal to that of the 'All Other' group, it is important to recognize that the majority of the PIs were successful."⁵¹

Greenberg's report on the PIs was submitted to Congress by OSD along with documentation of the relative performance of Category IV recruits in the Marine Corps.⁵² The Marine conclusions were similar to those for the Army. Within education categories, Category IV recruits had somewhat higher attrition rates. They earned lower course grades and had higher failure rates, notable mostly in high tech jobs. Being both a Category IV and a nongraduate was practically the "kiss of death" as far as recommendation for reenlistment was concerned.

In synthesizing the implications of these reports, OSD told Congress:

There are increased costs associated with both the acceptance of too many personnel who measure low on the enlistment standards and with demanding too many personnel who measure high. The lower the entrance standards for admission into the Service, the easier and less costly recruiting becomes. There are a number of jobs in the Service which permit a lower aptitude than others. However, if accessions include large numbers of personnel whose chance of successfully completing training and adjusting to their assignments are low, additional costs are incurred.⁵³

A few more studies were undertaken to guide policy regarding the place of low-aptitude personnel in the military. In 1983, Army research-

ers chose 19 MOS that were representative of the wide range of technical difficulty of Army jobs and compared PIs to non-PIs in terms of percentage of early or adverse discharge, successful first-tour completion, and job proficiency.⁵⁴ The only notable difference between the PIs and others was regarding job proficiency. SQT results were closely tied to aptitude. There was a descending pattern in the percentage passing SQTs (e.g., from 88 percent for Category I high school graduates to 37 percent for PI graduates).

The latest look at the military performance of PIs was undertaken in 1987.⁵⁵ DoD had commissioned a reexamination of data from the Misnorming era (as well as from Project 100,000) because the recruiting crystal ball was looking grim. It projected that "the size of the youth population will shrink in the coming decade."⁵⁶ DoD was planning for the future. To adequately man the force, Defense was considering many alternatives, from stepped-up recruiting and advertising to accepting less-qualified individuals for military service. It's ironic that the PIs may have saved the day during the anticipated recruiting crisis of the late 1970s—by accident; and their legacy was being considered in the contingency plans for crisis expected in the 1990s—by design.

This time the analyses were not limited to the Army's experience with these "almost rejected" recruits. They spanned the Services and included members from each of the fiscal year cohorts of the era in question. Also, because the relationship between aptitude level and military performance indicators was not disputed, the authors focused on comparing the PIs to just eligible or marginally eligible recruits. It was a given that a PI wouldn't be expected to outperform a CAT I or II but could a PI do about as well as a CAT IIIB? To answer this, Ramsberger and Means compared men in contiguous AFQT categories within a sample of jobs of varying complexity levels. The assessment measures were attrition, promotion, and reenlistment eligibility. In general, PIs were as successful as marginally eligibles in completing their term of service. Contrary to expectations, attrition was consistently higher in jobs of low complexity than in more difficult jobs; both groups tended to flee "easier" jobs. Small differences favoring the marginally eligibles were found again with regard to promotion to E-4 or above within 36 months, as well as in reenlistment eligibility. Unfortunately, this latest review and reanalysis could leave one pondering and puzzled. Do these results mean that the Potentially Ineligibles weren't so bad or that the barely eligibles weren't so good?

Though the majority of the Potentially Ineligibles (and the Project 100,000 men, for that matter) were "successful" and their performance

indexes were not extremely far below those in the next higher aptitude category, is this grounds for concluding that lower aptitude personnel are the answer to manpower shortages? As of yet, no one really knows. In addition to standards for enlistment, performance standards “may bend with the times.”⁵⁷ Who gets promoted, booted out for bad performance, and so forth is relative. In times of war, commanders may overlook the “little” things and in cases like the Misnorming era, when there are a lot of slower learners and poor performers, you bear the extra training time, and promote and keep the best of what you’ve got.

In any event, the crisis had passed. The worries of the shrinking pool and the concomitant need to take in more CAT IVs were OBE (overcome by events). When the Berlin Wall came down, so did manpower requirements.

But, though the pinch has passed, the issue remains. Regardless of the quantity of the force, quality is still an important consideration. The answer to “How much quality is enough?” awaits the outcome of the Job Performance Measurement project. Actually, this endeavor will move us closer to determining quality requirements but it will not eliminate reliance on supply and demand, for “How much quality is enough?” is an enigma. Is 50 percent proficiency enough? If not, how about 70 or 90 percent? How long will it take to reach a specified proficiency level and how much will it cost to get there? These are weighty issues that will ultimately be resolved based on judgment of the trade-offs involved. If this sounds a little like how quality requirements are determined today, that’s because it is. The only difference is that more objective information is there for the weighing.

P.S. ON THE PIs

The aura of the Potentially Ineligibles lingers. As of the end of Fiscal Year 1988, 58,481 Category IVs who entered service between 1 January 1976 and 30 September 1980 were still on active duty. This figure amounts to almost 14 percent of the original group—which practically matches the overall “stay” rate of about 15 percent for others who came in at the same time. The 58,481 remaining represents only 20 percent fewer than the number of CAT IVs the Services probably anticipated taking in over this period. This bit of trivia has negative connotations for some. The catch is that, compared to those of average or high aptitude, those in Category IV have a higher propensity to enlist and to reenlist. If eligible, many will enlist and stay in. Military manpower managers are worried that the PIs and others like them will fail over the long term

Table 3.6

Occupational Distribution for AFQT Category IV Personnel Who Enlisted During the ASVAB Misnorming and Were Still on Active Duty as of September 1988

<u>DoD Occupational Area</u>	<u>Number</u>	<u>Percent^a</u>
Infantry, Guncrew, Seamanship	13,224	22.6
Electronic Equipment Repair	2,289	3.9
Communications & Intelligence	5,270	9.0
Medical & Dental	2,670	4.6
Other Technical	1,224	2.1
Functional Support & Administration	10,288	17.6
Electrical/Mechanical Equipment Repair	13,811	23.6
Craftsman	2,476	4.2
Service & Supply	7,022	12.0
Nonoccupational ^b	200	.3
Total	58,474	100.0

Source: Special tabulations provided by the Defense Manpower Data Center.

^a May not sum to 100 due to rounding.

^b Specific occupation not assigned.

Table 3.7

A Comparison of Entry and Current Educational Level Among AFQT Category IV Personnel Who Enlisted During the ASVAB Misnorming and Were Still on Active Duty as of September 1988 (Percent)

<u>Time Period</u>	<u>Educational Level (Number of Grades Completed)</u>			
	<u>Less than 10</u>	<u>10-11</u>	<u>12 or Equivalent^a</u>	<u>Greater than 12</u>
Accession (58,481) ^b	6.6	7.7	82.7	3.0
September 1988 (58,481) ^b	.2	2.3	94.0	3.5

Source: Special tabulations provided by the Defense Manpower Data Center.

^a Includes recipients of the General Educational Development (GED) high school equivalency certificate.

^b Number of Category IV personnel remaining on active duty as of 30 September 1988.

as noncommissioned officers, as managers of military missions and equipment, and as leaders of the “bright boys” who have been enlisting in recent years.

How are they doing? Well, at least they stood the test of time. And of those who did remain, just over one half are black (53 percent). As far as what they are doing, their occupational assignment pattern is shown in Table 3.6. In contrast to time of entry, 8 to 13 years later practically no one was in the nonoccupational category. They were gainfully employed, primarily as equipment repairers and in combat specialties. Many had even increased their level of education, as Table 3.7 shows. Most notable is the 10 percent jump in the percentage who have completed secondary school or its equivalent.

This is only 14 percent of the story. The overwhelming majority of the PIs aren't in the military today. They are back in the civilian world. The testing error of the late 1970s was the ticket in for hundreds of thousands of disadvantaged youngsters. Did they exit with the right tickets punched? Most of the PIs are now military veterans, but many questions remain. Was there a silver lining to the ASVAB Misnorming? Did the veterans of this era realize the same kind of benefits that McNamara claimed for the men of Project 100,000? Wouldn't that be nice!

CHAPTER 4 ---

Studying the Effects of Military Service

In his inaugural address, John F. Kennedy advised that we should “ask not what your country can do for you; ask what you can do for your country.”¹ The men from Project 100,000 served their country in the face of great danger—the Vietnam war. The Potentially Ineligibles volunteered to serve in peaceful times, but there is always the shadow of conflict whether it be in Beirut, Grenada, Panama, or the Arabian desert. In examining these two periods in recent history when large numbers of low-aptitude youth were admitted into the active-duty enlisted force, the question of central interest has been: What can the low-aptitude do for the military? The answer in each instance was: “Something, but not as much as those with greater abilities.” Allowing those with lesser skills into the Services did not do irreparable harm in either era. And yet, it seems that the job of defending the Nation would have been easier without them. At least one would have expected an easier time had higher aptitude recruits been substituted for Category IV recruits. Some might also contend that somewhat understrength units would have been preferable to a large proportion of Category IV troops. Both points are subject to debate, the first from a cost perspective and the latter from a readiness perspective. Attrition rates increased, training periods were longer, and new methods of training had to be adopted. But DoD survived.

There is another question, however, that needs to be answered if the complete picture of the low-aptitude in the military is to be painted. It is the one President Kennedy told us not to ask. In the face of the

well-documented skills decline among American youth, the issue Robert McNamara raised more than two decades ago remains: Is the military a viable alternative for helping to erase the deficits that so many young people bring with them to their adult lives? And will a term of service leave them better able to cope with the challenges they will face as they attempt to create a niche for themselves in society? In short, what can the military do for our youth of lesser ability?

MORE QUESTIONS THAN ANSWERS

I am convinced that the Project 100,000 men will continue to do a fully creditable job in the service; and that on return to civilian life, their earning capacity—and their over-all achievement in society—will be two to three times what it would have been had there been no such program, and had they remained rejectees. Hundreds of thousands of men can be salvaged from the blight of poverty, and the Defense Department—with no detriment whatever to its primary role—is particularly well equipped to salvage them.²

McNamara's contention that military service would provide a leg up for those who need help is, on the face of it, quite reasonable. As recounted earlier, the Department of Defense is this Nation's largest training institution. Many of the functions that must be carried out to make DoD work have direct civilian counterparts. In addition to its specific job-skills training, the military has long been thought of as a place where "boys become men" (and, presumably, "girls become women"). The discipline and rigors of military life are expected to give young people backbone and a determination to see that the job gets done, characteristics valued by employers in the private sector.

Over the years, social scientists have taken an interest in the possible role of military service in the development of young people. A number of theories have been applied to explain why military service *should* provide an advantage to someone who chooses this option. Human Capital Theory, for instance, views the military as an arena where young people can develop skills and work experience.³ Although immediately upon returning to civilian life veterans may lag behind those who remained in the private sector, over time this disadvantage should be overcome and even turned around, as they begin to capitalize on their in-service training. (This assumes, of course, that that training was not entirely military-specific.)

Perhaps the most popular explanation for the purported positive effects of military service is based on the Bridging Hypothesis.⁴ In this view,

the military is seen as a broadening experience (e.g., one is exposed to persons from diverse social origins) that acts as a bridge to civilian work life. The military interlude can make it easier to obtain a civilian job and get better pay, and it can boost one up the occupational ladder because of acquired geographic and personal mobility and independence, educational and occupational training, and acquaintance with bureaucratic structures.

Yet another hypothesis is that the military acts as a filtering or signaling device.⁵ Because former military members were screened (mentally, morally, and physically) for service entry, this provides potential employers with much more (and more positive) information about the veteran as a job candidate than is available for nonveteran applicants. This hypothesis has been extended with the proposition that, the greater the proportion of veterans within an age cohort, the better the screen and hence the greater the veteran earnings premiums. Related to the screening effect is the credential or certification factor of military service. An honorable discharge for successfully completing a tour of duty is assumed to act as a surrogate sheepskin and be likewise valued in the civilian world of work.

Armed with hypotheses such as these, a variety of studies have sought to determine the impact of the military on the postservice lives of veterans. Most have focused on income as the primary variable of interest, with earnings taken as an indicator of an individual's well-being or achieved status. For instance, Fredland and Little found that for World War II veterans the bridging hypothesis did hold for some, but was overly broad.⁶

The results of other research suggest that the military does not have long-term positive effects for everyone, but serves a bridging function for the disadvantaged, including minorities.⁷ This conclusion was based on a study of full-time employed, pre-Vietnam era veterans and non-veterans from the Southwestern part of the United States, which found that black and especially Mexican-American veterans had an earnings advantage over their civilian counterparts. No such advantage was found for Anglos. The greater premium for Mexican-Americans than for blacks was interpreted on the basis of the military's power to improve achieved rather than ascribed attributes. That is, Mexicans as well as blacks improved their skills and abilities and thus benefited from military service, but black veterans were still negatively affected by racial prejudice, which detracted from the bridging effects. These findings were confirmed by other analysts, who have said that the military has its greatest effect among groups with the fewest initial advantages.⁸ For

minorities and the disadvantaged in general, the military is thought to break the entrapping family and old social ties and integrate them into the living and working arrangements of the majorities.

Unfortunately, selectivity bias has been a strong methodological concern in many studies reporting positive effects for veterans, particularly the underprivileged. Most studies have not properly controlled for the effects of military selection, most importantly aptitude differences between those in the civilian and military sectors. Attempts have been made to equate samples on the basis of education but this compounds the problem, because enlistment policies dating back to the 1960s require higher aptitude scores for applicants with less than a high school diploma. Thus, nongraduates in the military generally have higher cognitive ability (which is related to occupational and economic success) than civilian nongraduates.

Aside from failure to disaggregate by race/ethnicity, another factor contributing to the chaos in the literature is differences in eras. Some investigators claim that the military was beneficial (or at least not harmful) to veterans of World War II and the Korean conflict (and maybe nonwar periods surrounding these times), but not to those from the Vietnam era. Studies that have addressed the differential impact of period of service have to varying degrees confirmed these suspicions by finding either less earnings premiums or lower rates of return for education for Vietnam veterans than other veterans, or flat-out labor market disadvantages for those who served in Vietnam.⁹

In a series of convincing articles, Berger and Hirsch showed not only that earnings benefits for Vietnam veterans relative to nonveterans were inconsequential (and only for nongraduates, and thus particularly confounded),¹⁰ but that in contrast to findings for earlier cohorts, there was no screening effect for Vietnam veterans.¹¹ Similarly, researchers have found that for Vietnam veterans the labor market did not evaluate time in the military as equivalent to time in the civilian economy.¹²

These and other social scientists believe that the military levies an implicit tax by interrupting career, education, and gains in seniority, or causes a disruption in human capital accumulation. Kassing has this to say about the returns from military service:

Military service cannot be said to increase the earnings of veterans relative to what the same men would have earned if they remained in civilian life. The claim that military service is "good for you" is not confirmed by any economic consideration, as it is not confirmed by consideration of attitudes and opinions. Rather, military experience has little or no effect on a veteran's attitude or income.¹³

Vietnam veterans seem to have fared worse than others, and this has prompted many studies and opinions regarding the peculiarities of the Vietnam era. Strayer and Ellenhorn attribute the dismal picture for such former soldiers to the fact that there were "no cheering crowds, or open-armed employers."¹⁴ Their homecoming and adjustment to the civilian world were fraught with hopelessness, apathy, acting out, and disorientation. In a word, for the most part, Vietnam veterans were maladjusted. A recent study had this to say about service during Vietnam: "Of all the long-term postwar consequences of participation in the Vietnam War, perhaps the most encompassing one, economically and emotionally, may be the disadvantage Vietnam veterans have experienced in the civilian labor market."¹⁵ Service in Vietnam was shown to have long-lasting negative effects on emotional well-being. Vietnam veterans had trouble maintaining social relationships and internal control and this contributed to their poorer mental health.

A much needed statistical overview or meta-analysis of the psychological effects (e.g., mental health indicators) of military service for Vietnam veterans appeared recently.¹⁶ This study's literature review cites many reports attesting to the difficulty that men returning from Vietnam had in adjusting to civilian life, with one predicting that the troubles due to delayed stress response syndrome would reach an upper limit in the mid-1980s. Returning veterans from this most unpopular war exhibited withdrawal from social relationships, and their professional achievements were inferior to those of their peers. Overall, the review indicated that "Vietnam veterans manifested poorer sociopsychological health than did the nonveterans and Vietnam-era veterans with whom they were compared." The negative effects were especially notable in later studies, and this was attributed to factors such as a deteriorating sociopolitical climate, with increasing public antipathy and social alienation and diminished social support as the war raged. So being a veteran of this era and particularly having served in Vietnam had negative effects in terms of attitudes (e.g., life satisfaction), alcohol use, stress symptoms, and adjustment.

Another prime contender as an explanation for the negative (or at least nonpositive) labor force experiences of Vietnam veterans is that employers are, or at least add to, the problem. Bordieri and Drehmer sought to determine whether bias against the Vietnam veteran exists.¹⁷ More specifically, they hypothesized that Vietnam veterans would be more likely than nonveterans to be discriminated against with regard to employment situations. Upon reviewing resumes that were identical with the exception of veteran status (i.e., some indicated a tour in Vietnam

while others showed military service during the Vietnam era only), the manager subjects did not perceive differential qualifications but were more likely to recommend hiring the person who did not actually go to Southeast Asia and, furthermore, rated the former as having poorer mental health. The authors integrated the findings by suggesting that employers perceived the Vietnam veteran as psychologically unbalanced and felt that such psychological problems might have an effect on their work behavior.

Whether the negative images of veterans are specific to those who served in the 1960s and early 1970s is unclear. As cited in *Business Week*, a set of studies argues that once nonrandom selection factors are controlled, not only do Vietnam veterans earn less than nonveterans but the same holds for veterans of World War II.¹⁸ A study of Korean conflict veterans found that they earned significantly less than nonveterans when aptitude, education, race, and age were controlled.¹⁹ Daymont and Andriasani suggest that after initial frictional unemployment, *today's* veterans' income levels overtake civilian youth.²⁰ However, a cursory evaluation of their data shows that the relationship between years since military service and annual income does not even approach statistical significance. Mangum and Ball report some transferability of military skills to civilian occupation, but analyses of the income of former military members did not reveal statistically higher annual earnings.²¹

Beyond these studies, follow-up investigations of volunteer force enlisted personnel after they separated from service are practically nonexistent. What is available are measures of today's separatees' attitudes toward the military, and these certainly are not what might have been expected from the hand dealt to Vietnam veterans by the labor market. In fact, attitude studies have repeatedly failed to find enduring negative or nonsocially acceptable attitudes in former military members. They are not more authoritarian or prone to violence,²² though compared to those still on active duty and nonveteran civilians, they may be less likely to participate in our democratic system because of a decline in status once they leave the military.²³ They still believe in the military—they believe in a strong defense, and are supportive of their sons joining the military. Most exiting service members feel that the military was valuable to their self-growth. They report increased self-confidence, ability to work with others, responsibility to authority, leadership abilities, openness to new ideas, and personal independence. However, they report somewhat less positive impacts on job skill training.²⁴

So the question remains: Is the military a great place to start? Though former enlisted personnel may believe that it is, empirical data do not

provide a definitive answer. Further, except for one study, empirical data do not exist on the subsequent effects of military service on low-aptitude personnel, the group for which the nation desperately seeks a solution. Beusse examined the economic returns to military service for Army Project 100,000 participants who separated in FY 1969 after completing 18 to 24 months of service and receiving an honorable discharge.²⁵ He reported positive labor force effects, with veterans earning higher wages and being more likely to upgrade their level of education than nonveterans. Unfortunately, though Beusse controlled for race, education at the time of enlistment, age, and geographic location, the nonveteran sample was of lower aptitude in that the sample was culled from Selective Service records of rejected (for mental reasons) registrants. Furthermore, by restricting veterans to those with honorable discharges, the researcher introduced another bias in favor of veterans because "job quitters" and "troublemakers" were not eliminated from the civilian group.²⁶

McNamara fervently believed that the military would be a victor in the War on Poverty. An interview with the former Secretary of Defense quoted him as follows: "I believed that the below-30th percentile group that went through the military training would have substantial increases in lifetime earnings, as well as more responsible participation in our society, than the below-30th percentile group that did not go through military training."²⁷ Despite these prophecies, aside from the earlier study by Beusse there is no empirical corroboration. In an address delivered to the National Association of Educational Broadcasters on 7 November 1967, McNamara raised the issue of the likely impact of military service on the low-aptitude. Would it help?

We cannot say for certain. But we intend to find out. We are launching a careful follow-up study to test conclusively the ultimate outcome of Project 100,000. At least a decade of careful measurement of the performance of the men both in and out of service will be required. We won't know until the end of that period what the definitive study will prove.

In fact, that period was to be much longer than the Secretary envisioned. According to David Evans, a former Marine Corps lieutenant colonel who is now a columnist for the *Chicago Tribune*, there was little interest in assessing whether Project 100,000's objectives were met: "For those who survived the experience, did Project 100,000 provide a way out of the backwater of ignorance and unemployment? Impossible to tell. The Pentagon never conducted a survey of what happened after they left the military."²⁸

Though this is not quite true,²⁹ research on the effects of military service on low-aptitude personnel is scarce, and studies dealing with the

long-term outcomes for this group are even scarcer. The fact that there currently is a skills decline among the nation's youth, and that military service or a military-model civilian service are often suggested as a potential answer to this problem, makes the subsequent life experiences of the New Standards Men and the Potentially Ineligibles particularly relevant. Therefore, the Department of Defense commissioned a follow-up study of these two groups. The results, described herein, provide at least a partial answer to the question: "What *did* military service do for those of lower aptitude?"

METHODS USED IN THE FOLLOW-UP STUDY

Overview

To assess the effects of military experience on the post-Service lives of low-aptitude personnel, surveys were administered to samples of participants of Project 100,000 (PK) and the Potentially Ineligibles (PI) from October 1986 through December 1987.³⁰ Samples were randomly drawn from files maintained by the Defense Manpower Data Center (DMDC). Extensive efforts were then made to locate the desired subjects through a variety of sources, including DMDC files, National Personnel Records Center (NPRC) paper records, and Veterans Affairs data bases. Once leads were developed, actual location proceeded primarily through telephone directory assistance. Monetary incentives were used to boost participation.

After tracking potential respondents, the investigators contacted them for participation in telephone or, in some cases (roughly 20 percent), face-to-face interviews. The first step was to ask questions to make sure that the person was the individual identified on DMDC files. Current status vis-a-vis the military was also checked out, and other identification checks were made. When the eligibility of the individual was confirmed, he was either interviewed or an appointment was made for a later time.

After the data were gathered, they were edited, coded, and entered into machine-readable form by the National Opinion Research Center (NORC) of the University of Chicago. NORC compiled tapes containing the screening and survey data, and some additional demographic and service information (e.g., education at entry, term of enlistment). All personal identifiers (e.g., social security numbers, names, addresses) were purged from these files to assure confidentiality. To serve as a baseline group for comparisons, samples of nonveterans were drawn from the preexisting 1966 and 1979 base years of the National Longitu-

dinal Surveys. These surveys, sponsored by the Department of Labor (DOL), had been identified as the best sources available for civilian comparison groups.³¹ The NLS surveys contain detailed information on labor market activity, labor market status, and related variables.³² The NLS 1966 coincided with the PK sample, containing data on men of military age. Likewise, there was considerable overlap between the young men interviewed for the NLS 1979 and the PI sample. Aptitude level could be discerned for both samples; in fact, the NLS 1979 contained actual AFQT scores as a result of the joint 1980 DoD/DOL Profile of American Youth, in which the ASVAB was administered to the NLS sample as part of its first follow-up.³³

In short, from the NLS data, low-aptitude nonveterans from the same birth cohort were identified and made comparable to the corresponding group with military experience on the demographic variables of year of birth, race, education, and geographical area. The resulting data permit comparing the low-aptitude veterans and nonveterans in terms of economic and social variables (e.g., income, employment history, educational attainment, and use of social assistance).

Veteran Samples and Civilian Comparison Groups

Before the Project 100,000 sample was drawn, a specific base population was identified. Prospective sample members had to meet the following criteria:

- Brought in or admitted to service under relaxed aptitude standards, specifically those scoring within AFQT Category IV or the 10th through 30th percentiles.
- Entered between July 1967 and June 1970 when the program was fully operational.
- Ages overlapped with the comparison group from the 1966 NLS (year of birth, 1941–51).

From this base population of 207,093, a final sample of 311 completed PK interviews was obtained. This number of cases approximates that suggested by statisticians for drawing statistically reliable conclusions based on survey data.³⁴ Needless to say, there were substantial problems in locating these men due to the passage of time. A comparison between the final sample and the overall Project 100,000 base population on key demographic variables is shown in Table 4.1. The differences between the two in racial makeup, AFQT category, education, geographic region, and year of birth are minimal.

Table 4.1**Demographic Comparison of Population and Sample for Project 100,000 (Percent)**

<u>Variable</u>	<u>Project 100,000</u>	
	<u>Population</u> (N = 207,093)	<u>Sample</u> (n = 311)
<u>Education</u>		
High School Graduate/GED ^a	47	47
Nongraduate	52	53
Unknown/Other	1	0
<u>AFQT Category</u>		
IVA	3	3
IVB & C	97	97
<u>Race</u>		
Black	36	34
Nonblack	64	66
<u>Geographic Region</u>		
South	35	36
Non-South	65	64
<u>Year of Birth</u>		
1941-1947	33	34
1948-1949	43	44
1950-1951	24	22

^a Data analysts typically group GEDs with nongraduates because of their similar military performance. However, for the present study, equivalency certificate recipients were considered a subset of the high school graduates because labor force behavior of GEDs is more similar to this education group. See A. G. Malizio and D. R. Whitney, "Educational Credentials in Employment: A Nationwide Survey," paper presented at the AAACE National Adult Conference, Louisville, November 1984.

A sample from the National Longitudinal Surveys was used for the PK comparison group of men of similar aptitude who had never served in the military. The NLS was undertaken in the mid-1960s by the Center for Human Resource Research of the Ohio State University under contract to the Department of Labor to provide data on the employment and financial history of four groups of individuals. The segment of interest in this case was the survey of young men 14 to 24 years old in 1966. Follow-ups on these individuals were carried out periodically through 1981, and each year data were collected on employment history, educational attainment, income, and a variety of other variables relevant

to the veteran-nonveteran comparisons. In addition, each respondent's file included school testing information, which provided an accurate parallel to the AFQT. These results were pooled and reported in deciles, with those in the 10th through the 29th percentiles considered the aptitude-equivalents of Project 100,000 participants. When the sample is restricted to lower aptitude individuals born between 1941 and 1951 who never served in the military, the final sample size is 199.

The second veteran population (PI) was made up of Category IV males born between 1957 and 1962 who served in the military between FY 1976 and FY 1980 ($N = 339,051$). Although some Category III men who entered during this period were actually Potentially Ineligibles, the concern with low-aptitude youth led to a restriction that only Category IV personnel would be included in the sampling frame. Anticipating that problems in locating these veterans would be similar to those encountered with the PKs, 1,020 records were drawn to ensure that an adequate sample (targeted at around 400) could be located and interviewed. Over 500 of these individuals could not be found, and 183 of those found could not be interviewed for a variety of reasons (out of the country, refusals, etc.), leaving the number of completed interviews at 326. As with the Project 100,000 sample, this group closely mirrored the PI population on the key demographic variables (see Table 4.2).

The control group for the Potentially Ineligibles was drawn from the 1979 National Longitudinal Survey of Youth Labor Force Behavior. Low-aptitude young men of prime military age (i.e., birth years 1957 through 1962) but without military experience were identified from this national probability sample. Because the ASVAB itself was administered as part of the first NLS follow-up (1980), the nonveteran comparison group could be sorted into AFQT subcategories concordant with the PIs—IVA, IVB, and IVC. The 1985 follow-up of the NLS 1979 was the latest available at the time this study was undertaken. The resulting unweighted sample of 879 civilian low-aptitude men aged 23 to 28 (in 1985) thus forms the PI control group.

The interview protocol for the Project 100,000 and the Potentially Ineligible sample members was structured to provide data that would be comparable with the data from the 1981 follow-up of the 1966 and the 1985 follow-up of the 1979 NLS, respectively. Specifically, the focus was on those sections of the NLS dealing with training, employment, and income experience. Other items were added to obtain information on veterans' military experience. The nine sections of the instrument covered:

1. Education and training
2. College experience
3. Military experience
4. Current labor force status
5. Previous work experience
6. Marital status
7. Assets and income
8. Geographic mobility
9. Effects of military experience and demographics

Table 4.2
Demographic Comparison of Population and Sample for the Potentially Ineligibles (Percent)

<u>Variable</u>	<u>Potentially Ineligible</u>	
	<u>Population</u> (N = 339,051)	<u>Sample</u> (n = 326)
<u>Education</u>		
High School Graduate/GED ^a	67	54
Nongraduate	33	46
<u>AFQT Category</u>		
IVA	53	53
IVB	34	37
IVC	13	10
<u>Race</u>		
Black	41	36
Nonblack	59	64
<u>Geographic Region</u>		
South	42	45
Non-South	55	55
Unknown/Other	3	0
<u>Year of Birth</u>		
1957-1958	34	36
1959-1960	43	42
1961-1962	23	22

^a Data analysts typically group GEDs with nongraduates because of their similar military performance. However, for the present study, equivalency certificate recipients were considered a subset of the high school graduates because the labor force behavior of GEDs is more similar to this education group. See A. G. Malizio and D. R. Whitney, "Educational Credentials in Employment: A Nationwide Survey," paper presented at the AAACE National Adult Conference, Louisville, November 1984.

Locating Veteran Subjects

One of the biggest challenges associated with this study was finding the veterans identified for the samples. These men had been separated from service for about a decade in the case of the PIs, while the NSM left the military nearly 20 years earlier. Because vanishing veterans indeed posed a problem, some bias is possible in the resulting PI and PK samples. The true underclass among low-aptitude veterans may be underrepresented. That is, one might speculate that the homeless, the institutionalized, the extremely transient, and so forth were among those not captured for survey participation. However, the NLS nonveteran samples also suffer from these same biases (though perhaps to a lesser extent, given yearly or biennial tracking), enabling fair comparisons between veteran and nonveteran groups.

The literature indicates that locating military members, minorities, those of low socioeconomic status, those without children, youth, and the undereducated is particularly troublesome.³⁵ Because the low-aptitude might be considered a somewhat homogenous amalgamation of many of these characteristics, nonlocation bias might tend to be of similar magnitude for veterans and nonveterans.³⁶

Weighting and Adjusting

For both the PK and the PI samples, demographic equivalence with their civilian comparison groups was neither expected nor assumed. To ensure that factors other than veteran status would not influence the outcomes of the study, a weighting scheme was devised to equate the civilians and veterans in terms of racial composition, education status (graduate/nongraduate), geographic region of origin (South/non-South), and year of birth.

Two sets of weights were generated for each veteran/nonveteran sample pair. The first set was applied to demographically adjust the PKs and PIs to reflect the proportions found in their corresponding total male youth populations. For example, the PK sample was weighted to mirror the 1966 NLS total male youth population in 1981 (i.e., all aptitude levels, regardless of military status, within birth years 1941–51) in terms of age, race, education, and geographic region. Similarly, the PIs were adjusted to approximate the 1985 follow-up of the 1979 NLS total male youth population along the same demographics. Parallel weights were applied to the NLS 1966 (1981 follow-up) and NLS 1979 (1985 follow-

up) low-aptitude, nonveteran subsets, bringing them in line demographically with the corresponding total male NLS populations.

Use of the first set of weights provided demographic equivalence between the veteran sample and their corresponding civilian sample. For statistical comparisons, a second set of weights was employed to yield effective veteran and nonveteran sample sizes. These weights maintain the above demographic equating but adjust for the effects of unequal weighting, thus reducing sample sizes.

It is important to keep in mind that although the weights permit demographically controlled PK/NLS and PI/NLS comparisons, they do so at the expense of transforming the component samples. That is, the samples no longer reflect low-aptitude veterans or nonveterans, but similar demographic portions of the total youth population. Generalizations from these comparisons to the PK and PI populations must, therefore, be tempered somewhat.

Despite weighting, selectivity bias cannot be ruled out completely. It is possible that the samples differed in regard to nonobservable characteristics such as socioeconomic status (SES) or various psychological dimensions. However, controlling for aptitude, race, education, and geographic region reduces the likelihood of SES differences. Further, research has shown that although military recruits tend not to come from the highest or lowest echelons, they are quite similar to the general population in terms of SES.³⁷

A second concern is that veterans and nonveterans were interviewed at different points in time. Both the PKs and PIs were surveyed in 1986 and 1987. The Project 100,000 comparison group, low-aptitude respondents to the NLS 1966, was last followed up in 1981, while the last data available for the PI comparison group, the NLS 1979, were collected in 1985. These time differences cause unease, particularly for variables such as income that fluctuate with the overall economic picture. Because the bulk of the military income data is referenced to 1985, this became the base year to which other data would be adjusted. Census Bureau figures were analyzed and stable trends for age cohorts by education status (high school graduates and nongraduates) were used to adjust income data.³⁸ By calculating the percentage change in dollar income over these years, these results could be applied to the survey data to bring all income figures to a common 1985 metric.

A final concern was that the PK veterans were older than their civilian counterparts at the time they were surveyed. NLS respondents' ages ranged from 30 to 40 at the time of the 1981 follow-up, while PK respondents interviewed in 1986 were 35 to 45 and those interviewed in

1987 were 36 to 46. Therefore, for some variables, responses were examined for those between the ages of 35 and 40. The decision to restrict birth years was based upon whether age was related to the variable in question. For the NLS this restricted the sample to birth years 1941 to 1946. For the PKs birth years were restricted to 1947 to 1951.

Statistical Analyses

The basic research question to be addressed was: Does military service have a positive impact on the subsequent lives of low-aptitude recruits compared to a similar group of low-aptitude nonveterans? The interest was not to determine absolute values for the dependent variables, rather simply to determine whether the veterans and nonveterans differed in terms of income, employment status, education, and so on. Thus, after weights were applied, statistical tests were used to make these determinations. While the tabulated data reflect the application of demographic weights, in the interest of simplicity, neither the statistical significance values nor the effective sample sizes on which they were calculated are presented here.³⁹ Significant differences between groups are highlighted in the narrative.

In Chapter 5 the results achieved from the procedures outlined here are presented. Due to the differences in the eras and the circumstances under which these men served, the results for Project 100,000 and ASVAB Misnorming veterans are presented separately. Together these pieces are known as VETLIFE—an unparalleled look at the aftermath of Project 100,000 and the Misnorming.

CHAPTER 5 ---

What Became of the Low-Aptitude Veterans?

Before ascertaining, in turn, how Project 100,000 participants and Potentially Ineligible recruits fared relative to comparable nonveterans, the characteristics and military service experiences of each low-aptitude military sample are described. Unweighted data are used for these analyses, thus allowing generalizations to the PK and PI populations. Following the main event for each sample—the veteran/nonveteran comparisons—is a description of how these former military members perceived the benefits or pitfalls of service.

PROJECT 100,000 AND THE NLS 1966/81

The Military Service of the New Standards Men

Of the 311 Project 100,000 veterans who responded to the survey, only 13 (4.2 percent) were still in the military as of 1986/87.¹ Given the 20-year period intervening between Project 100,000 and the current study, this figure is not surprising. Fifty percent of the respondents indicated that they were drafted to serve, and the average length of tour was 24 months. Nearly 70 percent of the respondents indicated that they served between one and two years. The normal term of duty for draftees during this period was two years (longer for enlistees), but it was possible to leave service before the end of this period if one was returning from Vietnam. Therefore, it appears that these results reflect Service policies

at the time. Nearly 10 percent of the sample served less than one year (these individuals were most likely cases of attrition).

No relationship was found between how long one stayed in the military and such characteristics as race and education status. However, the average tour was significantly longer for those in the Air Force (44 months) than for the other Services (23 months). Enlistees were also found to have served longer terms than draftees (29 vs. 22 months). These findings are also largely due to DoD and Service policies, which often required a longer commitment from those who volunteered and those who took jobs that require more skill training, such as many of the skill areas in the Air Force.

Twenty-eight percent of the sample reported that they received no military training other than basic. Furthermore, of those who did get further training, 92 percent completed it but less than 13 percent indicated that they used it in performing their military jobs. Unfortunately, although questions regarding the type of work performed while in service were included in the survey, nearly three-quarters of the sample either failed to provide this information or did so in such a vague way that their responses could not be coded with any degree of confidence. Because this was a random sample of PK veterans, there is no reason that the distribution of assignments among them should be any different than that reported earlier for the entire population (see Table 2.7). Slightly over 50 percent of the sample were E-4s when they left the military, while 19 percent were E-5s and 16 percent were E-3s at separation.

Finally, 56 percent of the respondents had served in Vietnam, this factor being unrelated to race, education, or branch of service. Army personnel served the longest tours in Southeast Asia (mean = 12.84 months), while those in the Navy were there for the shortest period of time (mean = 6.19 months). The average tour was about 10 months.

The New Standards Men 20 Years Later

Data on the current employment status and income for the PKs who participated in the survey were examined in conjunction with personal and military-history characteristics. This provides an indication of the extent to which factors other than veteran status affect the major comparisons to be made, as well as affording an opportunity to examine the sample before it is weighted.

Seventy-seven percent of the PK veterans were employed full-time when they were interviewed, and an additional 8 percent were working part-time. The remaining 15 percent were unemployed, a rate nearly

three times that for 35- to 40-year-old males nationally in 1986.² (It is important to remember that the latter group is made up of individuals from all aptitude levels.) Employment status was found to be unrelated to education, years of military service, or branch of service. However, 10 percent more of the blacks were unemployed as compared to nonblacks.

Race also had an effect on income, with nonblacks making over \$3,000 a year more on average than blacks. Education also was related to income, with high school graduates making just over \$3,000 more per annum than nongraduates. Correlations between income and the length of time served or the length of time since separation from the military showed no relationship. Overall, the average annual income for this veteran group was \$16,944, which compares with an average income of \$28,497 for 35- to 45-year-olds in the general population.³ (Again, the latter group contains individuals from all education and aptitude levels, so this result would not be unexpected.)

In summary, only a small number of the PK respondents were still on active duty some 20 years later, and their in-service experience mirrors that of the overall PK population in terms of how they entered and how long they stayed. Over half the sample had been stationed in Vietnam, with an average tour there of 10 months. The major relationship between veterans' characteristics and their post-service experience involved race, with blacks more likely to be unemployed and earning significantly less than nonblacks. Military history details—such as the branch in which one served, the amount of time served, and the amount of time since separation—were not related to later employment status or income.

Veteran-Nonveteran Comparisons

To address whether Project 100,000 was successful in meeting its objectives, its participants were equated and compared to a sample of low-aptitude nonveterans. The hopes in McNamara's effort were not to turn the disadvantaged into the affluent, but rather to ameliorate their skills deficits. If this attempt was successful, it should be reflected in higher rates of employment, earnings, and so on for the veterans over their low-aptitude nonveteran peers. Because the data discussed above showed that inservice experience (i.e., branch of Service, time in) was not related to postservice outcomes for the veterans, these factors can be ignored in future comparisons with nonveterans. The impact of race and education, on the other hand, was clear, emphasizing the need to equate the samples on these dimensions so as to isolate veteran status as the

chief difference between the two groups. As was mentioned previously, two sets of weights were used in these comparisons. The first set adjusts the PKs and PIs to reflect the proportions found in their corresponding total male youth populations; the Ns shown in the tables are those that result when these weights are applied. The second set was used to yield effective veteran and nonveteran sample sizes. These maintain the above demographic equating, but adjust for the effects of unequal weighting, thus reducing the sample sizes. It is these weights that were used when statistics were computed.⁴

Employment. A breakdown of the current employment status of Project 100,000 participants and low-aptitude civilians is shown in Table 5.1. (When active-duty PKs are included, they are classified as full-time workers.) Differences between veterans and nonveterans in terms of employment status were not significant. Approximately 88 percent of the former military members were employed full- or part-time, as were 91 percent of the NLS respondents. This difference was even smaller when the active-duty New Standards Men were added, with 89 percent of the PKs employed.

Because employment has often been found to fluctuate with age, the same comparisons were carried out with only the men from the overlapping age group (35–40) included. These results, also presented in Table 5.1, do indicate significant differences, with Project 100,000 participants more likely to be unemployed than were the NLS respondents in the same age range.

Survey participants were asked to indicate the type of establishment for which they worked—private company, government (Federal, state, or local) agency, or their own business (includes employer-owned business, family business without pay, own farm business, and working without pay in farm business). A higher portion of NLS respondents were employed privately (76 vs. 68 percent) or had their own business (15 vs. 10 percent). A significantly higher percentage of NSM were employed by the government (23 vs. 9 percent). This probably reflects the veteran hiring preferences by the Federal government that were in effect during the 1960s and 1970s.

Occupational coding was done according to methods developed by the Census Bureau, with the veteran survey using an updated version of the system used for the NLS 1966. The two schemes were equated, and veteran and nonveteran occupations were compared in the resulting nine-category format (Table 5.2). Overall, the differences between the civilian and veteran low-aptitude workers in terms of the type of work performed were small. The civilians had somewhat higher percentages

Table 5.1
Employment Status for Project 100,000 and NLS 1966 Samples

Sample	Full-Time		Part-Time		Not Working		Total	
	N ^a	%	N ^a	%	N ^a	%	N ^a	%
<u>Full Sample</u>								
<u>Veteran</u>								
PK Separated ^b	250	84.9	10	3.5	34	11.5	294	100
PK Separated and Active Duty	261	85.5	10	3.4	34	11.1	305	100
<u>Nonveteran</u>								
NLS 1966 in 1981	177	90.8	2	0.9	16	8.4	195	100
<u>Controlling for Age</u>								
<u>Veteran</u>								
PK Separated ^b 35-40 year olds	179	87.0	6	2.7	21	10.3	206	100
<u>Nonveteran</u>								
NLS 1966 in 1981 35-40 year olds	94	96.4	1	0.8	3	2.7	98	100

Note: Full-Time vs. Part-Time vs. Not Working and Full-Time vs. Part-Time comparisons could not be interpreted due to small cell sizes for part-time workers.

^a Weighted frequency produced by demographically equating the veteran and nonveteran samples. The percentages may not sum to 100 due to the effects of weighting and rounding.

^b Separated includes those serving in the Reserves.

in Professional/Technical/Managerial and Farm occupations, while the former Servicemembers were concentrated slightly more in Clerical and Service jobs, but the differences were not statistically significant. In both groups, just over half were in the Craftsmen, Operatives, and Repair category.

The final employment variable examined was a work tenure measure. The men in both groups were asked about the job they had held for the longest time in the past five years—when that job was first taken, and when they left it (if, in fact, they had).⁵ The mean job tenure for longest job held was 9.6 years for the PK sample and 7.9 years for the civilians—this being a significant difference. However, the median for the NLS was 1.5 years higher than for the PK, suggesting that some PK respondents had held their jobs for a relatively long period of time, thereby increasing the overall mean. Because age can affect job tenure,

Table 5.2
Civilian Occupational Categories for Project 100,000 and NLS 1966 Samples

Civilian Occupational Categories ^a	PI Separated ^b		NLS 66 in 1981	
	N ^c	%	N ^c	%
Professional, Technical, & Managerial	42	16.3	39	20.7
Sales	11	4.1	9	4.9
Clerical & Administrative Support	23	9.0	12	6.5
Service, Private Household	0*	0.1	--	--
Service, Except Private Household	21	8.0	8	4.3
Farmers & Farm Managers	3	1.3	10	5.0
Farm Laborers & Foremen	2	0.7	2	0.9
Laborers, Except Farm	19	7.2	11	6.0
Craftsmen, Operatives, Repair & Precision Production	138	53.3	98	51.7
Total	260	100	189	100

Note: 0* indicates N < .50, which is possible because of weighted data.

-- indicates no reported cases.

^a Occupational codes for the PK and NLS were taken from the 1980 and 1960 versions of the Census 3-digit Occupational Classification System, respectively. The two versions were equated and this produced the nine categories listed in this table.

^b Separated includes those serving in the Reserves.

^c Weighted frequency produced by demographically equating the military and civilian samples. The percentages may not sum to 100 due to the effects of weighting and rounding.

the same analyses were conducted for the men in the overlapping age group. In this instance, the means for the two samples were nearly identical.

In summation, the only major work-related differences between the veteran and nonveteran samples were that 35- to 40-year-old veterans were more likely to be unemployed than nonveterans in the same age range, and of those employed, veterans were more likely to have jobs with the government.

Income and Other Economic Indicators. Two measures of income were collected for the veterans and nonveterans: hourly wage, and total income for the year before the survey. Again, because this information was obtained from each group at different times, all responses were converted to a common 1985 metric for comparisons. One additional alteration to these data was required. When a respondent indicated that he was a full- or part-time worker and reported no earnings, this result was treated as missing data and the individual was not included in the analyses for wages only.⁶

In the first question, the individual was asked how much he was paid by his employer before deductions, and whether this rate was paid per hour, day, week, every two weeks, month, or year. These figures were all converted to an hourly rate. For the veterans this question was asked only of those who had separated from service, so all data pertain to civilians.

Nonveterans reported a mean hourly rate just about four dollars higher than did the PKs, which is a significant difference (Table 5.3). When age is controlled by examining only those in the 35–40 age group, the results remain significantly in favor of the civilians, with the difference increasing to over five dollars an hour. Furthermore, when the income figures were analyzed without the adjustments for the year collected, the NLS still made significantly more, although the gap decreased to just under two dollars more per hour. Thus, low-aptitude civilians were making more in 1981 than low-aptitude veterans were making in 1985–86.

The figures for annual income from wages alone and wages plus farm or business income are presented in Table 5.4. These results clearly demonstrate that any advantage military service provided low-aptitude veterans over their civilian counterparts did not translate into higher future incomes. Whether the analysis includes only separated PKs or all PKs, only full-time employees or all of those with jobs, whether farm business income is included or wages only are examined—in all cases the civilians are found to earn significantly more. The smallest difference in average earnings between the two groups was about \$5,000 a year (PK and NLS full-time employees, wages only). The largest was over \$7,000 (all PK separated and active duty respondents and the entire sample of low-aptitude civilians, wages and farm/business income). Furthermore, when these same analyses were conducted including only veterans who had served 18 months or more, the results were the same, and the magnitude of the differences in earnings was similar.

In addition to the data on income, other economic indicators in the two surveys included whether respondents, in the year before being

Table 5.3

Adjusted Hourly Pay for Project 100,000 and NLS 1966 Samples (in dollars)

Sample	Employment Status	N ^a	Mean	Median	Standard Deviation
<u>Full Sample</u>					
<u>Veteran</u>					
PK Separated ^b	Full-Time ^c	232	10.2	9.7	4.8
	All Workers ^d	245	10.1	9.3	4.8
<u>Nonveteran</u>					
NLS 1966 in 1981	Full-Time ^c	111	14.2	12.9	6.8
	All Workers ^d	119	14.1	12.5	6.7
<u>Controlling for Age</u>					
<u>Veteran</u>					
PK Separated ^b 35-40 year olds	Full-Time ^c	186	10.2	9.5	4.6
	All Workers ^d	199	10.0	9.2	4.6
<u>Nonveteran</u>					
NLS 1966 in 1981 35-40 year olds	Full-Time ^c	63	15.5	13.5	7.6
	All Workers ^d	63	15.5	13.3	7.6

^a Weighted frequency produced by demographically equating the veteran and nonveteran samples.

^b Includes those serving in the Reserves.

^c Includes only full-time workers who reported income.

^d Includes full-time and part-time workers who reported income.

interviewed, received welfare or unemployment benefits or assistance from relatives. The percentages of civilians and veterans who had received welfare or unemployment benefits were small, and the differences between the two groups are not significant. Approximately 7 percent of the PK and 4 percent of the NLS respondents had been "on welfare," while 10 percent of the veterans and 12 percent of the civilians had received unemployment compensation. Neither of these results changed when the samples were restricted to individuals who were between the ages of 35 and 40 at the time of the survey. When those who had received unemployment benefits were compared in terms of the number of weeks they had been paid, no significant differences were found.

When respondents were asked if they had obtained financial help from relatives during the past year, a higher percentage of civilians indicated

Table 5.4**Adjusted Annual Income for Project 100,000 and NLS 1966 Samples (in dollars)**

Adjusted Annual Income From Wages					
Employment Sample	Status	N*	Mean	Median	Standard Deviation
Veteran					
PK Separated*	Full-Time*	198	20,196	19,360	8,854
	All*	240	17,675	16,524	9,957
PK Separated and Active Duty	Full-Time	208	20,016	9,360	8,729
	All	250	17,629	16,779	9,794
Nonveteran					
NLS 1966 in 1981	Full-Time	146	25,153	22,499	12,121
	All	168	23,634	20,912	13,059
Wages and Farm/Business Income					
Adjusted Annual Income From Wages & FBI*					
Sample	Employment Status	N*	Mean	Median	Standard Deviation
Veteran					
PK Separated*	Full-Time*	209	21,084	19,420	10,552
	All*	250	18,682	17,000	11,222
PK Separated and Active Duty	Full-Time	220	20,877	19,420	10,375
	All	260	18,602	17,000	11,030
Nonveteran					
NLS 1966 in 1981	Full-Time	161	27,569	23,620	16,052
	All	183	25,921	21,488	16,537

^a Weighted frequency produced by demographically equating the veteran and nonveteran samples.^b Includes those serving in the Reserves.^c Includes only full-time workers who reported income.^d Includes full-time, and not working, excluding full-time and part-time workers who did not report income.

that they had (9.5 vs. 3.7 percent). Assuming that younger people are more likely to be in a position to make such a request and to have relatives in a position to respond to it, the analyses were repeated focusing only on those in the overlapping age range. When this was done the difference between the two groups disappeared, with nearly identical percentages reporting they had gotten assistance of this sort (veterans 4.5 percent, nonveterans 4.3 percent).

In conclusion, no differences of consequence were found between the samples on economic indicators such as receiving welfare, unemployment compensation, or financial help from relatives. However, when veteran and civilian *income* data were compared, the results were unequivocal. In both hourly wages and earned income the year before the survey, the civilians made significantly more than their veteran counterparts. These results suggest that Project 100,000 participants either did not receive the “boost” that McNamara hoped military service would provide, or they were unable to translate this advantage into a competitive edge in the civilian world.

Education and Training. Another benefit hypothesized to accrue from military participation by low-aptitude individuals was a sense of discipline, maturity, and goal orientation that would work to their advantage upon return to civilian life. One indirect measure of the success of this effort is the degree to which the veterans sought to better themselves through education and training upon returning to civilian life. After all, those who successfully completed their military term had the advantage of educational benefits obtained by the mere fact of their military experience. Therefore, the veterans were asked a variety of questions about their education and training histories, questions that paralleled those included in the NLS surveys.

The respondents were first asked about their formal education—the highest grade of “regular” school they had completed. Civilians had a significantly higher average grade—12.3 years as compared to 11.7 for the veterans. When age is controlled, however, this difference lessens, with both groups around 12 years of school. It should be noted that this group of Project 100,000 participants was nearly identical to the population in terms of high school graduation status at time of entry. The average highest grade completed at that time was 10.7, a full grade below that reported here. This would indicate that these veterans did increase their educational status, either in or after leaving service.

A clearer picture of the educational profile of these two groups is provided by Table 5.5. Whereas over 26 percent of the nonveteran sample had at least some college, this was true for only about 17 percent of the veterans. The statistically significant difference between the percentage with a high school diploma or less and the percentage with at least some college disappeared when age was controlled—partially as a result of the smaller sample size.

Project 100,000 participants were asked three questions about training programs they had attended since leaving service: if they had ever taken a course at a business college or vocational/technical institute, attended

Table 5.5
Highest Level of Education Completed for Project 100,000 and NLS 1966
Samples

<u>Sample</u>	<u>Less Than</u> <u>High School</u>		<u>High</u> <u>School</u>		<u>Some</u> <u>College</u>		<u>College+</u>		<u>Total</u>	
	<u>N^a</u>	<u>%</u>	<u>N^a</u>	<u>%</u>	<u>N^a</u>	<u>%</u>	<u>N^a</u>	<u>%</u>	<u>N^a</u>	<u>%</u>
<u>Full Sample</u>										
<u>Veteran</u>										
PK Separated ^b	82	27.3	166	55.4	42	14.0	10	3.2	299	100
PK Separated and Active Duty	85	27.3	170	54.9	44	14.1	11	3.6	310	100
<u>Nonveteran</u>										
NLS 1966 in 1981	46	24.0	95	49.4	32	16.7	19	9.9	192	100
<u>Controlling for Age</u>										
<u>Veteran</u>										
PK Separated ^b	62	26.1	128	53.8	39	16.3	9	3.8	238	100
PK Separated and Active Duty	64	25.7	132	53.6	40	16.3	11	4.3	247	100
<u>Nonveteran</u>										
NLS 1966 in 1981	22	22.6	46	48.2	16	16.9	12	12.2	96	100

^a Weighted frequency produced by demographically equating the veteran and nonveteran samples.

^b Includes those serving in the Reserves.

a business or company training school, or taken additional courses lasting six weeks or longer; they were told to omit any military training they had received. NLS participants were asked a single question regarding any training courses or educational programs attended.⁷ A significant difference was found between the two groups in this regard, with 68 percent of the nonveterans and 42 percent of the veterans reporting they had attended such a program.⁸ This difference was not affected by age. It may be that the PKs felt they did not need to pursue additional training after their military experience. Had the veterans been allowed to include military training, these results probably would have been somewhat different.

When those who had attended such a course were asked if they had completed it, about one-third of each group said they had not. Data on

the type of training each sample participated in (Table 5.6) reveals that civilians were more likely to have been involved in professional/technical type courses, while the PKs were concentrated more in "other" types of training.

On the whole, military service appeared to have little impact on lower aptitude individuals in terms of an inclination to seek self-improvement through education. These results should be evaluated in light of other research that has shown that over 70 percent of Vietnam-era veterans returned to school at some point.⁹ The fact that this sample is made up exclusively of low-aptitude men probably explains the difference between these participation rates and those for the overall military population of this era.

Marriage and Family. The final area of military-civilian comparisons was in the realm of marriage and family. The ability to enter into and maintain a life-long relationship and contribute to society by raising the next generation of Americans is often seen as a sign of a stable and mature individual. At the same time, one of the goals of Project 100,000 was to foster and develop in its participants, many of whom were themselves raised in somewhat less than ideal circumstances, the sense of maturity and discipline that is endemic to the military environment. One reflection of the success of this effort may be the degree to which veterans were able to create and sustain a secure family life.

Table 5.7 shows that the overall groups did not differ a great deal in terms of marital status at the time of the survey, with approximately 75 percent of both groups being married. Because this characteristic is quite likely to be affected by age, comparisons were also made with just those in the overlapping age ranges. In this case significant differences were found, with 16 percent more of the nonveterans married and with a divorce rate among veterans nearly twice that of the civilians. Furthermore, while all of the civilians had been married at least once, nearly 7 percent of the PKs had never taken that step.

Comparison of the average number of marriages showed that the PKs had significantly more (1.4 vs. 1.1). When age was controlled for, this difference was smaller (1.3 for PKs, 1.2 for NLS) but still significantly different.

Whereas all of the nonveterans had fathered at least one child, 19 percent of the PKs had yet to do so. The average number of children was significantly higher for the nonveterans (2.4 vs. 1.9), with the difference increasing slightly when age was controlled (2.6 vs. 1.8).

Although it is difficult to assess how much military service may have affected variables such as these, it appears that the PKs were more likely

Table 5.6
Kind of Training Received by Project 100,000 and NLS 1966 Samples

Sample	Kind of Training									
	Professional/ Technical		Managerial		Clerical		Other		Total	
	N ^a	%	N ^a	%	N ^a	%	N ^a	%	N	%
PK Separated ^b										
Business College ^c	24	28.8	8	9.4	1	1.8	49	60.1	82	100
6-Weeks Course ^d	9	44.8	5	21.5	1	2.7	7	31.0	22	100
PK Separated and Active Duty										
Business College ^c	25	29.6	8	9.3	3	3.1	49	58.0	85	100
6-Weeks Course ^d	10	45.2	5	21.3	1	2.7	7	30.8	23	100
NLS 1966 in 1981 ^e	43	33.6	23	17.5	3	2.1	60	46.8	129	100

^a Weighted frequency produced by demographically equating the veteran and nonveteran samples. The percentages may not sum to 100 due to the effects of weighting and rounding.

^b Includes those serving in the Reserves.

^c PK respondents were asked if they attended a business college or vocational school, and if they did, what kind of training they received.

^d PK respondents were asked if they attended a full-time course of six weeks or longer, and if they did, what kind of training they received.

^e NLS respondents were asked one question covering business and vocational training, except in 1966 they were asked the same questions that the PK survey used. If the most recent training for NLS respondents was in 1966, then the kind of training defaults first to any business college or vocational school and second to any full-time course of six weeks or longer.

Table 5.7
Marital Status for Project 100,000 and NLS 1966 Samples

<u>Sample</u>	<u>Married</u>		<u>Widowed</u>		<u>Divorced/ Separated</u>		<u>Never Married</u>		<u>Total</u>	
	<u>N^a</u>	<u>%</u>	<u>N^a</u>	<u>%</u>	<u>N^a</u>	<u>%</u>	<u>N^a</u>	<u>%</u>	<u>N^a</u>	<u>%</u>
<u>Full Sample</u>										
<u>Veteran</u>										
PK Separated and Active Duty	232	74.7	0*	0.1	56	17.9	23	7.3	311	100
<u>Nonveteran</u>										
NLS 1966 in 1981	152	76.7	--	--	28	13.9	19	9.4	198	100
<u>Controlling for Age</u>										
<u>Veteran</u>										
PK Separated and Active Duty 35-40 year olds	186	74.7	0*	0.0	46	18.4	17	6.8	249	100
<u>Nonveteran</u>										
NLS 1966 in 1981 35-40 year olds	90	90.7	--	--	9	9.3	--	--	100	100

Note: O* indicates N < .50 which is possible because of weighted data.

-- indicates no cases.

^a Weighted frequency produced by demographically equating the veteran and nonveteran samples. The percentage may not sum to 100 due to the effects of weighting and rounding.

than their nonveteran counterparts to be divorced or to never have been married, and as a group they averaged a higher number of marriages with fewer children.

The Veterans' Opinions

The evidence reviewed to this point does not paint an especially positive picture of the outcomes of Project 100,000 on the subsequent lives of its veterans. On nearly every measure considered, the PKs were either no better off or actually worse off than their civilian counterparts who never served in the military. But what do the veterans themselves think about the impact of their having served? To assess this, those who had separated were asked to indicate whether they felt that being in the military had helped, hurt, or had no effect

on their careers. When the respondent said that it had helped or hurt, he was asked to specify the way in which it had done so. In addition, all respondents were asked to evaluate how being in the military had influenced their lives in general. These responses were recorded verbatim, content analyzed, and coded.

Nearly half of the Project 100,000 veterans felt that their military experience had a positive effect on their subsequent careers (Table 5.8). Only 14 percent said it had a damaging effect, with the remainder indicating that it had basically no impact. Blacks and high school graduates were more likely to feel that it helped them in the long run. The most frequently cited positive effects were maturity, training, and a sense of discipline that was imparted. Maturity was the result given most often by blacks and nonblacks, graduates and nongraduates (more than 36 percent in all groups) (Table 5.9). This same outcome was most often highlighted when the men were asked about the general effect on their overall lives, with nearly 21 percent giving this answer.

Of the small number who indicated that military service hurt their later career, equal proportions (26 percent) cited physical and emotional problems as the reason. Difficulties in finding a job attributed to having served was another major factor cited. These results mirror those obtained when the general question was asked about the overall effects of the military experience on the veterans' lives. So, despite the fact that the objective data provided little support for the contention that serving in the military provided benefits to Project 100,000 veterans, a substantial proportion of the respondents themselves felt that it was a positive experience.

THE POTENTIALLY INELIGIBLES AND THE NLS 1979/85

Before turning to comparisons of the Potentially Ineligibles and their nonveteran counterparts, data on the military experience and postservice status of the PIs are offered. Again it is important to remember that although these data are unweighted, generalizations can be made to the population of low-aptitude veterans of the Misnorming era because the sample was selected randomly.

The Military Service of the Potentially Ineligibles

About a decade after the military mistakenly began allowing lower aptitude youth to enter service, 31 (9.5 percent) of the 326 PIs who

Table 5.8

Effect of Military Experience on Post-Service Career as Viewed by the Project 100,000 Sample, by Race and Educational Status

Characteristic	Helped		Hurt		No Effect		Total	
	N ^a	%	N ^a	%	N ^a	%	N ^a	%
Race								
Nonblack	88	45.4	23	11.9	83	42.8	194	100
Black	59	58.4	17	16.8	25	24.8	101	100
Educational Status at Entry								
Nongraduate	64	40.8	30	19.1	63	40.1	157	100
HS Graduate	83	60.1	10	7.2	45	32.6	138	100
Total	147	49.8	40	13.6	108	36.6	295	100

^a Data are unweighted.

responded to the survey were still on active duty. This represents a rather low retention rate compared to the roughly 20 to 30 percent of an enlisted cohort expected to remain in the Services after that interval.¹⁰ Of the PI respondents, 66 percent had entered the Army, with 17 percent in the Navy, 13 percent in the Marine Corps, and the remainder (4 percent) in the Air Force. These proportions reflect the Services' manpower requirements and enlistment standards, with the Army being the largest branch and the Air Force having the most stringent aptitude criteria. In fact, during the Misnorming era, Air Force standards would have precluded nongraduates in AFQT Category III and graduates below Category IVA from enlisting.

On average these Misnorming era veterans served about three years (mean = 33 months). Of those who had been separated before the time of the interview, 30 percent had left the military before serving two years, and 42 percent were gone before completing three years, which was the standard term of enlistment at that time. However, the great majority (79.7 percent) had received at least one year of military training.

Approximately 36 percent of this sample was black, and 46 percent had failed to obtain a high school diploma. Nearly half were teenagers when they enlisted, and 45 percent lived in the South at the time.

Table 5.9

Reasons for Helpful Effects of Military Service on Post-Service Career as Reported by Project 100,000 Sample Separated from Service at Time of Survey, by Education and Race.

How Military Helped Career	Educational Status				Race				Total	
	Nongraduate		HS Graduate		Nonblack		Black			
	N ^a	%	N ^a	%	N ^a	%	N ^a	%	N ^a	%
Leadership	--	--	2	2.5	2	2.3	--	--	2	1.4
Maturity	26	40.6	29	35.8	33	38.4	22	37.2	55	37.9
Discipline	4	6.2	11	13.6	9	10.5	6	10.2	15	10.3
Ed. Assistance	6	9.5	4	4.9	9	10.5	1	1.6	10	6.9
Training	12	18.7	25	30.9	15	17.4	22	37.3	37	25.5
Motivation	2	3.1	--	--	2	2.3	--	--	2	1.4
Other	14	21.9	10	12.3	16	18.6	8	13.6	24	16.5
Total	64	100	81	100	86	100	59	100	145	100

Note: Respondents were asked "All things considered, do you think that your entire period of military service, including Reserve or Guard Duty, has helped, hurt, or had no effect on your career?" Respondents who answered military service helped their careers were then asked "Why do you think it has helped?"

^a Data are unweighted.

The Potentially Ineligibles 10 Years Later

An examination of the current employment and income status of the PI respondents indicates that 77 percent were employed full-time, and an additional 8 percent were working part-time, leaving 15 percent who were not employed. Even when the 31 active-duty members are counted as full-time employees, the jobless rate only decreases to 13 percent. This rate does not compare favorably with the 7.2 percent unemployment among the national population of 25- to 29-year-old males in 1986.¹¹ (However, it should be remembered that this national figure includes men of all aptitude levels.)

The PIs' mean annual income from wages alone was \$13,050. When farm and business income are added to wage earnings, the mean income level was slightly higher at \$13,613. A useful reference point for these income figures is the substantially higher mean of \$20,721 for the national population of 25- to 29-year-old males in 1985.¹² No significant differences in income were found when respondents were compared on the basis of race, educational status at entry, or Service joined. Furthermore, neither length of service nor elapsed time since military separation was significantly related to income, whether restricted to those employed full-time or for all separated PIs.

In brief, these AFQT Category IV men, who were disproportionately black, typically entered the military at age 18 and served, on average, for three years. Though the majority were employed in full-time jobs, as of 1986 one in seven was without a job. These low-aptitude men in their mid- to late-20s were earning about \$13,000 per year.

Veteran-Nonveteran Comparisons

Though certain common measures of economic well-being—employment status and income—were reported above for the Potentially Ineligibles, such figures cannot be readily interpreted without an appropriate reference group. Comparing these figures to national employment and earnings data for similar age groups and time periods (as was done above) tells us only that men who entered the military during the Misnorming are, to say the least, not among society's most prosperous. However, given their aptitude deficits, one would not expect them to have, as a group, the rates of employment or earnings of men of average ability. Thus, to better gauge the impact of military service on the PIs' post-Service lives, they are compared with low-aptitude counterparts who never enlisted in the military.

Employment. The employment status of the veterans and nonveterans at the time they were interviewed is summarized in Table 5.10. It must be remembered that the NLS sample was surveyed about one to two years earlier than were the PIs. The fact that they were somewhat younger than the military sample members would tend to bias the results against the civilians, because overall employment rates tend to be inversely related to age.¹³

Overall, the percentage of men working full time was virtually the same for the two samples. About 4 percent more PIs were part-time employees, and about 4 percent more nonveterans were not working; neither of these differences is significant. When the veteran group is restricted to those who served at least 24 months in the military, the difference in part-time employment increases and is statistically significant.

Unlike the Project 100,000 sample and control group, no differences were found between the PIs and their nonveteran counterparts in regard to type of employer. Approximately seven-eighths of both groups worked for privately owned companies. Also, the PIs did not differ significantly from those who never served in terms of the types of jobs held (Table 5.11). Approximately half of each group were employed as craftsmen (e.g., construction trades), operators (e.g., metalworking machines, woodworking machines), repairers (e.g., mechanics), or precision production workers (e.g., shoe repairers, butchers, tool and die makers).

A final employment-related consideration is job satisfaction. Overall job attitudes are often linked to productivity, turnover, absenteeism, and tardiness, either as a cause or as an effect. Further, many would argue that, quite aside from the relationship to profitability to the employer, a worker's positive regard for the job is an important human resource goal. Although the vast majority of both PIs and nonveterans reported that they liked their jobs at least fairly well, a substantially greater proportion of former military members expressed dissatisfaction. In fact, the PIs were almost twice as likely as the nonveterans to dislike their jobs somewhat or very much.

So, all in all, there were few differences between veterans and nonveterans in terms of work-related variables. About the same proportion of both groups were working, the vast majority worked for the private sector, and there was a great deal of overlap in the type of work being performed. Despite these similarities, however, the PIs were significantly more likely to report dissatisfaction with their jobs.

Table 5.10
Employment Status for Potentially Ineligible and NLS 1979 Samples

Sample	Full-Time		Part-Time		Not Working		Total	
	N ^a	%	N ^a	%	N ^a	%	N ^a	%
<u>Full Sample</u>								
<u>Veteran</u>								
PI Separated ^b	218	77.0	26	9.3	39	13.8	283	100
PI Separated and Active Duty	243	78.8	26	8.5	39	12.6	308	100
<u>Nonveteran</u>								
NLS 1979 in 1985	670	77.2	45	5.2	153	17.6	868	100
<u>PIs Serving 24+ Months</u>								
<u>Veteran</u>								
PI Separated ^b Who Served 24 Months or More	140	73.3	23	12.0	28	14.7	191	100
<u>Nonveteran</u>								
NLS 1979 in 1985	670	77.1	45	5.2	153	17.7	869	100

^a Weighted frequency produced by demographically equating the veteran and nonveteran samples. The percentages may not sum to 100 due to the effects of weighting and rounding.

^b Includes those serving in the Reserves.

Income and Other Economic Indicators. The annual income data for the veteran and nonveteran groups are presented in Table 5.12. These figures have been adjusted to account for the fact that the civilians provided income information for 1981, while the PIs reported their earnings in 1985 or 1986. Once the data for the nonveterans were adjusted upward to compensate for inflation and age, the difference between their income and that of the veterans was statistically nonsignificant and, indeed, inconsequential. In fact, the differences between the two groups were minimal (and nonsignificant) even before this adjustment was made.

In 1985 dollars, these young men in their mid- to late-20s were making, on average, about \$13,000 from annual wages. Those who were employed full-time were making slightly more at around \$15,000 per year. Including farm or business income increases earnings only slightly (Table 5.12), with no difference between those who served and those who did not. Even when the "quitters" and the undertrained were weeded out of

Table 5.11

Civilian Occupational Categories for All Workers^a in Potentially Ineligible and NLS 1979 Samples

Civilian Occupational Categories ^b	PI Separated ^c		NLS 79 in 1985	
	N ^d	%	N ^d	%
Professional, Technical, & Managerial	25	10.8	61	8.6
Sales	13	5.7	16	2.3
Clerical & Administrative Support	14	6.2	64	8.9
Service, Private Household	--	--	--	--
Service, Except Private Household	33	14.5	97	13.6
Farmers & Farm Managers	1	0.5	--	--
Farm Laborers & Foremen	1	0.6	9	1.3
Laborers, Except Farm	24	10.4	114	15.9
Craftsmen, Operatives, Repair & Precision Production	117	51.2	354	49.5
Total	229	100	716	100

Note: -- indicates no reported cases.

^a Full-time and part-time workers.

^a Occupational codes for the PI and NLS were taken from the 1970 and 1980 versions of the Census 3-digit Occupational Classification System, respectively. The two versions were equated and this produced the nine categories listed in this label.

^c Separated includes those serving in the Reserves.

^d Weighted frequency produced by demographically equating the veteran and nonveteran samples. The percentages may not sum to 100 due to the effects of weighting and rounding.

the veteran sample by eliminating those who served less than two years, there was little effect on the results.

Aside from job-related earnings, sample members were asked about other sources of revenue, such as savings interest, dividends, social security, and the like. Combining these figures with wages and farm/business income yields a measure of total income. Questions about unearned income were asked in regard to both the respondent and spouse,¹⁴ so the responses of married and separated/divorced individuals were examined separately as well as with the total sample. No significant differences were found, with a mean total income of just under \$16,000 for the PIs and \$16,716 for the nonveterans.

Table 5.12

Adjusted Annual Income for Potentially Ineligible and NLS 1979 Samples (in dollars)

Employment Sample	Status	Adjusted Annual Income From Wages			Standard Deviation
		N ^a	Mean	Median	
<u>Full Sample</u>					
<u>Veteran</u>					
PI Separated ^b	Full-Time ^c	202	14,564	13,000	9,229
	All ^d	277	12,859	11,592	9,194
PI Separated and Active Duty	Full-Time	227	14,433	13,000	8,707
	All	301	12,899	11,760	8,796
<u>Nonveteran</u>					
NLS 1979 in 1985	Full-Time	637	15,181	12,252	9,881
	All	833	12,862	10,124	9,920

Employment Sample	Status	Adjusted Annual Income From Wages and FBI			Standard Deviation
		N ^a	Mean	Median	
<u>Veteran</u>					
PI Separated ^b	Full-Time ^c	202	15,479	13,720	11,003
	All ^d	277	13,529	11,760	10,652
PI Separated and Active Duty	Full-Time	227	15,293	13,720	10,368
	All	301	13,547	12,000	10,181
<u>Nonveteran</u>					
NLS 1979 in 1985	Full-Time	652	15,582	12,252	11,324
	All	828	13,314	10,156	11,088

a Weighted frequency produced by demographically equating the veteran and nonveteran samples.

b Includes those serving in the Reserves.

c Includes only full-time workers who reported income.

d Includes full-time, part-time, and not working, excluding full-time and part-time workers who did not report income.

From the results of the income analyses, it seems that no matter how you look at it there was no apparent advantage to the veteran. In terms of earning power they did neither better nor worse than low-aptitude youth who never served.

In addition to comparing the low-aptitude samples in terms of earned and unearned income, the degree of reliance on public assistance was also assessed. Among PIs and NLS respondents who were married or divorced, about 14 percent and 16 percent, respectively, had received welfare benefits in the past year (Table 5.13). These differences were

Table 5.13
Receipt of Assistance Benefits for Potentially Ineligible and NLS 1979 Samples

Sample	Marital Status	Welfare Benefits ^a				Total	
		Benefits		No Benefits			
		N ^b	%	N ^b	%	N ^b	%
<u>Full Sample</u>							
<u>Veteran</u>							
PI Separated and Active Duty	Married & Div/Sep ^c	24	13.6	154	86.4	179	100
	All	41	12.8	280	87.2	321	100
<u>Nonveteran</u>							
NLS 1979 in 1985	Married & Div/Sep ^c	45	16.0	236	84.0	280	100
	All	79	9.0	800	91.0	879	100
<u>Unemployment Benefits</u>							
<u>Veteran</u>							
PI Separated and Active Duty		56	17.2	268	82.8	324	100
<u>Nonveteran</u>							
NLS 1979 in 1985		116	13.2	761	86.8	878	100
<u>Veterans Benefits^d/Workers Comp/Disability</u>							
<u>Veteran</u>							
PI Separated and Active Duty		21	6.5	305	93.5	326	100
<u>Nonveteran</u>							
NLS 1979 in 1985		50	5.6	828	94.4	878	100

^a Welfare sources include Aid to Families with Dependent Children (AFDC), food stamps, Supplemental Security Income (SSI), or any other public assistance, thus marital status was taken into consideration.

^b Weighted frequency produced by demographically equating the veteran and nonveteran samples. The percentages may not sum to 100 due to the effects of weighting and rounding.

^c Div/Sep = Divorced or Separated.

^d Other than education benefits.

not of consequence. Basically the same result holds true when all respondents are included in the analysis. About 17 percent of the low-aptitude military separatees received unemployment compensation during the year before the survey, compared with 13 percent of those who had never served in the military. About 6 percent of each group obtained disability insurance payments. Again, neither of these results represents a significant difference.

So in sum, there is no evidence that the Potentially Ineligibles exchanged their human capital for economic capital to any greater or lesser extent than did youth who were similarly cognitively disadvantaged but did not serve in the military. Low-aptitude youth who enlisted during the peacetime conditions of the late 1970s did not have higher post-Ser-vice incomes and were no less reliant on government subsidies than their civilian brothers. In short, the economic verdict is: no effect.

Education and Training. The next series of questions was asked to determine whether the PIs were inspired, simply because of their military experience or as a result of educational benefits achieved while in service, to pursue education/training possibilities beyond the level of those who never served. The mean number of grades of regular school that had been completed by the PIs and NLS civilians was 11.4 and 11.6, respectively. Though the means were very close and the medians were identical, nonveterans had acquired somewhat more years of education. As can be seen when the proportions in various educational categories from less than high school graduation to the college level are explored (Table 5.14), about 58 percent of the military group (separated and active) had completed at least high school. Significantly more (69 percent) of the low-aptitude civilians had received a high school diploma. Also, a far greater percentage of NLS civilians had attended college (about 17 percent, with about 3 percent completing). Among the PIs, only about 10 percent reported having gone to college, with only 1 percent having obtained a degree.

College, of course, is not for everyone. Given their lower aptitude levels, vocational or technical type courses may have been the better option for both veterans and nonveterans who were out to improve their lot through further training. The PIs appeared to be slightly but not significantly more likely to participate in training outside of regular school (Table 5.15). About one-third of all low-aptitude youth (irrespective of veteran status) had participated in such programs. Among those who received such vocational/technical instruction, former military members were more likely than nonveterans to do so under the auspices of the government, though the majority received training that was not government-sponsored.

One might expect that the veterans would have been more likely to continue with their education and training because many had education benefits available to them as a result of their military experience. Some of the PIs would have been eligible for the generous and noncontributory GI Bill, which provided funding for up to 48 months of education. Those who enlisted after 31 December 1976 were eligible to make monthly

Table 5.14

Highest Level of Education Completed for Potentially Ineligible and NLS 1979 Samples

Sample	Less Than High School		High School		Some College		College+		Total	
	N ^a	%	N ^a	%	N ^a	%	N ^a	%	N ^a	%
Veteran										
PI Separated ^b	137	45.6	135	45.2	25	8.3	3	0.9	300	100
PI Separated and Active Duty	138	42.5	155	47.7	29	9.0	3	0.8	325	100
Nonveteran										
NLS 1979 in 1985	272	31.5	445	51.7	123	14.3	22	2.5	862	100

^a Weighted frequency produced by demographically equating the veteran and nonveteran samples.

^b Includes those serving in the Reserves.

contributions with 2:1 matching by the government under the Veterans' Educational Assistance Program (VEAP). When the PIs were asked if they had received educational benefits, only 8.5 percent said they had.¹⁵ It appears that educational benefits from military service were relatively underutilized by the low-aptitude men—not an unexpected finding, given that VEAP participation in general was not high, and that the disadvantaged tend not to enroll in such programs. The figure of 8.5 percent still stands in marked contrast to the civilians, none of whom reported having received educational benefits of this type.

In contrast to the findings for the economic measures of success, there were some significant differences between the PI and NLS sample members in terms of level of education. Unfortunately, such findings were in favor of the nonveterans. Participation in nonmilitary vocational/technical training did not compensate for this finding, because veterans were no more likely than nonveterans to enter such programs.

Marriage and Family. Family patterns provide yet another measure of the degree of life success. Following a normative pattern with regard to marriage and parenthood is often related to economic and social outcomes.¹⁶ The marital status of low-aptitude veterans and nonveterans at the time of the surveys is shown in Table 5.16. Only about one-third of the military sample had never been married, as compared with three-fifths of NLS respondents. Though significantly more PIs were married at the time of the survey (about 50 percent

Table 5.15
Participation in Training for Potentially Ineligible and NLS 1979 Samples

Sample	Participated in Training ^a					
	Participated		Did Not Participate		Total	
	N ^b	%	N ^b	%	N ^b	%
Veteran						
PI Separated ^c	85	34.1	164	65.9	248	100
PI Separated and Active Duty	86	33.8	168	66.2	253	100
Nonveteran						
NLS 1979 in 1985	235	28.2	599	71.8	834	100

Sample	Government-Sponsored Training					
	Yes		No		Total	
	N ^b	%	N ^b	%	N ^b	%
Veteran						
PI Separated ^c	19	28.6	48	71.4	67	100
PI Separated and Active Duty	20	29.6	48	70.4	68	100
Nonveteran						
NLS 1979 in 1985	5	2.0	230	98.0	235	100

^a Participation in training in the last five years, excluding regular school. Though military training was subsumed under this survey question, through responses to a subsequent item those who received military training were not included as participants.

^b Weighted frequency produced by demographically equating the veteran and nonveteran samples.

^c Includes those serving in the Reserves.

vs. 34 percent NLS), the percent divorced was three times as high among the former Servicemembers as it was for the nonveterans (16 vs. 5 percent). Excluding those who had never been married, this results in a divorce rate of about 24 percent for the PIs and 13 percent for the nonveterans.

There were corresponding statistically significant differences between veterans and nonveterans in terms of the number of children fathered. The majority of nonveterans had no children, while the majority of veterans had at least one child and, in general, larger family sizes (Table 5.17). Though the one- to two-year age gap would make the PIs slightly older at the time of the survey, it is doubtful that having concordant ages would change this statistically significant

Table 5.16
Marital Status of Potentially Ineligible and NLS 1979 Samples

Sample	Married		Widowed		Divorced/ Separated		Never Married		Total	
	N ^a	%	N ^a	%	N ^a	%	N ^a	%	N ^a	%
<u>Veteran</u>										
PI Separated ^b	150	49.9	3	1.0	49	16.3	98	32.7	301	100
PI Separated and Active Duty	167	51.3	3	1.0	53	16.2	103	31.6	326	100
<u>Nonveteran</u>										
NLS 1979 in 1985	269	33.6	1	0.1	40	5.0	490	61.2	801	100

^a Weighted frequency produced by demographically equating the veteran and nonveteran samples. The percentages may not sum to 100 due to the effects weighting and rounding.

^b Includes those serving in the Reserves.

Table 5.17
Number of Children Fathered by Potentially Ineligible and NLS 1979 Samples

Sample	0		1		2		3		4 or more		Total	
	N ^a	%	N ^a	%	N ^a	%	N ^a	%	N ^a	%	N ^a	%
PI Separated and Active Duty	135	41.5	76	23.3	83	25.6	24	7.4	7	2.3	325	100
NLS 1979 in 1985	513	58.4	210	23.9	126	14.3	28	3.2	2	.2	879	100

^a Weighted frequency produced by demographically equating the veteran and nonveteran samples. The percentages may not sum to 100 due to the effects of weighting and rounding.

difference. Overall, then, serving in the military was shown to be related to marital status and family size.

The Veterans' Opinions

This survey afforded the opportunity not only to compare veterans and nonveterans of marginal abilities along economic and social dimensions, but to solicit the Potentially Ineligibles' opinions of how military service affected their careers and lives. How did *they* perceive their military experiences once they returned to civilian life?

About 21 percent of the veterans indicated that there was positive transfer of job skills from the military to the civilian sector. On a broader basis, however, just as with Project 100,000 veterans, *one-half* of the sample felt that their military experience had a positive effect on their post-service career (Table 5.18). About 10 percent thought military service hurt their later civilian career opportunities, while about 38 percent reported that it had no impact one way or the other.

For those who thought that their military experience had been beneficial to their post-Service career, most indicated that it had given them increased maturity and training (Table 5.19). Others mentioned benefits such as discipline, motivation, educational assistance, and leadership. For the small proportion who said that the military had a negative effect, most offered difficulty in finding a job as the reason.

These ASVAB Mismorning-era veterans were also asked about the impact of service on their lives in general. Though the question was intended to be broader in nature, it elicited perceptions similar to those described above. That is, positive feelings substantially outweighed negative, and the most common single response category aside from "no effect" was maturity.

As with the findings from the New Standards Men, there was little to no evidence that being in the military helped the low-aptitude veterans of the late 1970s after they left the service, and yet half of them felt that its impact was positive. Who's right—the half who said the military had either no or negative effects, or the half who said military experience had a positive influence on their lives? Perhaps both. It's hard to believe that substantial time in the military did not leave an indelible mark. The men who served had to have taken some positive skills and attitudes with them when they left. Yet it appears that, years later, they did not stand high above their nonserving low-aptitude counterparts in traditional ways of measuring success.

CONCLUSION

Apparently Project 100,000 was less than successful in its stated goal of providing low-aptitude and disadvantaged youth an avenue for upgrading their skills and potential through military service. In virtually every comparison drawn between the veteran and nonveteran samples, the civilians fared equally well or better. And, although the Potentially Ineligibles were found to be functioning at the same level as their civilian counterparts, being a veteran did not provide much, if any, advantage.

Table 5.18
Effect of Military Experience on Post-Service Career as Viewed by Potentially Ineligible Sample, by Race and Educational Status

Characteristic	Helped		Hurt		No Effect		Total	
	N ^a	%	N ^a	%	N ^a	%	N ^a	%
Race								
Nonblack	102	52.3	18	9.2	75	38.5	195	100
Black	52	52.0	10	10.0	38	38.0	100	100
Educational Status at Entry								
Nongraduate	74	51.4	13	9.0	57	39.6	144	100
HS Graduate	80	53.0	15	9.9	56	37.1	151	100
All	154	52.2	28	9.5	113	38.3	295	100

^a Data are weighted.

Table 5.19
Reasons for Helpful and Harmful Effects of Military Service on Post-Service Career as Reported by Potentially Ineligible Sample

Reasons for Helpful or Harmful Effects					
How Military Helped Career ^a	N ^a	%	How Military Hurt Career ^a	N ^a	%
Leadership	3	2.0	Hard to Find Job	18	66.7
Maturity	58	37.9	Physical Problems	1	3.7
Discipline	14	9.2	Emotional Problems	2	7.4
Ed. Assistance	5	3.3	Family Problems	1	3.7
Training	54	35.3	Other	5	18.5
Motivation	6	3.9			
Other	13	8.5			
Total ^a	153	100	Total ^a	27	100

- ^a Respondents were asked “All things considered, do you think that your entire period of military service, including Reserve or Guard Duty, has helped, hurt, or had no effect on your career?” Respondents who answered military service helped their careers were then asked “Why do you think it has helped?” Respondents who answered military service hurt their careers were then asked “Why do you think it has hurt?”
- ^b Data are unweighted.
- ^c Excludes those who said that the military hurt or had no effect on their careers, thus they did not respond to the question “Why do you think it has helped?”
- ^d Excludes those who said that the military helped or had no effect on their careers, thus they did not respond to the question “Why do you think it has hurt?”

The body of research cited in Chapters 2 and 3 indicated that those of low aptitude do not perform as well in service as their higher ability peers. This seems to suggest that, unless manpower needs are pressing, there is little reason to believe that the military would want to accept these individuals or to force them to do so. The one unknown was the flip side of the coin. What if being in the military proved beneficial to the lower ability man? Would that justify altering standards to admit them even when they are not needed? The evidence presented here suggests that this is a moot point, in that there is little to indicate that the Category IV veterans of the 1960s or those of the 1970s received any—or at least much—tangible, long-lasting benefit as a result of their military service. The implications this has for manpower policy regarding the low-aptitude are discussed in Chapter 6.

CHAPTER 6 ---

Postscript and Lessons Learned

“We tried to fight a war on two fronts in the sixties—a war in Viet Nam and a war on poverty—and we lost both.”¹ This is what Stephen J. Smith, a former Army draftee and now Captain of the Savannah Police Force, wrote when he learned of the fate of McNamara’s Millions. Oddly enough, although the Potentially Ineligibles seemed to have fared a bit better than Project 100,000 participants, they too were not found to be better off economically, educationally, or socially than their nonveteran peers. Are there any lessons to be learned from these periods and is anybody even interested?

The interest and commentary are easier to capture than sorting out the lessons learned. Since the release of a 252-page technical report detailing the long-term effects of military service on men of low aptitude, people across and up and down the country have taken notice.² Individual veterans and veterans’ organizations, members of Congress, the press, think tanks, foundations, social workers, academics, and “lay” citizens alike are trying to come to grips with the disheartening news. Congressman Lane Evans (D-IL) recently devoted hearings to the aftermath and upshot of Project 100,000 before the House Veterans’ Affairs Subcommittee on Oversight and Investigations. Evans opened the hearing by saying: “From the beginning, Project 100,000 was controversial. Today, nearly two decades after the last program accession, the controversy continues.”³ Yes, Project 100,000, and for that matter the Misnorming, may be history but their lessons remain unsettled. Newspaper headlines

across the nation buzzed with the news that "Disadvantaged Veterans Gain Little in Military,"⁴ and asked "Did the Services Renege?"⁵ Peter Passell of the *New York Times* commented on the basis of the follow-up of Project 100,000 and the Misnorming (as well as other new studies) that "war may make men out of boys. It does not seem to make them breadwinners."⁶

WHY DIDN'T IT WORK?

For many the news that lower aptitude men were not heads above their civilian counterparts came as no big surprise. For example, according to Richard Hinkley, Army veteran and now Executive Director of the Plymouth, Massachusetts, South Shore Community Action Council, "anyone who is foolish enough to believe that this venture would help poor and disadvantaged recruits is either incredibly naive or incredibly stupid."⁷ It is not difficult to conjecture why military service ultimately failed the Project 100,000 men. "Jobs were created in the jungles of Viet Nam. . . . To call Project 100,000 an effort to give the disadvantaged a step up is ironic. It was at best a temporary expedient."⁸ These men were uprooted from their impoverished yet home environments and ended up fighting in this nation's most atrocious and unpopular war. After being exposed to the strains of poverty or educational deficiencies, they had to face the intensity of the war and later the reproaches of their compatriots who lambasted soldiers as villains and scoffed at their sacrifices. They had little time for extensive basic skills training and were shuttled off to dangerous and menial military jobs. More than ten years before these results were published, a book appeared that practically predicted the findings just presented in Chapter 5. In the haunting words of the authors:

In the opinion of many military leaders, social planners and liberal critics, Project 100,000 proved a failure. While it expanded the wartime manpower pool, it also required additional resources which the services could ill afford. But above all, it was a failure for the recruits themselves. They never got the training that military service seemed to promise. They were the last to be promoted and the first to be sent to Vietnam. They saw more than their share of combat and got more than their share of bad discharges. Many ended up with greater difficulties in civilian society than when they started. For them, it was an ironic and tragic conclusion to a program that promised special treatment and a brighter future, and denied both.⁹

Others were baffled as well as troubled by the postscript on Project 100,000 and the Misnorming. David A. Brigham, Director of the Veterans Assistance Service, Department of Veterans Affairs, testified at Congressman Evans' hearings that "the conclusions reached . . . are of

concern to us.” They “are not the results we would have expected and are disappointing.”¹⁰ Brigham went on to say:

Veterans—especially veterans with wartime and combat experience—face special readjustment problems and deserve special attention. Such attention includes clear identification of needs, direct outreach, motivation to use available benefits, appropriated job readiness and employment assistance, readily available health care, and in some cases, very personalized counseling and rehabilitation efforts.¹¹

Unfortunately the Veterans’ Administration was never directly apprised of Project 100,000 and the special needs of its veterans. And certainly they were unaware of the later “Project 100,000 that nobody knew about”—the Misnorming-era veterans. However, the VA generally targets the educationally disadvantaged for various outreach programs and one may have assumed that such special after-service programs, coupled with military training and discipline, may have provided some kind of help. Ronald W. Drach, National Employment Director, Disabled American Veterans, sadly stated that the VETLIFE results were “shocking and truthful.”¹²

If the anticipated benefits of military service for the disadvantaged were usurped by the lasting burdens of the Vietnam era, then what are the lessons to be learned from the military’s inadvertent peacetime dabble into social welfare? The PIs were not found to be heads above their low-aptitude nonveteran counterparts in terms of the economic and social variables studied, but neither were they tails below. These results suggest that military service had what a sizable number of the PIs claimed it to have—no effect. Such aftereffects (or the lack thereof) are counterintuitive. Shouldn’t the nation’s number one educator and trainer have provided advantages compared to similar men who didn’t serve? After all, the PIs entered during peaceful times, unfettered by the psychological and other accoutrements of the Vietnam war.

There is a vast lore that military service provides opportunities particularly for the downtrodden. In addition to the hypotheses enumerated in Chapter 4, Adam Yarmolinsky, former Deputy Assistant Secretary of Defense for International Security Affairs, claimed: “The more depressed the socioeconomic background of the recruit, the more he seems likely to benefit from the experience in the armed forces.”¹³ Further, he explained:

The recruit from a lower socioeconomic or minority group soon discovers that the military provides a greater sense of protection than he has had in civilian life. His food and his shelter, his clothes, his medical needs, his welfare and insurance, all are directly available; they are not made available through exchange relations that may

lead to a sense of exploitation. The military accepts responsibility for his personal well-being.¹⁴

Indeed, the after-Service results of Project 100,000 and the Misnorming came as a shock to many. The findings ran counter to conventional wisdom. Military service should have been particularly beneficial to the low aptitude, yet it didn't seem to work out that way.

WHAT DID THE VETERANS SAY?

Though most accepted the sad conclusion that military service, especially during the mid-1960s, did not expand the opportunities of low-aptitude men,¹⁵ others held firm to the idea expressed by Yarmolinsky and others that military training, structure, discipline, and assistance can be helpful. One staunch advocate of the military as a social welfare provider for the low-aptitude is Thomas G. Sticht, President of Applied Behavioral and Cognitive Sciences, Inc. Sticht believes that for such youth, and Project 100,000 personnel in particular, "the military offered not just a chance for employment, above poverty income, health and housing care, and training and education, but also [for some] a career."¹⁶ Though as a group, low-aptitude veterans in many ways did not fare better than those who never entered service, certainly some *individual* Armed Forces alumni benefited. And as Sticht pointed out, "whether it is helpful or not to an individual is probably best determined . . . by asking them."

As you may recall, the VETLIFE study did just that. The men from Project 100,000 and the Misnorming were asked to reflect on the effects of military service on their careers and lives. Some said it hurt, others said it had no effect, and many said it helped. In their paraphrased yet uncategorized words, here are some samples of what these men had to say. A number of Project 100,000 veterans felt, as one man put it, "if it wasn't for the military, I wouldn't have a job today." A former Army cook found a similar and rewarding civilian job. Others said they were lifted from "the streets," became men, were more responsible, gained a broader perspective, learned friendship, obedience, and how to treat others, were stronger, better persons, and felt that they could now deal with any situation. Serving their country helped some to pay for school, greatly improved their reading, made them proud, and made them respect their country. Others said the military "helped 100 percent" and a notable number wished they were still in uniform. Some described the military as the "best thing in the world," and an "experience I'll never forget."

The Potentially Ineligibles offered similar accounts. They too thought the military took good care of them and had good benefits. They said things like, "I've got a good job and I was hired mainly because I was a Navy veteran," "I wouldn't have gone to college otherwise," and "if I had not gone in I would still be on drugs and under peer pressure." Military service taught these men how to take care of themselves. It taught one man "how to work with computers and people of all races." Some learned to overcome their prejudices, how to deal with stress, and how to supervise others. A few of these young adults in their mid- to late twenties expressed such sentiments as "It helped me a lot, I would join again in a second," and "I never wanted to get out."

From these comments and others like them it appears that military service, even during wartime, had an enduring positive effect on a considerable number of the low-aptitude men. Even if all or most were not earning as much as their contemporaries, the military had offered some opportunities, instilled pride, and given them a sense of competence.

But, unfortunately, some of the men interviewed reported negative effects, which might provide clues as to the reasons for the overall unfavorable group results and relative disadvantage of these groups of men relative to nonveterans. Some of the Project 100,000 men had physical problems arising from service, and a number felt rejected because of the war or, as one person said, "after the military, civilian people treat you like a dog." One Vietnam veteran felt that "if I did not put on a job application that I was in Vietnam that I would get hired." Many did not think their military skills were transferable. In their words, the military "teach[es] you things but they don't really help in the real world" and "I never refer back to my military training; it can't be applied to the outside," or there's "no such thing in civilian as gunnery."

Misnorming era men did not suffer from the Vietnam stigma but had other similar negative comments. Military job training, they argued, is situation specific. They said: "They trained me in a job skill but when I got out, there was no market for the skill." "Some say [we] didn't get good training in the Army." "They teach you things but [they] don't really help in the real world." "Education in the military is not specific enough to be used in the civilian world." "It's the only thing I know how to do." Others suggested that outsiders had a dim view or bad image of the military. For example, some comments went like this: "People feel that because I'm a Marine they think I have a bad temper." "I think it hurt my chances to get a job. I stopped using it as a reference." And finally, here are a few other general reactions: "Things have not been

good for me since I left the military.” “Before I went into the military and after I left I just couldn’t find a decent job.” “A lot of plants in the area were hiring, but when I got out they weren’t anymore. Now I’m taking a lower paying job. My friends got the jobs in the plant and are still there.”

WHY THE MILITARY MIGHT BE GOOD FOR SOME BUT NOT ALL

The words of these Project 100,000 and Misnorming era veterans provide a lot of food for thought about the military’s capacity to ease some of the social problems of this country. Time in Service did some of these men a lot of long-term good. Success has many facets and cannot be measured simply by economic standing, level of formal education, and marital accord. There’s a lot to be said about building good character and confidence, and just learning something about the world beyond your own backyard. But the finding that as a group these men trailed comparable low-aptitude men without military experience on typical indexes of life achievement runs counter to the expressed logic and expectations of many who have cared both about such men and about the military. Why weren’t all or even most of these men better off economically, educationally, and socially after service?

The Project 100,000 and Misnorming types are a hard group to help, particularly by the time they reach their 18th or 19th birthdays. By that time, adverse environmental conditions and the lack of opportunities may leave an indelible imprint of helplessness on such individuals. The National Advisory Commission on Selective Service concluded in 1967:

The problem . . . lies in the years of their youth and development, in conditions of poverty and discrimination, inadequate education, and poor medical facilities. The problem that confronts our society is to reduce the reasons for their rejection before those reasons can overpower the young men and shape their future lives.¹⁷

Maybe uplifting even a few is indeed a victory. When you think about the huge absolute numbers involved, providing long-lasting benefits to even a small percentage of people in the military can be pretty impressive. But the military’s massive brand of socialization, motivating and disciplinary tactics, and training and education cannot be expected to help all low-ability and disadvantaged youth. And these same large numbers and big bureaucracy that characterize Defense may render social welfare difficult—even impossible—to run to best effect, especially when it must be a mere by-product of the primary military mission. Those who might

benefit if given individual attention may simply get lost in the crowd no matter how good the formation.

The military job training and experience that those of limited ability typically qualify for and receive may not transfer to the civilian world, at least not directly. Serving as infantryman or in many of the combat specialties is not likely to have much bargaining power in the civilian economy. Even those who were trained for one of the many military jobs that have civilian equivalents may still face obstacles in locating the right civilian position, understanding the commonalities and communicating them to a prospective employer, or starting anywhere but at the bottom of the ladder after leaving service. A tank crewman might be a superb heavy equipment operator but does the low-aptitude veteran or the prospective employer know that? In civilian terminology a cargo specialist is a forklift operator; a food service specialist is a butcher, baker, or sous chef; a tactical wire operations specialist is a telephone installer; and a motor transport operator is a dump truck driver, but it is doubtful whether veterans with such experiences will be regarded highly in the civilian economy or start outside the military at anything but the going entry-level wage rate. Even an advertisement in the *Navy Times* for the Army National Guard was captioned: "Don't Waste Your Military Experience." The ad went on to say: "It took you years of study and hard work to master a military skill. So, why throw that experience away?"¹⁸

Readjustment to the world outside the military can be difficult, and probably more so for marginal individuals. Aside from the barriers of military-specific training and "soft skill" assignments that were not particularly career enhancing, it may be difficult for such an individual to function well without a drill sergeant barking out orders or instructions and without the constant and total care of the military establishment. On the outside, the disadvantaged veteran must learn to fend for himself in a less predictable and egalitarian environment. The "protection" afforded by the military, of which Yarmolinsky spoke, disappears with the uniform.

Public perceptions of the military may exacerbate the transition. Bernard Beck argues that as long as military service has an honored position in society or is seen as a legitimate activity, it should serve as an effective rehabilitator. But, he adds, "when military honor is devalued in ordinary society the process of re-entry into civilian life for veterans becomes problematic as the process of 'rehabilitation' of former welfare recipients."¹⁹ The reputation of the military suffered because of Vietnam. Though the images may have mellowed with the peacetime volunteer military, Beck also cautions that "during protracted periods of peace we

find that characteristics normally attributed to welfare recipients are attributed to career soldiers: lack of ambition, suspect motivation, dependency, idleness, irresponsibility and even personal immorality.”²⁰

If the military is seen as an employer of last resort, taking in society's marginals, then such perceptions may affect later employability. Civilian employers may hold unwarranted biases and avoid hiring the “vet.” Or, if they hire, it's probably going to be at the bottom of the ladder, because most employers promote from within.²¹ While some applicants may hold “bad paper”—that is, dishonorable discharges or suspect general discharges—in many cases employers simply may not be aware of the positive aspects of service such as relevant job attitudes and behaviors, even if specific job skills do not transfer.

Just as many of these men were transformed from raw recruits into efficient soldiers upon entry into service, they might benefit from an extensive and intense transition program as and after they exit. Such men not only need adequate time to learn a civilian trade and how and where to find a job but they need to know how to function and take care of life's numerous details on their own. Furthermore, such transition training and information might be more effective if it is aimed at both former members and prospective employers.

If it's tough on the outside, perhaps the men from Project 100,000 and the Misnorming would have been better off remaining in the military. Military service may not be a bad place to be but a bad place to leave. Remember, many of the men said they never wanted to leave. Unfortunately, the low-aptitude soldier may be caught between the proverbial “rock and a hard place.” Civilian life following military service does not find the veteran in an advantageous position vis-a-vis his nonveteran peer. But remaining on board may not be an option because low cognitive ability is associated with marginal job performance and difficulty in advancing up the career ladder, even in low-skill jobs. When marginal men do find their way into the military, on average they tend to be one-termers exiled from service on the basis of performance ratings and an up-or-out policy. Though low-aptitude personnel may be aptly suited to low-complexity entry-level positions, the military with its emphasis on youth and vitality cannot afford to leave them there at the expense of incoming recruits.

The reluctance of the military to accept these men, let alone keep them, appears to be steadfast. Higher quality recruits are easier to train and retrain and show greater promise for moving up the ranks and leading others as noncommissioned officers. Defense downsizing as a result of the thawing of Cold War tensions further removes the likelihood of

increasing, and may even reduce, reliance on low-aptitude youth. Is there room for marginal manpower in today's military? Though there are no latrines to be dug and few papers to be sorted, there remain *some* "less taxing" jobs to which lower-aptitude recruits could be assigned. But as one analyst put it: "Certainly, there is no room for Project 100,000 in a military that is 50 percent or even 25 percent smaller than at present. Project 10,000 or Project 50,000 however, may be another story."²²

However, as an historian of social welfare stated: "We know much more in the 1980s than we knew in the 1960s about what does not work. We have a lot to learn about what *does* work."²³ Nevertheless, in a constantly changing international scene, the possibility of a Defense manpower buildup always exists, and low-aptitude men may be asked again to join in the military mission.

Though the military is no panacea or sure quick fix for all, it can help some of those of lesser ability. No one seems to want people of low-aptitude, at least for long. Regardless of this sentiment, problems such as educational and environmental deficiencies exist and will continue to exist until we are truly committed to finding solutions. Defense, like the rest of society, has a vested interest in righting the skills deficits that face this nation's youth. The military by itself cannot transform disadvantage into advantage, but perhaps it can make a dent. And if the military is to be part of the solution then the effort must be all out and supported both internally and externally. Who knows, if McNamara had been able to institute his original concept of STEP, the results of Project 100,000 might have been different. But to expect a miracle or to engage in a minimal or even less than a sustained intense remediation endeavor is unwise, for the results presented here suggest that though marginal men made military history twice upon a time, they didn't necessarily live happily ever after.

Notes

CHAPTER 1

1. Whether or not Project 100,000 had purely social goals is open to debate. Chapter 2 provides a detailed discussion of this issue.

2. W. S. Sellman, Director for Accession Policy, Office of the Assistant Secretary of Defense (Force Management and Personnel), personal communication, July 1989.

3. Such advocacy can be found in the recent writing and presentations of social science researcher Thomas G. Sticht. See, for example, Thomas G. Sticht, "Military Testing and Public Policy: Selected Studies of Lower-Aptitude Personnel," in *Test Policy in Defense: Lessons from the Military for Education, Training, and Employment*, Bernard Gifford and Linda Wing (Eds.) (Boston: Kluwer Academic Press, forthcoming); and Thomas G. Sticht, William B. Armstrong, Daniel T. Hickey, and John S. Caylor, *Cast-off Youth: Policy and Training Methods from the Military Experience* (New York: Praeger, 1987). For another position on the use of the military to achieve social welfare goals, see Hugh B. Price, "A Quasi-Military Service Corps for Out-of-School Youth: A Discussion Paper," Rockefeller Foundation, June 1989, presented at a roundtable discussion at the Joint Center for Political Studies, Washington, DC.

4. See John A. Davis and Paul B. Sheatsley, *Americans View the Military: A 1984 Update*, NORC Report No. 132 (Chicago: National Opinion Research Center, December 1985).

5. See, for example, Paul Taylor, "Conservatives Embrace War on Poverty," *Washington Post*, 19 May 1990, p. A-7.

6. In July, August, and September of 1989, representatives from the Office of the Assistant Secretary of Defense (Force Management and Personnel) met with and provided written answers to questions from James P. Pinkerton, Deputy Assistant to the President for Policy Planning, and his staff regarding the utilization of low-aptitude personnel.

7. See, for example, Educational Testing Service, *The Subtle Danger: Reflections on the Literacy Abilities of America's Young Adults* (Princeton, NJ: Educational Testing Service, January 1987); Hudson Institute, *Workforce 2000: Work and Workers for the 21st Century* (Washington, DC: U.S. Government Printing Office, June 1987); Aerospace Education Foundation, *America's Next Crisis: The Shortfall in Technical Manpower* (Arlington, VA: Aerospace Education Foundation, September 1989); National Commission on Excellence in Education, *A Nation at Risk: Imperative for Educational Reform* (Washington, DC: U.S. Department of Education, April 1983).

8. Educational Testing Service, *The Subtle Danger*.

9. U.S. Department of Labor, U.S. Department of Education, and U.S. Department of Commerce, *Building a Quality Workforce* (Washington, DC: U.S. Government Printing Office, July 1988).

10. Because literacy is a complex and multidimensional concept, a detailed discussion of literacy and just what U.S. youth can or cannot do is beyond the scope of this book. For a recent and good discussion of American youth literacy and international comparisons, see Irwin S. Kirsch and Ann Jungeblut, *Literacy: Profiles of America's Young Adults* (Princeton, NJ: Educational Testing Service, 1986); and Archie E. Lapointe, Nancy A. Mead, and Gary W. Phillips, *A World of Differences: An International Assessment of Mathematics and Science* (Princeton, NJ: Educational Testing Service, 1988).

11. Craig T. Norback (Ed.), *The Human Resources Yearbook* (Englewood Cliffs, NJ: Prentice Hall, 1990), p. 8.24.

12. For a discussion of educational problems and proposed solutions for minorities, see Quality Education for Minorities Project, *Education That Works: An Action Plan for the Education of Minorities* (Cambridge: Massachusetts Institute of Technology, January 1990).

13. William T. Grant Foundation, *The Forgotten Half: Pathways to Success for America's Youth and Young Families* (Washington, DC: Youth and America's Future, William T. Grant Commission on Work, Family and Citizenship, 1988), p. 31.

14. Mark J. Eitelberg, "War or Welfare: The Military as an Agent of Social Change," paper presented at the Biennial Conference of the Inter-University Seminar on Armed Forces and Society, Baltimore, October 1989.

15. John A. Salmond, *The Civilian Conservation Corps, 1933-1942: A New Deal Case Study* (Durham, NC: Duke University Press, 1967), p. 85.

16. For more details on the CCC, see Charles C. Moskos, *A Call to Civic Service* (New York: The Free Press, 1988); Salmond, *The Civilian Conservation Corps*; and Michael W. Sherraden, "Military Participation in a Youth Employment Program: The Civilian Conservation Corps," *Armed Forces and Society*, 7 (Winter 1981), pp. 227-245.

17. Salmond, *The Civilian Conservation Corps*, p. 4.

18. President's Task Force on Manpower Conservation, *One-Third of a Nation: A Report on Young Men Found Unqualified for Military Service* (Washington, DC: Author, January 1964).

19. William T. Grant Foundation, *The Forgotten Half*.

20. Some postsecondary schools such as community and junior colleges take part in the DoD Student Testing Program as well. This program has been in existence, in one form or another, since 1966. For more details, see Department of Defense, *Military Career Guide: 1988-1989* (Chicago: U.S. Military Entrance Processing Command, 1987); Department of Defense, *Counselor's Manual for the Armed Ser-*

vices *Vocational Aptitude Battery*, (Chicago: U.S. Military Entrance Processing Command, July 1984); and Gerald P. Fisher, William A. Mehrens, James Van Hanegan, and Brian K. Waters, *Evaluation of the Armed Services Vocational Aptitude Battery (ASVAB) Use by High School Counselors and Students*, FR-PRD-85-3 (Alexandria, VA: Human Resources Research Organization, March 1985).

21. For details on screening for service and its impact on the manpower pool beyond the excerpts presented here, see Mark J. Eitelberg, Janice H. Laurence, Brian K. Waters, with Linda S. Perelman, *Screening for Service: Aptitude and Education Criteria for Military Entry* (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Installations, and Logistics], September 1984).

22. Department of Defense, *Selected Manpower Statistics: Fiscal Year 1987* (Washington, DC: Directorate for Information, Operations, and Reports, 1988).

23. These numbers are presented from the point of view of selection requirements, not from the perspective of whether the force size is or is not adequate for our national and international commitments.

24. There is a litany of such reports, including John P. Campbell (Ed.), *Validation Analysis for New Predictors*, ARI Selection and Classification Technical Area Working Group Paper 86-09 (Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences, 1987); John P. Campbell (Ed.), *Improving the Selection, Classification, and Utilization of Army Enlisted Personnel: Annual Report, 1985 Fiscal Year*, ARI Technical Report 746 (Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences, June 1986); Department of Defense, *Joint-Service Efforts to Link Enlistment Standards to Job Performance: Recruit Quality and Military Readiness*, Report the House Committee on Appropriations (Washington, DC: Office of the Assistant Secretary of Defense [Force Management and Personnel], January 1989); Department of Defense, *Joint-Service Efforts to Link Enlistment Standards to Job Performance*, Report to the House Committee on Appropriations (Washington, DC: Office of the Assistant Secretary of Defense [Force Management and Personnel], December 1987); Department of Defense, *Aptitude Testing of Recruits* (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Reserve Affairs, and Logistics], 1980); Bert F. Green, Hilda Wing, and Alexandra K. Wigdor (Eds.), *Linking Military Enlistment Standards to Job Performance—Report of a Workshop* (Washington, DC: National Academy Press, 1988); Brian K. Waters, Janice H. Laurence, and Wayne J. Camara, *Personnel Enlistment and Classification Procedures in the U.S. Military* (Washington, DC: National Academy Press, 1987); and Alexandra K. Wigdor and Bert F. Green (Eds.), *Assessing the Performance of Enlisted Personnel: Evaluation of a Joint-Service Research Project* (Washington, DC: National Academy Press, 1986).

25. For more details on past and present enlistment policy regarding education credentials, see Janice H. Laurence, *Military Enlistment Policy and Education Credentials: Evaluation and Improvement*, FR-PRD-87-33 (Alexandria, VA: Human Resources Research Organization, September 1987).

26. See Mark J. Eitelberg, *Manpower for Military Occupations* (Washington, DC: Office of the Assistant Secretary of Defense [Force Management and Personnel], April 1988), p. 4.

27. Staff, Personnel Research Section, "The Army General Classification Test," *Psychological Bulletin*, 42 (10) (1945), 760-768.

28. This population was considered a good approximation to the national population of men of military age, because this was the peak strength period of World War II when deferments were at an all-time low.

29. DoD Directive 1145.1, *Qualitative Distribution of Military Manpower*, defines the official boundaries for AFQT categories. In that directive, Category IV is not broken into subcategories. However, such subcategories are commonly used in nonofficial reports on personnel quality and in many analyses of performance by aptitude so as to discern whether performance variance exists within this aptitude category.

30. For a description of the WAIS and the meaning of intelligence test scores, see Joseph D. Matarazzo, *Wechsler's Measurement and Appraisal of Adult Intelligence*, 5th Edition (New York: Oxford University Press, 1972). The loose equating between the WAIS and the AFQT is based upon an unpublished correlation of .8 between the two tests and a tabular display of AFQT categories and corresponding IQ scores as obtained through files provided by the Department of Defense, Office of the Assistant Secretary of Defense (Force Management and Personnel).

31. In addition to verbal and mathematics content, earlier versions of the AFQT have included items related to spatial relationships and knowledge of tool functions.

32. While all four Services use the same AFQT composite, they are free to combine other subtests for supplemental selection and job classification purposes as they see fit from a technical and policy perspective. Further, it should be noted that while AFQT scores are expressed in terms of percentiles, except for those used by the Air Force, other ASVAB composites are expressed in alternative metrics. The Army and Marine Corps use a standard score scale with a mean of 100 and a standard deviation of 20. The Navy sums subtest scores that it standardizes to a mean of 50 and a standard deviation of 10. For more details see Waters et al., *Personnel Enlistment and Classification*.

33. See R. Darrell Bock and Robert J. Mislevy, *Data Quality Analysis of the Armed Services Vocational Aptitude Battery* (Chicago: National Opinion Research Center, August 1981); Defense Advisory Committee on Military Personnel Testing, *The DoD High School Testing Program*, report submitted to the Deputy Assistant Secretary of Defense for Military Personnel and Force Management (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Reserve Affairs, and Logistics], January 1983); and Lauress L. Wise, "The Validity of Test Scores for Selecting and Classifying Enlisted Recruits" in Gifford and Wing, *Test Policy in Defense*. The ASVAB is continually scrutinized by psychometricians, both internal to Defense and under outside independent review by the Defense Advisory Committee.

34. Jay E. Uhlaner and Daniel J. Bolonovich, *Development of the Armed Forces Qualification Test and Predecessor Army Screening Tests*, PRS Report 976 (Washington, DC: Personnel Research Section, Department of the Army, November 1952), p. 31.

35. Department of the Army, *Marginal Man and Military Service: A Review* (Washington, DC: Author, 1965), p. 12.

36. See Peter F. Ramsberger, Janice H. Laurence, and D. H. Harris, *A Comparison of Early Career Experiences of Military and Civilian Youth*, FR-PRD-89-03 (Alexandria, VA: Human Resources Research Organization, January 1989).

37. Eitelberg, *Manpower for Military Occupations*, p. 99.

38. Mark J. Eitelberg, "Marginal Man and the Military: Past, Present, and Prospects," in *The Post-Service Effects of Military Experience on Low-Aptitude*

Recruits, symposium at the Annual Convention of the American Psychological Association, Boston, August 1990, p. 20.

39. Peter Applebome, "As Armed Forces Cut Back, Some Lose a Way Up in Life," *New York Times*, 7 May 1990, p. A-1, D-12.

40. *Ibid.*, p. A-1.

41. Eitelberg, *Manpower for Military Occupations*.

42. Martin Binkin, *Military Technology and Defense Manpower* (Washington, DC: Brookings Institution, 1986), p. 69.

43. Martin Binkin, "High Technology and the Soldier: Implications for C3I," paper presented at the 43rd International Convention and Exposition, Armed Forces Communications and Electronics Association, 21 June 1989.

44. Richard B. Cheney as quoted in David C. Morrison, "Fall In, Citizens!" *National Journal*, 22 April 1989, p. 989.

45. James E. Driskell and B. Olmstead, "Psychology and the Military: Research Applications and Trends," *American Psychologist*, 44 (1) (1989), pp. 43-54.

46. William Matthews, "Skipper Questions Navy's Battleship Commitment," *Navy Times*, 9 October 1989, pp. 3, 16. Other factors were mentioned as potential contributors besides poor quality enlisted personnel, including poor quality officers and insufficient training.

47. See Department of Defense, *A Comparison of Current Army and Marine Corps Recruit Quality Requirements*, report to House and Senate Committees on Appropriations (Washington, DC: Office of the Assistant Secretary of Defense [Force Management and Personnel], May 1986).

48. Bill Turque and Douglas Waller, "Warriors Without War," *Newsweek*, 19 March 1990, p. 20.

49. *Ibid.*, p. 20.

50. *Ibid.*, p. 18.

51. Statement of William E. Beusse, Air Force veteran, *Readjustment of Project 100,000 Veterans*, Hearing before the Subcommittee on Oversight and Investigations, of the House Committee on Veterans' Affairs, House of Representatives, 101st Congress, 28 February 1990, Serial No. 101-38, (Washington, DC: U.S. Government Printing Office, 1990), p. 8.

52. Bernard M. Baruch, speech on presenting his papers to Princeton University, 11 May 1964.

CHAPTER 2

1. John F. Kennedy, "Statement by the President Establishing the Task Force on Manpower Conservation," 30 September 1963. (As reported in *One-Third of a Nation: A Report on Young Men Found Unqualified for Military Service* [Washington, DC: President's Task Force on Manpower Conservation, January 1964]).

2. Section 641, DoD appropriation for FY 1966, Senate Appropriations Subcommittee, cited in Department of Defense, *Reference Materials, Department of Defense Study of the Draft* (Washington, DC: Assistant Secretary of Defense, July 1966).

3. Eli Ginzberg, James K. Anderson, Sol W. Ginsburg, and John L. Herma, *The Lost Divisions* (New York: Columbia University Press, 1959), p. 166.

4. Background paper on the STEP program.

5. Edward A. Rundquist, *The Marginal Personnel Problem* (San Diego: U.S. Navy Training Laboratory, U.S. Naval Personnel Research Laboratory, March 1967), p. 4.

6. Charles Murray, *Losing Ground: American Social Policy 1950-1980* (New York: Basic Books, 1984), p. 83.

7. DODDS are schools located outside the United States for the purpose of educating dependents of military and civilian employees stationed overseas.

8. Robert S. McNamara, speech before the Veterans of Foreign Wars, 23 August 1966.

9. Roughly 9 percent of those who entered under the program were medical admissions, with 85 percent of this group failing to qualify because they were over or under the weight standards in effect at the time. However, it is the lowering of aptitude standards that is the real legacy of McNamara's efforts to help the disadvantaged. The medical remedial program received relatively little attention at the time, and has largely been forgotten since. Once these individuals were fattened up or trimmed down, they blended in with their fellow Servicemembers and were in no way remarkable. The focus of this chapter, therefore, is the men of lower aptitude who served during this period.

10. Stanley Karnow, *Vietnam, A History: The First Complete Accounting of Vietnam at War* (New York: The Viking Press, 1983).

11. Harold Wool, *The Military Specialist: Skilled Manpower for the Armed Forces* (Baltimore: Johns Hopkins University Press, 1968).

12. Theories concerning the true motivation behind Project 100,000 abound. Some have even hypothesized that drafting disaffected minority youth who otherwise may not have qualified for service was a means of eliminating or cutting down on the number of disturbances in the intercity neighborhoods where such youth often resided.

13. Unpublished keynote address at the Seminar on Special Training, Testing and Screening-out Procedures, U.S. Naval Academy, Annapolis, MD, 15-17 September 1966.

14. Personal communication, April 1989.

15. The term "New Standards Men" was the official label given those entering under reduced standards. This was done at the request of Thomas Morris, then Assistant Secretary of Defense (Manpower), in January 1967. Up until that time they were called "Below the Line Accessions."

16. For a more thorough discussion of accession quotas, see Gus C. Lee and Geoffrey Y. Parker, *Ending the Draft-The Story of the All Volunteer Force*, HumRRO Final Report 77-1 (Alexandria, VA: Human Resources Research Organization, April 1977).

17. If the individual had a complete record, this information was to be forwarded to the appropriate AFEES. Non-high school graduates who had not taken the AQB were to be told to report to the AFEES for further examination.

18. Memorandum to Charles A. Ullman (OASD, Manpower) regarding "High Scoring I-Ys" from I. M. Greenberg, 14 April 1967.

19. Memorandum for the Deputy Under Secretary of the Army (Manpower) regarding Accession Goals for Project 100,000, from Thomas D. Morris, 13 January 1967.

20. Unpublished report at the Seminar on Special Training, Testing and Screening-Out Procedures, U.S. Naval Academy, Annapolis, MD, 15-16 September 1966.

21. As we shall see, this was easier said than done. In fact, in the early stages of the effort, those entering under reduced standards were given special service numbers beginning with 67.

22. Jane G. Heisey, Barbara Means, and Janice H. Laurence, *Military Performance of Low Aptitude Recruits: Project 100,000 and the ASVAB Misnorming*, Final Report FR-PRD-85-2 (Alexandria, VA: Human Resources Research Organization, 1985), p. 11.

23. Certain research efforts were not funded, however, including one presented to Mr. Morris by Senator Henry M. Jackson (D-WA). The Senator forwarded a concept paper prepared by one of his constituents, Dr. Nathan Gross, Assistant Professor of Education at the University of Washington. Dr. Gross was curriculum consultant for the Rainier School for the mentally retarded, which was investigating ways to train and place residents in income-producing jobs (i.e., busboys, domestics, dishwashers). He felt that their experience would be of value to DoD in light of Project 100,000. Mr. Morris disagreed, pointing out that no special training was to be provided for the men accessed under the program. In a letter to Senator Jackson dated 10 March 1967, Mr. Morris went on to say: "We do not believe . . . that the educational development of retardates will be of direct application to servicemen accepted under the new standards. It may be that the principal contribution of this proposal will be to educational programs of a more severely impaired group than appears in the Armed Forces."

24. It seems that the chief difference between APT and STEP was the maximum amount of time an individual was allowed to remain in training—six weeks versus six months. APT could, in fact, be called McNamara's baby STEP.

25. Note that these figures include NSM and others entering each Service's literacy program. No data dealt with NSM alone.

26. Though those who entered with remedial physical problems accounted for only 10 percent or 33,677 of the Project 100,000 men, it is notable that the Navy had the largest share of them—38 percent. The corresponding percentages for the other Services were: Army—28 percent, Marine Corps—11 percent, and Air Force—24 percent.

27. Unless otherwise noted, the data presented here were included in an unpublished 1972 final edition of "Project One Hundred Thousand: Characteristics and Performance of 'New Standards' Men," prepared by the Office of the Secretary of Defense, Assistant Secretary of Defense (Manpower and Reserve Affairs).

28. Navy and Air Force, which had no ground combat units.

29. Peter F. Ramsberger and Barbara Means, *Military Performance of Low-Aptitude Recruits: A Reexamination of Data from Project 100,000 and the ASVAB Misnorming Period*, Final Report FR-PRD-87-31 (Alexandria, VA: Human Resources Research Organization, 1987).

30. Ibid.

31. See, for example, Thomas G. Sticht, William B. Armstrong, Daniel T. Hickey, and John S. Caylor, *Cast-off Youth: Policy and Training Methods from the Military Experience* (New York: Praeger, 1987). After reviewing skill training performance data, Sticht and colleagues state: "Statistically, then, it is more appropriate to characterize this group on the basis of its success, rather than its failure, as critics have done" (p. 49).

32. Michael P. Wagner, Robert P. Dirmeyer, Barbara Means, and Margery K. Davidson, *Analysis of Aptitude, Training, and Job Performance Measures*, MGA-81-1080(2)-WRO-0440 (Monterey, CA: McFann-Gray and Associates, February 1982).

33. Marvin E. Grunzke, Nancy Guinn, and Glenn F. Stauffer, *Comparative Performance of Low-Ability Airmen*, AFHRL-TR-70-4 (Lackland Air Force Base, TX: Personnel Research Division, Air Force Human Resources Laboratory, January 1970).
34. S. James Goffard, Morris Showel, and Hilton M. Bialek, *A Study of Category IV Personnel in Basic Training*, HumRRO Technical Report 66-2 (Alexandria, VA: Human Resources Research Organization, April 1966).
35. John A. Plag, Walter L. Wilkins, and James D. Phelan, *Strategies for Predicting the Adjustment of AFQT Category IV Navy and Marine Corps Personnel*, Report Number 68-28 (San Diego: Navy Medical Neuropsychiatric Research Unit, October 1968).
36. Nicholas H. Van Matre, Robert J. Harrigan, and Alvin G. Archibald, *A Comparative Evaluation of the Group IV Personnel Assigned to the USS Catskill*, Research Report SRR 69-7 (San Diego: Naval Personnel Research Activity, August 1968); Nicholas H. Van Matre and Robert J. Harrigan, *A Comparative Evaluation of Group IV Personnel Assigned to the USS Catskill: Follow-up Performance Evaluation*, Research Report SRR 71-1 (San Diego: Naval Personnel and Training Research Laboratory, July 1970).
37. Charles H. Cory, *A Comparison of the Job Performance and Attitude of Category IVs and I-III in 16 Navy Ratings*, NPRDC TR-76-35 (San Diego: Navy Personnel Research and Development Center, May 1976).
38. Eugene A. Hooprich, *A Second Investigation of the Feasibility of Navy Commisaryman Training for Group IV Personnel*, Research Report SRR 68-23 (San Diego: Naval Personnel Research Activity, May 1968); Lloyd S. Standlee and John C. Saylor, *Feasibility of Steelworker Class "A" School Training for Group IV Personnel*, Research Report SRR 69-8 (San Diego: Naval Personnel Research Activity, August 1968); Lloyd S. Standlee and John C. Saylor, *Second Study of Equipment Operator Class "A" School Training for Group IV Personnel*, Research Report SRR 69-19 (San Diego: Naval Personnel Research Activity, January 1969).
39. Lloyd S. Standlee and John C. Saylor, *Feasibility of Storekeeper Class "A" School Training for Group IV Personnel*, Research Report SRR 68-25 (San Diego: Naval Personnel Research Activity, June 1968).
40. Robert Vineberg, Thomas G. Sticht, Elaine N. Taylor, and John S. Caylor, *Effects of Aptitude (AFQT), Job Experience, and Literacy on Job Performance: Summary of HumRRO Work Units UTILITY and REALISTIC*, HumRRO Technical Report 71-1 (Alexandria, VA: Human Resources Research Organization, February 1971).
41. In a recent reanalysis of these data, Schmidt and colleagues showed little evidence for the "convergence hypothesis." That is, although the performance levels of both high- and low-aptitude personnel increased as a function of job experience, the differences between them remained even at 5 years of job tenure, with higher aptitude individuals performing more successfully. See Frank L. Schmidt, John E. Hunter, Alice N. Outerbridge, and Stephen Goff, "Joint Relation of Experience and Ability with Job Performance: Test of Three Hypotheses," *Journal of Applied Psychology*, 73 (February 1988), pp. 46-57.
42. Vineberg et al., *Effects of Aptitude (AFQT)*, p. 8.
43. Joseph C. Steadman, Chester R. Bilinski, James D. Coady, and John H. Steinemann, *The Development and Evaluation of Training Methods for Group IV Personnel: II. Training Group IV Personnel in the Operation of the Electronic*

Multimeter AN/PSM-4, Research Report 69-22 (San Diego: Naval Personnel Research Activity, March 1969).

44. Nicholas H. Van Matre, *An Instrument Reading Training Course for Group IV Personnel*, Research Report SRR 71-26 (San Diego: Naval Personnel and Training Research Laboratory, May 1971).

45. Wayne S. Sellman, *Effectiveness of Experimental Training Materials for Low Ability Airmen*, AFHRL-TR-70-16 (Lowry Air Force Base, CO: Technical Training Division, Air Force Human Resources Laboratory, June 1970).

46. Eugene A. Hooprich and E. W. Matlock, *Printed-circuit-board Soldering Training for Group IV Personnel*, Research Report SRR 71-11 (San Diego: Naval Personnel and Training Research Laboratory, October 1970).

47. Kenneth Weingarten, Jacklyn E. Hungerland, and Mark F. Brennan, *Development and Implementation of a Quality-Assured Peer-Instructional Model*, HumRRO Technical Report 69-19 (Alexandria, VA: Human Resources Research Organization, November 1972).

48. Wayne L. Fox, John E. Taylor, and John S. Caylor, *Aptitude Level and the Acquisition of Skills and Knowledges in a Variety of Military Training Tasks*, HumRRO Technical Report 69-6 (Alexandria VA: Human Resources Research Organization, May 1969).

49. *Ibid.*, p. vi.

50. President Johnson's 1967 Manpower Report to Congress.

51. Project 100,000 did continue officially through McNamara's successors, Clark Clifford and Melvin Laird.

52. John Burlage, "CNO Wants to Lead Way in National Education," *Navy Times*, 25 February 1985, p. A-4.

53. This is not to suggest that those who set up the data base were guilty of deliberate deception. Rather, McNamara's comments suggest that he was "banking" on the tracking system providing positive evidence regarding Project 100,000.

54. Rundquist, *The Marginal Personnel Problem*, p. 15.

55. "McNamara's One Hundred Thousand" obviously lacks alliterative appeal.

56. A nickname used by recruiters to distinguish between regular New Standards Men and those in AFQT percentiles 10-15.

CHAPTER 3

1. This task force is known as the Gates Commission for former Secretary of Defense Thomas S. Gates, who headed the panel.

2. For a comprehensive discussion on the draft and the transition to the All-Volunteer Force, see Gus C. Lee and Geoffrey Y. Parker, *Ending the Draft—The Story of the All Volunteer Force*, HumRRO Final Report 77-1 (Alexandria, VA: Human Resources Research Organization, April 1977).

3. Martin Anderson, "The All-Volunteer Force Decision, History, and Prospects," in *The All Volunteer Force After a Decade: Retrospect and Prospect*, William Bowman, Roger Little, and G. Thomas Sicilia (Eds.) (Elmsford, NY: Pergamon-Brassey's, 1986), p. 11.

4. Lee and Geoffrey Y. Parker, *Ending the Draft*.

5. See, for example, Mark J. Eitelberg, "Test-scoring errors may have saved all-volunteer force," *Navy Times*, 12 September 1988, p. 25.

6. Alternatively, A. J. Martin, former Director for Accession Policy, Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics) suggests that the Misnorming might have been superfluous to recruiting. That is, had the Misnorming not occurred, DoD's response to quantity and quality shortfalls might have been to implement pay raises and enlistment incentives sooner and to demand recruiting efficiency and effectiveness in an all-volunteer environment. In a sense, he suggests that we'll never know whether recruiting would have made it—at least on the surface—without the Misnorming. Recruiting got better following the Misnorming because of better offerings, a change in environment including the time elapsed since Vietnam and the Reagan administration's support for the military, and perhaps capitalization on latent recruiter capabilities. Personal communication, February 1991.

7. A military colloquialism for first sergeant or the senior enlisted person in a unit who reports directly to the commander.

8. Technically speaking, the ASVAB was "miscalibrated" rather than "misnormed." However, the latter term was coined shortly after the discovery of this error in the scoring of the enlistment screening test and is widely used in military manpower writings and discussions.

9. Mark J. Eitelberg, *Manpower for Military Occupations* (Washington, DC: Office of the Assistant Secretary of Defense [Force Management and Personnel], April 1988), p. 173.

10. These are the subcategories of the "nonoccupational" area, which are not stated in order of importance or frequency. In fact, "trainee" would be expected to be the most dense of the subcategories.

11. Eitelberg, *Manpower for Military Occupations*, pp. 172–182.

12. The term "Potentially Ineligible" first appeared in I. M. Greenberg, *Mental Standards for Enlistment: Performance of Army Personnel Related to AFQT/ASVAB Scores*, MGA-0180-WRO-02 (Monterey, CA: McFann-Gray and Associates, December 1980).

13. See Mark J. Eitelberg, Janice H. Laurence, Brian K. Waters, with Linda S. Perelman, *Screening for Service: Aptitude and Education Criteria for Military Entry* (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Installations, and Logistics], September 1984), for an analysis of the relative selectivity of the AFQT and composite minimums, pp. 117–119.

14. See Janice H. Laurence, Jane G. Heisey, Barbara Means, and Brian K. Waters, *Demographic Comparison of Low Aptitude Military and Nonmilitary Youth*, FR-PRD-85-1 (Alexandria, VA: Human Resources Research Organization, February 1985).

15. Because enlistment policies would have limited the number of Category IVs who were technically eligible, these men are treated as "Potentially Ineligibles" throughout the remainder of the book.

16. Currently the Director for Accession Policy within the Office of the Assistant Secretary of Defense (Force Management and Personnel).

17. W. S. Sellman, "Implications of a New ASVAB Reference Population on Military Manpower," in *Implications of a New ASVAB Reference Population on Military Manpower: Symposium Proceedings, Division of Military Psychology and Division of Evaluation and Measurement, Annual Convention of the American Psychological Association*, Technical Memorandum 85-2 (Washington, DC: Directorate for Accession Policy, Office of the Secretary of Defense, September 1985), pp. 1–2.

18. See Lee and Parker, *Ending the Draft*, Chapter IX.

19. The AQB was administered to applicants to all Services except the Air Force, which used the Airman Qualifying Examination or AQE.

20. ASVAB Working Group, *History of the Armed Services Vocational Aptitude Battery (ASVAB): 1974-1980* (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Reserve Affairs, and Logistics], March 1980), p. 6. This document is an invaluable source of information detailing the implementation of the Servicewide ASVAB.

21. See William H. Sims, *An Analysis of the Normalization and Verification of the Armed Services Vocational Aptitude Battery (ASVAB) Forms 6 and 7: Volume 1—Main Test*, CNS 1115 (Arlington, VA: Center for Naval Analyses, April 1978).

22. This study was later published as William H. Sims and Ann R. Truss, *A Reexamination of the Normalization of the Armed Services Vocational Aptitude Battery (ASVAB) Forms 6, 7, 6E, and 7E*, CNS 1152 (Arlington, VA: Center for Naval Analyses, April 1980).

23. Milton H. Maier and Ann R. Truss, *Original Scaling of ASVAB Forms 5/6/7: What Went Wrong*, CRC 457 (Alexandria VA: Center for Naval Analyses, March 1983).

24. Technically speaking, the old and new measures were not equated but calibrated. Equating would necessitate maintaining exact correspondence in subtests, item characteristics, and population characteristics. Rather, the new AFQT and other ASVAB composites were statistically tied to the aptitude distribution obtained on a similar but not identical test and population.

25. This is a fairly common practice in testing and is used to retard blind guesses from effectively improving scores. The formula for the ASVAB was number answered correctly minus one-third the number answered incorrectly.

26. According to Maier and Truss, *Original Scaling of ASVAB*, the test booklets used for calibrating the new ASVAB forms were of inferior quality and thus this test was easily distinguishable from the operational test.

27. Other factors include the failure to counterbalance the order of testing, which might produce fatigue effects on the second test, and changes in test content and population over the years. More details can be found in Maier and Truss, *Original Scaling of ASVAB*, and Richard M. Jaeger, Robert L. Linn, and Melvin R. Novick, "Review and Analysis of Score Calibration for the Armed Services Vocational Aptitude Battery," in *Aptitude Testing of Recruits*, a Report to the House Committee on Armed Services (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Reserve Affairs, and Logistics], July 1980).

28. This is the charter of the Assistant Secretary as indicated by DoD Directive 5124.1.

29. David W. Ream, Office, Assistant General Counsel (Manpower, Health, and Public Affairs), Memorandum for Director of Accession Policy, OASD(MRA&L), Subject: Authority of the Secretary of Defense for Establishing Mental Standards for Enlistment. (Washington, DC: Department of Defense, Office of General Counsel, 26 June 1980).

30. For a reference to Army Assistant Secretary Peacock's recall of his statement, see *Congressional Record—Senate*, Volume 126, Part 14 (96th Congress, 2nd Session, July 1, 1980) p. 18080.

31. Richard Halloran, "Army Drops Test Scores That Categorize Soldiers' Mental Ability," *New York Times*, 9 August 1980, p. 5.

32. Ad Hoc Study Group, *An Examination of the Use of the Armed Forces Qualification Test (AFQT) As a Screen and a Measure of Quality: A Report to the Secretary of the Army and the Chief of Staff* (Washington, DC: Department of the Army, 30 July 1980). The report was dubbed the Lister report after the primary study group member, Sara E. Lister, General Counsel.

33. Maier and Truss, *Original Scaling of ASVAB*, p. vii.

34. Three independent samples—of male applicants, recruits, and high school juniors and seniors—were used for calibration purposes, and one reference test other than the operational test was used as the anchor. The tests used for calibration purposes were administered in counterbalanced order. Even newer ASVAB forms have since been calibrated using a state-of-the-art methodology based on item response theory which renders test equating sample independent.

35. Details on this contemporary normative base for the ASVAB can be found in Department of Defense, *Profile of American Youth: 1980 Nationwide Administration of the Armed Services Vocational Aptitude Battery* (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Reserve Affairs, and Logistics], March 1982).

36. See Anita R. Lancaster, "Effects of the Norms on the Distribution of Youth Aptitude," Janice H. Laurence, "A New Look at Military Contracts and Accessions," Brian K. Waters and Janice H. Laurence, "Implications for Longitudinal Analyses of Military Entry Test Data," and Mark J. Eitelberg, "Discussant Remarks," in *Implications of a New ASVAB Reference Population*, pp. 8, 18, 21, 33, 34.

37. Annual reports on the progress of the JPM project are submitted to the House Committee on Appropriations. See Department of Defense, *Joint-Service Efforts to Link Military Enlistment Standards to Job Performance*. Report to the House Committee on Appropriations (Washington, DC: Office of the Assistant Secretary of Defense [Force Management and Personnel]), January 1990. There are six preceding Annual Reports beginning in 1982. See also Bert F. Green, Jr. and Hilda Wing (Eds.), *Analysis of Job Performance Measurement Data: Report of a Workshop* (Washington, DC: National Academy Press, 1988); Alexandra K. Wigdor and Bert F. Green, Jr. (Eds.), *Assessing the Performance of Enlisted Personnel: Evaluation of a Joint-Service Research Project* (Washington, DC: National Academy Press, 1986); Committee on the Performance of Military Personnel, *Job Performance Measurement in the Military: Report of a Workshop* (Washington, DC: National Academy Press, 1984).

38. The Pygmalion effect was coined by psychologists Robert Rosenthal and Lenore Jacobson as a result of a study showing that teachers' expectations of students' performance proved to be a self-fulfilling prophecy. The teachers' expectancy effect has been replicated by other researchers as well. For more details on the original studies, see Robert Rosenthal and Lenore Jacobson, *Pygmalion in the Classroom* (New York: Holt, Rinehart & Winston, 1968).

39. Maier and Truss, *Original Scaling of ASVAB*. The significance of this raising of standards was corroborated by Frances C. Grafton, Alternative Selection and Evaluation Techniques Team Leader for the Army Research Institute. Ms. Grafton indicated that this figure represented over 20 percent of the skills training courses.

40. A. J. Martin, personal communication, February 1991.

41. Charlie Schill, personal communication, August 1989.

42. Clinton L. Anderson, Senior Consultant with the American Association of State Colleges and Universities and the American Council on Education, personal communication, March 1991. Dr. Anderson was an Army officer with the Education

Directorate of the Adjutant General's Office at the time of the Misnorming. He attributes part of the surge of interest in basic skills to the Army's Chief of Staff, General Bernard Rogers, who noticed the reading problems in 1978 and advocated more attention be paid to basic skills training.

43. Jack Anderson, "GI Education: Military Effort Rates Grade F," *Washington Post*, 25 November 1981, p. B-13.

44. Art Buchwald, "Getting Tanked Over at the Officers' Club," *Washington Post*, 27 March 1980, p. D-1.

45. In an address before a conference held at the U.S. Naval Academy in 1983 on "The All-Volunteer Force After a Decade," General Thurman said that one of the goals set for the Army was "an Army of excellence in how it is manned." See Maxwell R. Thurman, "Sustaining the All-Volunteer Force 1983-1992: The Second Decade," in *The All Volunteer Force After a Decade: Retrospect and Prospect*, Bowman, Little, and Sicilia, p. 267.

46. *Ibid.*, p. 285.

47. I. M. Greenberg, the former director of Project 100,000, went on to become the Deputy Assistant Secretary of Defense (Program Management) and upon his retirement from the federal government joined a consulting firm.

48. Greenberg, *Mental Standards for Enlistment*.

49. For a more in-depth discussion of the limitations of the SQT and other surrogate performance measures, see Michael P. Wagner, Robert P. Dirmeyer, Barbara Means, and Margery K. Davidson, *Analysis of Aptitude, Training, and Job Performance Measures*, MGA-81-1080(2)-WRO-0440 (Monterey, CA: McFann-Gray and Associates, February 1982).

50. Greenberg, *Mental Standards for Enlistment*, p. 64. Greenberg considered only those failing to meet the AFQT minimums as Potentially Ineligibles. He did not factor in those who might have met the AFQT requirements but were below the minimums on the supplemental ASVAB composites.

51. *Ibid.*, p. 64.

52. Catherine M. Hiatt and William H. Sims, *Armed Services Vocational Aptitude Battery (ASVAB) and Job Performance*, CNA 80-3121 (Alexandria, VA: Center for Naval Analyses, November 1980).

53. Department of Defense, *Implementation of New Armed Services Vocational Aptitude Battery and Actions to Improve the Enlistment Standards Process*, a Report to the House and Senate Committees on Armed Services (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Reserve Affairs, and Logistics], 31 December 1980).

54. Joyce L. Shields and Frances C. Grafton, *A Natural Experiment: Analysis of an Almost Unselected Army Population* (Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences, 1983).

55. Peter F. Ramsberger and Barbara Means, *Military Performance of Low-Aptitude Recruits: A Reexamination of Data From Project 100,000 and the ASVAB Misnorming Period*, FR-PRD-87-31 (Alexandria, VA: Human Resources Research Organization, September 1987).

56. *Ibid.*, p. 2.

57. Eitelberg, *Manpower for Military Occupations*, p. 31.

CHAPTER 4

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2. Robert S. McNamara, address to the National Association of Educational Broadcasters, 7 November 1967.
3. J. Eric Fredland and Roger D. Little, "Job Satisfaction Determinants: Differences Between Servicemen and Civilians," *Journal of Political and Military Sociology*, 11 (Fall 1983), pp. 265-280.
4. Sally Cook Lopreato and Dudley L. Poston, Jr., "Differences in Earnings and Earnings Ability Between Black Veterans and Nonveterans in the United States," *Social Science Quarterly*, 57 (March 1977), pp. 750-766.
5. Dennis N. Detray, "Veteran Status as a Screening Device," *American Economic Review*, 72 (March 1982), pp. 133-142.
6. J. Eric Fredland and Roger D. Little, "Socioeconomic Status of World War II Veterans by Race: An Empirical Test of the Bridging Hypothesis," *Social Science Quarterly*, 66 (September 1985), pp. 533-551.
7. Harley L. Browning, Sally Cook Lopreato, and Dudley L. Poston, "Income and Veteran's Status: Variations Among Mexican Americans, Blacks, and Anglos," *American Sociological Review*, 38 (February 1973), pp. 74-85.
8. Lopreato and Poston, "Differences in Earnings"; Dudley L. Poston, "The Influence of Military Service on the Civilian Earnings Patterns of Blacks, Mexican Americans, and Anglos," *Journal of Political and Military Sociology*, 7 (Spring 1979), pp. 71-88; Roger D. Little and J. Erik Fredland, "Veteran Status, Earnings, and Race: Some Long Term Results," *Armed Forces and Society*, 5 (Winter 1979), pp. 244-260.
9. Wayne J. Villemez and J. D. Kassarda, "Veteran Status and Socioeconomic Attainment," *Armed Forces and Society*, 2 (Spring 1976), pp. 407-420; Melanie Martindale and Dudley L. Poston, "Variations in Veteran/Nonveteran Earnings Patterns Among World War II, Korean and Vietnam War Cohorts," *Armed Forces and Society*, 5 (Winter 1979), pp. 219-243; Saul Schwartz, "The Relative Earnings of Vietnam and Korean-era Veterans," *Industrial and Labor Relations Review*, 39 (July 1986), pp. 564-572.
10. Mark C. Berger and Barry T. Hirsch, "The Civilian Earnings Experience of Vietnam-era Veterans," *Journal of Human Resources*, 18 (Fall 1983), pp. 455-479, and "Veteran Status as a Screening Device During the Vietnam Era," *Social Science Quarterly*, 66 (March 1984), pp. 79-84.
11. Detray, "Veteran Status as a Screening Device."
12. Andrew I. Kohen and Patricia M. Shields, "Reaping the Spoils of Defeat: Labor Market Experiences of Vietnam-era Veterans," in *Strangers at Home: Vietnam Veterans Since the War* (New York: Praeger, 1980).
13. David B. Kassing, "Military Experience as a Determinant of Veterans Earnings," *Studies Prepared for President's Commission on All Volunteer Armed Force, Volume 2* (Washington, DC: U. S. Government Printing Office, November 1970), p. III-8-19.
14. Richard Strayer and Lewis Ellenhorn, "Vietnam Veterans: A Study Exploring Adjustment Patterns and Attitudes," *Journal of Social Issues*, 31 (4) (1975), pp. 81-93.
15. Amiram Vinokur, Robert D. Caplan, and Cindy C. Williams, "Effects of Recent and Past Stress on Mental Health: Coping with Unemployment Among

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16. Jeffrey A. Kaylor, Daniel W. King, and Lynda A. King, "Psychological Effects of Military Service in Vietnam: A Meta-analysis," *Psychological Bulletin*, 102 (2) (1987), pp. 257-271.

17. James E. Bordieri and David E. Drehmer, "Vietnam Veterans: Fighting the Employment War," *Journal of Applied Social Psychology*, 14 (1984), pp. 341-347.

18. Allen S. Blinder, "Caution: War May be Dangerous to Your Earnings," *Business Week*, 2 October 1989, p. 20; Joshua D. Angrist, *Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administration Records* (Working Paper No. 251) (Princeton, NJ: Princeton University, Industrial Relations Section, April 1989); Joshua D. Angrist and A. B. Krueger, *Why Do World War II Veterans Earn More Than Nonveterans?* (Working Paper No. 2991) (Cambridge, MA: National Bureau of Economic Research, May 1989).

19. Phillips Cutright, "The Civilian Earnings of White and Black Draftees and Nonveterans," *American Sociological Review*, 39 (June 1974), pp. 89-103.

20. Thomas N. Daymont and Paul J. Andriasani, *The Economic Returns to Military Service*, USAREC SR 86-11 (Ft. Sheridan, IL: U.S. Army Recruiting Command, November 1986).

21. Stephen L. Mangum and David E. Ball, "The Transferability of Military-Provided Occupational Training in the Post-Draft Era," *Industrial and Labor Relations Review*, 42 (2) (January 1989), pp. 230-245.

22. Edward M. Schreiber, "Enduring Effects of Military Service? Opinion Differences Between U.S. Veterans and Nonveterans," *Social Forces*, 57 (1979), pp. 825-839.

23. C. L. Davis and R. D. Taylor, "The Effects of Military Service on Political Participation: The Case of Long-Term Soldiers," *Journal of Political and Military Sociology*, 15 (Spring 1987), pp. 89-103.

24. James A. Barber, Jr., "The Social Effects of Military Service," in *The Military and American Society*, Stephen E. Ambrose and James A. Barber (Eds.) (New York: Free Press, 1972); Melvin J. Kimmel, "The Army Experience: A Good Place to Start?" paper presented at the Annual Convention of the American Psychological Society, Atlanta, August 1988.

25. William E. Beusse, *The Impact of Military Service on Low-Aptitude Men*, AFHRL-TR-74-75. Alexandria, VA: Air Force Human Resources Laboratory (Manpower Development Branch), 1974.

26. A review of the available data in the Beusse report (*ibid.*) suggests sampling bias as well. The survey completion rate for whites was higher in the veteran group. Also, it is unclear from the report whether the statistical analyses were performed using the Project 100,000-weighted sample sizes, thus grossly inflating the power of the significance tests.

27. Thomas G. Sticht, William B. Armstrong, Daniel T. Hickey, and John S. Caylor, *Cast-off Youth: Policy and Training Methods from the Military Experience* (New York: Praeger, 1987), p. 191.

28. David Evans, "Losing Battle," *The New Republic*, 728 (3) (30 June 1986), pp. 10-13.

29. Beusse, *The Impact of Military Service on Low-Aptitude Men*.

30. The National Opinion Research Center, under subcontract to the Human Resources Research Organization, conducted the interviews and prepared the resulting data tapes.

31. Janice H. Laurence, Jane G. Heisey, Barbara Means, and Brian K. Waters, *Demographic Comparison of Low Aptitude Military and Nonmilitary Youth*, FR-PRD-85-1 (Alexandria, VA: Human Resources Research Organization, 1985).

32. Center for Human Resource Research, *National Longitudinal Surveys Handbook* (Columbus: Ohio State University, 1986).

33. Department of Defense, *Profile of American Youth: 1980 Nationwide Administration of the Armed Services Vocational Aptitude Battery* (Washington, DC: Office of the Assistant Secretary of Defense [Manpower, Reserve Affairs, and Logistics], 1982).

34. See Robert V. Krejcie and Darryle W. Morgan, "Determining Sample Size for Research Activities," *Educational and Psychological Measurement*, 30 (1970), pp. 607-610. In the case of the PKs, this source would call for approximately 400 respondents. Having fewer cases reduces reliability estimates somewhat.

35. Vaughn R. A. Call, Luther B. Otto, and Kenneth I. Spinner, *Tracking Respondents: A Multi-method Approach* (Lexington, MA: Lexington Books, 1982).

36. It should be noted that because the nonveterans were tracked every two years and tend to be more geographically stable than veterans, the location bias may have less impact on the NLS results. To the extent that this was true, the effect would be to provide an advantage to the veterans because fewer of those who have truly fallen through the cracks would be included in the samples of former military members.

37. Congressional Budget Office, *Social Representation in the U.S. Military* (Washington, DC: Author, October 1989).

38. Money Income of Households, Families, and Persons in the United States (1979-1986), *Current Population Reports, Consumer Income, Series P-60*, various numbers (Washington, DC: U.S. Department of Commerce, Bureau of Census).

39. For a complete explication of the various methodological procedures and statistical results, see Janice H. Laurence, Peter F. Ramsberger, and Monica A. Gribben, *Effects of Military Experience on the Post-Service Lives of Low-Aptitude Recruits: Project 100,000 and the ASVAB Misnorming*, HumRRO Final Report FR-PRD-89-29 (Alexandria, VA: Human Resources Research Organization, December 1989).

CHAPTER 5

1. Though some of the men from Project 100,000 were still on active duty, they are referred to as veterans, at times, throughout the remainder of this chapter. This was done to avoid cumbersome language.

2. This figure was obtained from the Bureau of Labor Statistics. Not included in the base or among the unemployed are "discouraged" workers—those who were out of work but have not looked for a job in the last four weeks.

3. Data obtained from the Bureau of Labor Statistics, unpublished tables from the March 1986 *Current Population Survey*.

4. A detailed presentation, including the Ns resulting from the application of the second set of weights, can be seen in Janice H. Laurence, Peter F. Ramsberger, and Monica A. Gribben, *Effects of Military Experience on the Post-Service Lives of*

Low-Aptitude Recruits: Project 100,000 and the ASVAB Misnorming, HumRRO Final Report FR-PRD-89-29 (Alexandria, VA: Human Resources Research Organization, December 1989).

5. It should be noted that the respondent may have started the job in question longer than five years ago. The question was, of all jobs held in the past five years, which one was held for the longest time. The year in which the respondent started the job was subtracted from the year it was left to determine tenure. If the respondent still had this particular job, starting year was subtracted from the year in which he was surveyed.

6. The assumption was that someone who has a job must be earning some form of income from that job (volunteer work is covered under a separate category). The fact that none was reported was taken to indicate that the respondent didn't know or didn't care to respond, or that his answer was miscoded by the interviewer. When farm/business income was included in the analysis in addition to wages, and these individuals provided a figure for the former, they were included.

7. This question was asked each year the NLS was conducted. The data discussed here refer to the the last course the respondent mentioned.

8. The 42 percent participation rate reported here is similar to recent data provided by the Defense Manpower Data Center, which indicated that about 40 percent of the NSM had taken advantage of the GI Bill as of 1980. Sticht, on the other hand, reports that "68 percent of the New Standards Men were using the GI Bill as of 1974" (pp. 62-63). This, in fact, is a figure he presented to Robert McNamara in an interview included in his book. However, his tabular presentation of this result would seem to indicate that the actual figure is 68 percent of the four percent who were students at that time were taking advantage of this benefit. This would mean that only 2.7 percent of the total were using their educational benefits at this time. See Thomas G. Sticht, William B. Armstrong, Daniel T. Hickey, and John S. Taylor, *Cast-off Youth: Policy and Training Methods from the Military Experience*, (New York: Praeger, 1987).

9. G. Rothbart, L. Sloan, and K. Joyce, *Education and Work Careers: Men in the Vietnam Generation*. Vol. 2, *Legacies of Vietnam* (Washington, DC: U.S. Government Printing Office, 1981).

10. Department of Defense, *Description of Officers and Enlisted Personnel in the U.S. Armed Forces: 1985*. Vol. 1, *Supplementary Tabulations from the 1985 Survey of Officer and Enlisted Personnel* (Arlington, VA: Defense Manpower Data Center, December 1986).

11. This figure was obtained from the Bureau of Labor Statistics. Not included in the base or among the unemployed are "discouraged" workers—those who are out of work but have not looked for work in the last four weeks.

12. Data obtained from the Bureau of Labor Statistics, unpublished tables from the March 1986, *Current Population Survey*.

13. Because this age gap between the PI and NLS samples was relatively minor, analyses were not restricted to overlapping years as was done in the case of the PK comparisons with their nonveteran control group. Thus, a potential bias against the nonveteran group should be kept in mind.

14. As an example, respondents were asked: "During 1985 did you (or your wife) receive any money from interest on savings or bonds?"

15. Educational benefits in this case referred to use of GI Bill, VEAP, or other scholarships, fellowships, or grants. The question referred to either respondent or wife receiving such benefits, so the 8.5 percent may be an overestimation.

16. Vaughn R. A. Call and J. D. Teachman, *Military Service and Disruption of the Family Life Course*, paper presented at the Annual Convention of the American Psychological Association, Atlanta, August 1988.

CHAPTER 6

1. This is a quote from a letter written to Janice H. Laurence by Stephen J. Smith, dated March 5, 1990, and used with permission. Laurence wishes to express to Steve her sincere admiration and appreciation for his insightful thoughts and elegantly expressed words on the subject of Project 100,000 and military service.

2. Janice H. Laurence, Peter F. Ramsberger, and Monica A. Gribben, *Effects of Military Experience on the Post-Service Lives of Low-Aptitude Recruits: Project 100,000 and the ASVAB Misnorming*, HumRRO Final Report FR-PRD-89-29 (Alexandria, VA: Human Resources Research Organization, December 1989).

3. Opening statement of Chairman Lane Evans, *Readjustment of Project 100,000 Veterans*, Hearing before the Subcommittee on Oversight and Investigations, of the Committee on Veterans' Affairs, House of Representatives, 101st Congress, 28 February 1990, Serial No. 101-38 (Washington, DC: U.S. Government Printing Office, 1990).

4. Bill McAllister, "Disadvantaged Veterans Gain Little in Military, Study Finds," *Washington Post*, 24 February 1980, pp. A-1, A-10.

5. Robert Greene, "Did the Services Renege?" *Savannah Morning News*, 1 March 1990, p. 5C.

6. Peter Passell, "Make War, Not Money," *New York Times*, 23 May 1990, p. D-2.

7. This is a quote from a letter written to Janice Laurence by Richard W. Hinkley, Executive Director, South Shore Community Action Council, Inc., Plymouth, MA, dated March 20, 1990, and used with permission.

8. Smith letter.

9. Lawrence M. Baskir and William A. Strauss, *Chance and Circumstance: The Draft, the War and the Vietnam Generation* (New York: Vintage Books, 1978), p. 131.

10. Statement of David A. Brigham, Director, Veterans' Assistance Service, Veterans' Benefits Administration, *Readjustment of Project 100,000 Veterans*, Hearing before the Subcommittee on Oversight and Investigations, of the Committee on Veterans' Affairs, House of Representatives, 101st Congress, 28 February 1990, Serial No. 101-38 (Washington, DC: U.S. Government Printing Office, 1990), p. 63.

11. *Ibid*, p. 64.

12. Statement of Ronald W. Drach, National Employment Director, Disabled American Veterans, *Readjustment of Project 100,000 Veterans*, Hearing before the Subcommittee on Oversight and Investigations, of the Committee on Veterans' Affairs, House of Representatives, 101st Congress, 28 February 1990, Serial No. 101-38 (Washington, DC: U.S. Government Printing Office, 1990), p. 65.

13. Adam Yarmolinsky, *The Military Establishment* (New York: Harper & Row, 1971), p. 325.

14. Ibid., p. 328.

15. For the sake of fairness and accuracy, it should be noted that the statement that "most" accepted the conclusions is based upon many letters and phone and personal conversations following the release of the Laurence et al. technical report, *Effects of Military Service on the Post-Service Lives of Low-Aptitude Recruits*. It is entirely possible that those who did not contact the authors of this report were among the "nonacceptors."

16. This is a quote from a letter written to Janice Laurence by Thomas G. Sticht, dated March 10, 1990 and used with permission.

17. National Advisory Commission on Selective Service, *Who Serves When Not All Serve?* (Washington, DC: U.S. Government Printing Office, February 1967).

18. The Times Journal Co., "The New Military. The Special Pride of America's All Volunteer Force." *Navy Times*, 12 September 1988, p. S2.

19. Bernard Beck, "The Military as a Welfare Institution," in *Public Opinion and the Military Establishment*, Charles C. Moskos, Jr. (Ed.) (Beverly Hills, CA: Sage Publications, 1971), p. 144.

20. Ibid., p. 142.

21. This was a finding resulting from a recent survey of employers conducted for the Army Research Institute. For more details, see Connie J. Schroyer, Linda A. Hansen, Pasquale A. Lerro, and Michael E. Benedict, *Analysis of the 1990 ARI Survey of Employers*, Working Paper MPPRG 90-05 (Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences, September 1990).

22. Mark J. Eitelberg, "Marginal Man and the Military: Past, Present, and Prospects," in *The Post-Service Effects of Military Experience on Low-Aptitude Recruits*, symposium at the Annual Convention of the American Psychological Association, Boston, August 1990.

23. Charles Murray, *Losing Ground: American Social Policy 1950-1980* (New York: Basic Books, 1984), p. 232.

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