MILITARY PERSONNEL: STATUS AND STRATEGY[1]

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Background

The United States is a mighty nation—a superpower with global responsibilities. It is the land of liberty, committed to democratic ideals and a free market economy. Our government is "of the people, by the people, and for the people." And, indeed, it is our people—our human resources that are explored here.

Garnering manpower to support the national security strategy of the United States is complex, to say the least. Although the military is the focus of this treatise (with but brief mention of other sectors of society), certainly our national security depends not only on dedicated military manpower, but also on adequate strength and proficiency within the public and private sectors. Our military manpower strategy depends upon planning for, developing, maintaining, and sharing scarce human resources. In addition to consideration of military and economic needs, manpower procurement is constrained by social and political forces. Gentle career counseling by educators and parents is preferred over heavy-handed channeling by the State. And, since 1973, conscription has not been a manpower procurement tool. Rather than pressing people into service, we entice them with economic incentives.

With its 1.4 million active duty forces, 1.3 million Reserve and National Guard members (with Selected Reservists comprising roughly two-thirds of this total), and approximately 669,000 civilian employees, the Defense Department is our nation's largest employer. Furthermore, these "employees" serve in over 6,000 locations and 146 countries with just short of 475,000 personnel overseas or afloat. Their missions include warfighting, peacekeeping, humanitarian assistance, evacuation, and homeland security. Recruiting, training, assigning, employing, deploying, and retaining the Defense workforce is no trivial matter.

In the days of the Colonial Militia, a man took up his own musket, provided his own ammunition, clothing, and food to join his fellow militiamen for a short campaign. Manpower costs were negligible, experience wasn't a big issue, and youth and vitality were the prime indicators of quality (see Matloff, 1973). In 1940, the induction "bar" was raised to demonstrate the ability to comprehend simple orders given in the English language (Eitelberg, Laurence, & Waters, 1984). A lot has changed over the decades and centuries. It has been a long time since the troops brought the arms they bear. Minimal English comprehension is also an inadequate quality screen.

In today's U.S. military, it costs Uncle Sam plenty to recruit, outfit, train, and maintain personnel for the large and sophisticated standing "army". The Armed Services enlist, equip, and educate recruits for full-time duty not just in the modern infantry and lethal combat specialties, but also in hundreds of diverse, technologically sophisticated support and service occupations. To adequately defend the nation today takes a lot more than the brawn of a few hundred reluctant soldiers for a few weeks or troops who comprehend orders in English for a two-year hitch. It takes the brains and motivation of well over a million enlisted soldiers, sailors, marines, and airmen—some for a career and each, it is expected, for an initial enlistment term, that runs, on average, about four years. Qualification standards are more stringent and

[1] The views expressed in this article are those of the author and do not reflect the official policy or position of the National Defense University, the Department of Defense, or the U.S. Government.

complex in the modern military owing to the increasing sophistication of our weapon systems and missions.

Each year, the military services enlist about 200,000 new recruits and commission over 16,000 officers annually for active duty. Although most of the almost 900,000 Selected Reservists have had active duty experience, well over 50,000 come in "fresh" from civilian life (Department of Defense, 2001). Military selection has become a formidable enterprise, to say the least. Prospective recruits are evaluated in terms of a host of criteria including citizenship, age, physical fitness, and moral character. In addition, there are two, more salient screens. Cognitive aptitude is assessed via the Armed Services Vocational Aptitude Battery (ASVAB). And finally, the schooling that a prospective recruit has acquired is considered in the enlistment decision—with high school graduates preferred over non-graduates because of their better retention odds.

More demanding criteria are set for entry into the officer corps. A primary requirement for commissioning is attainment of a bachelor's degree from an accredited four-year college. This educational requirement is subsidized through competitive scholarships to the selective Service Academies or the Reserve Officer Training Corps (ROTC) program. For those who decide on a career as a military officer after college, deserving graduates may apply to Officer Candidate School or Officer Training School (OCS/OTS). Direct commissions are available for professionals (e.g., health care providers, lawyers, chaplains) with perks such as higher entry paygrade and student loan repayment (Department of Defense, 1999).

Military Occupations

The Military Services do not cull seasoned civilian workers to fill the ranks. Instead, they recruit novices to the world of work and train them to perform the myriad of duties. As of FY 2000, the occupational distribution (Department of Defense, 2001) of the enlisted ranks was as follows:

Table 1. Occupational Distribution of Active Duty Enlisted Force as of FY 2002

DoD Occupational Group	Percent of Enlisted Force
Infantry, Gun Crews, and Seamanship Specialists	16.9
Electronic Equipment Repairers	9.7
Communications and Intelligence Specialists	8.8
Medical and Dental Specialists	6.7
Other Allied Specialists	3.0
Functional Support and Administration	16.1
Electrical/Mechanical Equipment Repairers	19.7
Craftsmen	3.5
Service and Supply Handlers	8.4
Non-Occupational	7.2

About one in six enlisted members could be classified as purely combat job incumbents or in general military skills whereas one in four served in high-tech jobs in electronic equipment repair, communications and intelligence, or as other allied specialists (see Table 1). Even combat jobs have become more technologically complex and relatively less labor intensive over the years—and more manpower has been added behind the combat scenes. Although most military jobs are in the blue-collar category (infantry, guncrews, seamanship; electrical and mechanical equipment repairers; and craftsmen), white-collar positions (electronic equipment repairers; communications and intelligence specialists; medical and dental specialists; other technical and allied specialists; and administration) are almost as plentiful. Table 2 presents snapshots of the occupational distribution of male enlisted personnel over the years. Clearly, the military employs proportionately fewer of its workers in general military skills today compared to the Civil War or even the World War II era. Although

most enlisted military jobs continue to be in the blue-collar category, white-collar technical jobs have swelled.

In addition to the "traditional" combat and seamanship roles, the military enlisted workforce comprises technicians, clerks, administrative associates, mechanics, computer specialists, high-tech equipment operators and repairers, health care specialists, and a host of other "blue collar" employees. The most populous jobs in the military are those in electrical equipment repair, with about one in five of the services' workers engaged in such occupational pursuits as aircraft, automobile, and engine mechanics, ordnance mechanics, line installers or fixing radio, radar, and sonar equipment. Around one out of six military workers are employed in administration as stock and inventory clerks, shipping and receiving clerks, dispatchers, and the like.

Table 2. Percentage Distribution of Male Enlisted Military Personnel by Occupational Category Over Time

Occupational Category	Civil War	WWII	1992	2001
White Collar	.9	25.2	43.9	43.4
Technical[a]	.2	11.6	29.7	29.3
Clerical	.7	13.6	14.2	14.1
Blue Collar	99.1	74.7	56.1	55.2
Craftsmen[b]	.6	25.9	27.8	27.5
Service & Supply	5.3	14.8	9.0	8.8
General Military	93.2	34.0	19.3	18.9

Source for Civil War and WWII: Eitelberg, M.J. (1988).

[a] Includes electronic equipment repairers, communications and intelligence specialists, medical and dental specialists, and other technical and allied specialists. [b] Includes electrical and mechanical equipment repairers and craftsmen.

The Demand for Quality

The demand for skilled specialists has soared. Basic riflemen and combat units remain, but such titles mask the complex demands of modern warriors. Further, supply no longer denotes the repair of guns, wagons, and saddles. The enlisted force is not manning sails, handling ropes, or just standing watch. Present and future computer-based command, control, communications, intelligence, and space technology have resulted in an ever-increasing complexity of military tasks. In contrast to previous eras, today there are more technical jobs—and, specific jobs have become more complex (Binkin, 1986). Though some may argue that sophisticated systems reduce the demands on workers, there is ample evidence that aptitude matters. How one gauges complexity varies, but Binkin argues that time to train, training manual pages, and weapon system parts have increased and thus so have cognitive demands. Further, complexity is inversely related to reliability and directly with time to repair. Thus, higher aptitude recruits are critical to "staffing" the military.

The Revolution in Military Affairs (RMA) with its lethal automated weapons and systems demands intellectual acumen and experience. Asymmetric or unrestricted warfare requires substantial investment in human capital and not just up front but along the way in the spirit of a learning organization (Bray, 2002). The battlefield is everywhere – boundaries are blurred; the front line disappeared and now so has the distinct battlefield. There are no more fair fights. And in this setting, human resources—people and their skills are vital in war. Speaking about Operation Enduring Freedom, here's what a Defense analyst had to say: "The basic infantry skills, foreign language abilities, competence and care in using and maintaining equipment, and physical and mental toughness of American troops contributed to victory every bit as much as did high-technology weaponry" (O'Hanlon, 2002, p. 110).

Future forces will be required to have multiple skills – redundancy and skill depth are

essential (Hawley, 2002). Information technology and digitization flattens the organizational hierarchy and lessens the need for centralization. Jobs may become more complex and the workload may not be reduced, thus increasing aptitude and training requirements. The Army may combine Military Occupational Specialties (MOS) and with that will come increased demands on personnel skills and abilities. This will mean higher aptitude requirements, more up-front training, more experience, and more frequent refresher training. Adaptability is required and demands on followers and leaders will be great. The Special Operations Forces (SOF) model is often invoked as the force of the future. And, it may be glamorous – but it takes a lot of training, motivation, and selectivity to have good SOF.

The force today relies upon quality, maturity, and experience. Figure 1 shows the rise in experience levels from an average of just over five years in the 1970s to over 7 years in the late 1990s and 2000. Greater experience in the officer corps is also evident; rising from almost 10 years to 11 years over the same period (Department of Defense, 2001).

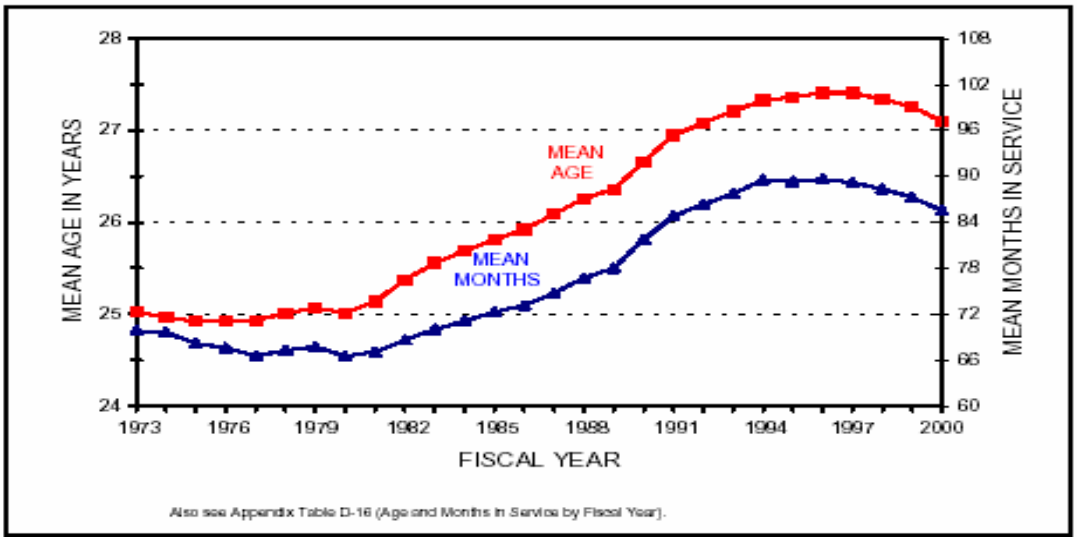


Figure 1. Mean Age and Time in Service Trends for Enlisted Members: FYs 1973-2000

Embedded within the ASVAB is a composite of math and verbal subtests that comprise the Armed Forces Qualification Test (AFQT), which serves as the main aptitude hurdle for enlistment purposes. The AFQT, for example, is reported in terms of percentiles, with scores grouped into categories of percentile ranges. Specifically, there are five categories: I through V, denoting progressively lower standing relative to the normative base of 18-23 year old American youth. The score ranges corresponding to the AFQT categories are as follows:

AFQT Category	**Percentile Score Range**
Category I	93-99
Category II	65-92
Category III	31-64
Category IV	10-30
Category V	1- 9

Those who score within Category V are ineligible for enlistment. Individuals in the marginal Category IV group are enlisted sparingly. In fact, these days, formal minimum standards for enlistment exclude lower scoring Category IVs. The Services actively recruit from among Categories I-III and further aim at the upper half of the aptitude distribution: from the 50th percentile on up. Thus, Category III is subdivided into IIIA—percentiles 50 to 64 and IIIB—percentiles 31 to 49.

In addition to screening on the basis of aptitude and preferring Category I-IIIA recruits, education credentials are also considered. The Services emphasize the enlistment of traditional high school diploma graduates and, depending upon recruiting conditions, avoid signing up non-graduates or even those with alternative secondary school credentials such as General Educational Development (GED) high school equivalency certificates. Aptitude

standards are adjusted on the basis of credential with the latter groups required to score higher on the AFQT.

Whereas diploma status and AFQT percentile might get one in the door and in basic training, qualifying for technical training requires the consideration of more specific aptitudes along with recruits' preferences. That is, entry into job training first entails meeting the minimum cutoff on the ASVAB composite(s) most appropriate for the job in question. To avoid the situation wherein someone is qualified for service but not a particular job, selection standards also typically include the proviso that an applicant must meet at least one or two minimums on composites other than the AFQT (Waters, Laurence & Camara, 1987).

Table 3 presents quality trends since 1973—the first year of the All Volunteer Force. The count of those within the upper half of the aptitude distribution (Categories I-IIIA) has risen, for the most part, from 58 percent in 1973 to 70 percent in 1995 with a slight dip to 66 percent in 2000. These statistics stand in contrast to those of the 18-24 year old youth population with 50 percent scoring within Categories I-IIIA and 79 percent high school graduates or equivalents (Department of Defense, 2001). Although recent quality statistics are not as stellar as in the 1990s, they remain above the minimum quality benchmarks (60 percent I-IIIAs and 90 percent high school diploma graduates) set by Defense in 1991.

Table 3. Active Duty Enlisted Accession Quality Statistics: Selected FYs 1973 -2000 (percent)

Fiscal Year	AFQT Category I-II	IIIA	IIIB	IV	All Categories*	High School Diploma Graduates (HSDG)	High Quality (I-IIIA/HSDG)
1973	34.3	23.6	28.0	12.7	100	65.6	42.8
1975	35.4	26.7	29.6	6.3	100	65.2	44.5
1985	37.0	23.2	31.9	7.5	100	90.0	52.7
1990	39.8	28.2	28.3	3.1	100	93.4	62.4
1995	42.1	28.0	28.8	.7	100	94.5	65.6
2000	37.1	28.7	33.1	.7	100	90.9	57.3

* Rows may not sum to 100 percent due to rounding and the exclusion of unknown AFQT.

Attrition and Retention

Regardless of quality, manpower concerns do not end at the point of enlistment or commissioning. After you lead youth toward the military, you have to get them to stay. Indeed, retention is a strategic manpower issue as well. A GAO study revealed that about half of officers and enlisted personnel surveyed were dissatisfied with the military and planned to leave after their current obligation period (General Accounting Office, 2000).

Each and every entering soldier, sailor, marine, and airman agrees to serve on active duty for a specified number of years (typically from three to six years). Failure to fulfill this obligation is a serious problem for the military services given costly training and other investments (e.g., recruiting and salary costs, veterans benefits expenditures, payment of unemployment compensation). Indeed, attrition is costly. Across all Services, the tally for the first six months alone is about 400 million dollars a year (Cardona, 2002). Furthermore, there are non-monetary costs such as force instability, lowered morale, and reduced readiness (Laurence, 1993).

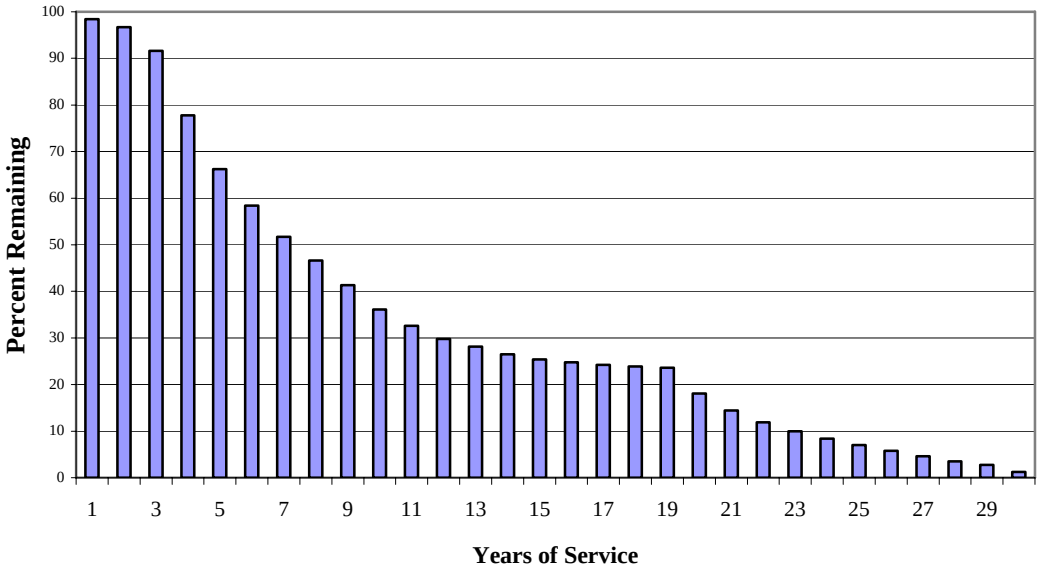
On average, around one-third of new recruits leave service prematurely; and a disproportionate share of attrition occurs early on—during training (General Accounting Office, 1997). Actually, many are lost even before they arrive at boot camp. Attrition from the Delayed Entry Program (DEP))—the "holding tank" for those who sign an enlistment contract but are awaiting actual enlistment—runs between 10 and 20 percent (Warner, Simon, & Payne, 2001).

For those who actually enlist and are "shipped" to boot camp, about a third don't make it through their first three years. First-term attrition occurs for a variety of reasons, most of which (about 75 percent) is categorized as failure to meet minimum behavior or performance criteria (Laurence, Ramsberger, & Arabian, 1996; Laurence, Naughton, & Harris, 1995). This category includes a host of reasons for separation,

including character or behavior disorder, motivational problems, inaptitude, alcoholism, use of drugs, discreditable incidents, misconduct, unsuitability, pattern of disciplinary infractions, fraudulent entry, and so on. Half of the remaining instances of attrition appear to be medically related and the rest are for dependency, hardship or other reasons. Such designators may seem innocuous, however, in some cases, behavioral delinquency may be the real reason for relieving one of duty. Among the most prevalent causes noted on personnel records are problems in the areas of work/duty, training, minor offenses, and mental health (Klein, Hawes-Dawson, & Martin, 1991). Actually, there is considerable flexibility as to exactly what constitutes grounds for discharge, how a discharge is coded, and the ease with which a discharge is given (Foch & King, 1977; General Accounting Office, 1980; 1998). In contrast to "stinginess" in granting early separations under the draft, since 1973, under the All Volunteer Force, a person who seeks to sever the enlistment contract can do so by displaying a pattern of disciplinary infractions tantamount to openly requesting a discharge.

Early attrition is not really a problem among officers, but as Figure 2 shows, retention is an issue after the conclusion of the period of obligation—after the 4-year point. That is, too many junior officers leave as soon as they can; they do not make a career of the military.

Figure 2. FY2000 Officer Continuation Rates



In dealing with attrition, the Services have relied upon limiting the enlistment of those with personal characteristics shown to be at higher risk. As mentioned above, high school diploma graduates are preferred over alternative credential holders and nongraduates because of their better odds of staying through the first enlistment. Aptitude and gender also are related to attrition with higher attrition among lower aptitude persons and women. Psychological factors such as cohesion, commitment, morale, esprit de corps, and a sense of purpose are important but often overlooked. Thus, organizational factors and climate should be considered in the attrition equation. Attrition varies by Service (with the lowest rates in the Air Force), job characteristics, leadership style, unit characteristics and so on. Emphasis must be on both care of the troops as well as the mission from basic training through permanent duty station (Moore, 2002). Women are more likely to "make it" in jobs with a higher and more supportive "female mix." Even high school graduates show decrements in perseverance when poorer job matches are made (Laurence, Naughton, & Harris, 1995). And, the diploma may be losing its predictive power as students

are passed along despite academic and motivational deficits.

Economic factors alone will not solve the recruiting and retention issues. In fact, non-economic factors (pride in service) are more significant than economic factors (satisfaction with pay and benefits) in predicting retention among junior enlisted personnel (Moore, 2002). As the Services open up enlistment to riskier groups—nongraduates and women—it is important to note that turnover is to be expected especially among indecisive youth. Actually, compared to turnover among 18 to 23 year old youth in the civilian employment sector, the military fares well. For example, after one year about 57 percent of young men and 55 percent of young women are reported to leave an employer whereas the figures after a year's time for the military are 22 percent and 21 percent, respectively (Waite & Berryman, 1985). As another point of comparison, at about 50 percent or so, college drop out rates also top enlisted attrition. Certainly, attrition will not be eliminated, but positive, developmental, remedial, organizational and leadership approaches seem in order, especially in light of population, generational, and labor market changes.

The Civilian Labor Market

The military and civilian sectors have a significant number of occupations in common, but the proportion of technical and craft workers is greater in the military. "In particular, the percentage of technical jobs in the military's enlisted ranks is almost twice as large as the proportion of technical jobs in the entire civilian economy" (Binkin, 1986, p. 9). Using job skill requirements as the metric, entry-level military jobs are more complex or demanding of workers than are civilian jobs, (Laurence, 1994). The competition for quality workers is tough. It would behoove both sectors to increase mutual awareness and understanding as well as to cooperate and cultivate partnerships.

Before the U.S. economy started to falter in 2002, labor market projections estimated that some 22.2 million jobs would be added to the inventory over the 2000—2010 period (Berman, 2001). The fastest growing job areas will be those requiring postsecondary schooling—especially work-related training. Table 4 indicates that professional jobs will have the largest growth with service jobs second. Labor statistics further assume that within these areas, transportation and material moving jobs will be the frontrunners. Computer and data processing occupations will boom. Health services also will grow in response to the aging population. Jobs within administrative support are among the slow growth occupations. Slow growth estimates with regard to Government employment are likely to need revision in light of the Department of Homeland Security. These statistics portend competition with military manpower needs as well as signal bad news for post-service career prospects.

Table 4. Employment by Major Occupational Group, 2000 and Projected 2010
(Numbers in thousands of jobs)

Occupational Group	Employment				Change	
	Number		Percent		Number	Percent
	2000	2010	2000	2010		
Total	145,594	167,754	100.0	100.0	22,160	15.2
Management, business, & financial	15,519	17,635	10.7	10.5	2,115	13.6
Professional & related	26,758	33,709	18.4	20.1	6,952	26.0
Service	26,075	31,163	17.9	18.6	5,088	19.5
Sales & related	15,513	17,365	10.7	10.4	1,852	11.9
Office & administrative support	23,882	26,053	16.4	15.5	2,171	9.1
Farming, fishing, & forestry	1,429	1,480	1.0	.9	51	3.6
Construction & extraction	7,451	8,439	5.1	5.0	989	13.3
Installation, maintenance, & repair	5,820	6,482	4.0	3.9	662	11.4
Production	13,060	13,811	9.0	8.2	750	5.7
Transportation & material moving	10,088	11,618	6.9	6.9	1,530	15.2

Source: Hecker, D. E. (2001, November). "Occupational employment projections to 2010." *Monthly Labor Review.*

Table 5 shows actual and projected declines in defense-related employment since 1987. But these were the state of affairs and predictions before September 11, 2001. In the event of increased spending to perhaps 1987 levels, the competition for manpower will be keen. If there is a defense buildup, defense-related employment will rise too. To support defense, the U.S. economy may see increases in jobs in such areas as communications, industrial machinery production and repair, electronics, ship building, medical equipment manufacturing, engineering, transportation, and personnel supply.

Table 5. Defense-Related Occupational Employment by Major Sector, 1987, 1996, and Projected 2002 and 2006 (Numbers in thousands of jobs)

Occupational Group	1987	1996	2002*	2006*
Total, civilian defense-related	4,707.8	2,959.8	2,301.3	2,152.3
Executive, administrative, & managerial	586.9	379.2	304.4	289.9
Professional specialty	646.8	420.6	357.4	354.0
Technicians & related support	297.6	188.9	151.3	144.1
Marketing & sales	191.5	141.0	104.3	93.9
Administrative support (including clerical)	934.5	588.0	454.9	423.0
Service	287.7	200.9	155.0	144.0
Agriculture, forestry, fishing, & related	45.6	27.7	21.9	20.7
Precision production, craft, & repair	851.1	505.5	389.2	361.6
Operators, fabricators, & laborers	880.5	517.0	370.5	328.7

Source: Thomson, A. (1998, July). "Defense-related employment and spending, 1996-2006." *Monthly Labor Review.*

There is some *good* news for military recruiting and retention. The good news is actually bad news—unemployment rates are up. Unemployment rates are positively related to military enlistment (Warner, Simon, & Payne, 2001). That is, when the job market gets tough, the tough get going—into the military. Among 16 through 24 year olds unemployment rate trends are as follows:

Men			Women			Total		
2000	2001	2002 (June)	2000	2001	2002 (June)	2000	2001	2002 (June)
9.7	11.4	12.9	8.9	9.7	11.4	9.3	10.6	12.2

Population Statistics and Propensity

Aside from competition from the civilian sector, the changing characteristics of the youth population will affect manpower trends. The population of the United States stands at 281,421,906 with 9.6 percent comprising the prime military manpower pool of 18-24 year olds. On the surface, there appears to be ample manpower for both the military and civilian workforce. Of course these figures have yet to exclude those not in the labor force, those who do not meet military qualifications, and those with no taste at all for the armed forces. One notable statistic is the increasing proportion of Americans who are overweight. Declining youth physical activity levels put them at risk for obesity and do not bode well for military qualification (Brown, 2001). When one considers the burgeoning diversity along race, ethnic, gender, abilities, national origin, education, experience, attitudes, and the like, manning the military is no easy task. As Table 6 indicates, women represent half of the population and, of late, about 75 percent of young women (ages 25-

34) are labor force participants. This is up from about 50 percent in 1975, 36 percent in 1960 and 34 percent in 1950. This figure is expected to reach around 80 percent or so in the next decade (Fullerton, 1999). Further, they are working more hours and more weeks of the year. Cutting to the chase, women are no longer available in droves to free a man to fight. In addition, although women with children are less likely to be in the labor force (the opposite is true for men), dual-income couples and "working moms" are no longer exceptions but the rule. The labor force participation rates are lower for younger age groups (e.g., ≤ 24) but the gender patterns are comparable.

Table 6. Race/Ethnicity and Education Level of Men and Women ages 25-34 in 1975 and 2000
(Numbers in thousands)

	Women		**Men**	
	1975	**2000**	**1975**	**2000**
Civilian population--aged 25-34-- in thousands	15,316	19,188	14,366	18,310
Race/Ethnicity				
White	86.6	79.0	88.7	81.6
Black	11.3	14.9	9.3	12.4
Hispanic	5.4	14.6	5.1	15.4
Education				
Less than HS	20.2	10.9	17.9	13.0
High School	45.9	28.9	36.9	32.4
Some College	16.3	30.3	19.6	25.9
College Degree	17.6	29.9	25.6	28.7
Civilian labor force --aged 25-34 (participation rate in parenthesis)	8,304 (54.2)	14,787 (77.1)	13,692 (95.3)	17,091 (93.3)

Source: DiNatale, M. & Boraas, S. (2002, March). "The labor force experience of women from 'Generation X.'" *Monthly Labor Review*.

Diversity is a continuing workforce trend. Hispanics are expected to comprise 17 percent of the labor pool within the next 20 years (Birnbaum, Ezring, Howell, Schulz, & Sutton, 2002). As of 2000, 13 percent of the U.S. population was foreign born—with almost half of these foreigners being of Hispanic origin. At least one-third of Hispanic youth (ages 16-24) are not U.S. citizens. Whereas 1 in 17 workers were foreign born in 1960, today that ratio stands at 1 in 8. And these workers are less likely to come from Europe; instead they hail from Latin America and Asia (Mosisa, 2002). Almost 50 percent of the labor force increase over the past five years can be attributed to the foreign born (Mosisa, 2002). It is beyond the scope of this manuscript to fully address the impact of immigration but it remains to be seen as to the degree to which Asian, Mexican and other immigrants absorb American culture and respond to patriotic calls (Jacoby, 2002). There is a belief that today's immigrants will be less likely to assimilate than yesterday's. Issues of potential foreign allegiance arise.

America is 'graying' as well as 'browning.' The aging workforce stems from the populous Baby Boomers—some 76 million of them—who were born from 1946 through 1964. Their future transition out of the workforce may place greater demands on those who follow. Learning curves are steep in the high tech world of work (Dohm, 2000); thus there may be a scramble to attract and groom young workers, those whom the military seeks. To be economically viable, we will have to be restocking our workforce and we will be doing this at a time when the military is gearing up to fight the long war on terrorism.

Whereas the size of the labor force has increased by over 20 million in the past 25 years, the subset of 16-24 year olds has declined in this same period (Fullerton, 1999). Even so, the size of the youth population is not *the* problem. Though somewhat smaller than 1980 levels, the number of youth ages 16-24 is rebounding from the baby bust of the mid to late 1970s. Young workers will be a bit more plentiful in the coming decades and older workers will be more so. It's the middle-aged worker that will be sparse. Table 7 "zeros' in on trends in the size of the 18-year-old cohort relative to accession requirements. This prime cohort is increasing—but so too is the requirement for accessions.

Table 7. Number of 18-Year-Old Male and Female Youth and Military Non-Prior Service Accession Requirements, Selected Years (Actual & Projected) (Numbers in thousands)

Year	18-Year-Old Civilians		Accession Requirements
	Male	Female	
1968	1791	1749	843
1973	2052	2000	406
1975	2159	2097	410
1980	2156	2089	352
1985	1877	1809	297
1990	1849	1755	223
1995	1796	1710	168
2000	2011	1918	195
2005	2081	1975	*191*
2010	2234	2127	???

Source: Department of Defense. (2001). *Population Representation in the Military Services: Fiscal Year 2000* .Washington, DC: Office of the Assistant Secretary of Defense [Force Management Policy].

So who is ready, willing, and able to join and make a career of the profession of arms? Despite the numerous benefits and opportunities to be derived from military service, given that military personnel are trained to actively engage in or support a dangerous enterprise and must sacrifice their personal freedom and a stable home life, this is not an overly popular career calling. The public sector, in general, is less attractive to youth as a work setting but the military is at the bottom of the heap. About three quarters of high school seniors rated the private sector as desirable or acceptable whereas only one quarter of them so rated the military. Other government employment and public service had middle of the road rating (DMR, 2001).

Approximately 20 percent of youth ages 16 - 21 express some interest in joining the military (Warner, Simon, & Payne, 2001). Among high school seniors alone, about 12 percent of young men and 7 percent of young women indicated that they might join the military after graduation. Unfortunately, the perception of the military as an employer of last resort is not without at least a kernel of truth. Propensity is higher among minorities, high school dropouts, lower academic achievers and those from lower socio-economic strata. Interestingly, Hispanic youth express the highest levels of positive propensity but their representation rates do not reach their population proportions. This disparity may be influenced by their educational and citizenship status. Over half (55%) of foreign born Hispanics ages 25 and older are not high school graduates.

Veterans are powerful influencers (Warner, Simon, & Payne, 2001). Propensity is higher among youth whose parents served in the military. Unfortunately there are fewer veterans to inspire youth (DMR, 2001). For example, in 1990 over 40 percent of fathers of 18 year olds were veterans. In 1998, that figure was down to 26 percent; and by 2005, it is expected to go down to 16 percent. Parents, regardless of military experience, express favorable attitudes towards the military but this does not necessarily mean that they favor enlistment for their own children. Propensity is lower among women, high-quality youth, with better-educated parents, and who are planning to go to college.

The changing workforce—in terms of educational aspirations, complexion, and attitudes—will affect military recruiting. The military must work hard to "flip" the qualified subset of the 80 percent of those with a negative propensity towards a military career. The aging of the workforce may be a temporary plus for the military in that youth may find it hard to enter the civilian world of work—at least in the short run. But given the skills gap, the civilian economy is clamoring for skilled workers. The burgeoning ethnic, racial, and gender diversity will have accompanying prospects and problems. Representation trends for women and minorities, such as those shown in Table 8, are likely to be affected.

Table 8. Percentage of NPS Accessions Who Are Female and of Various Racial/Ethnic Categories for Selected Fiscal Years. (percentages for the 18-24 year old civilian population in parenthesis)

	Female	White	Black	Hispanic	Other
1973	5.0	76.7	17.1	5.4	.8
1975	8.9	75.0	17.9	5.3	1.8
1980	13.5 (50.9)	70.3 (78.2)	22.1 (12.6)	4.7 (6.7)	2.9 (2.5)
1985	12.7	74.3	18.6	3.7	3.4
1990	13.2 (51.1)	69.3 (71.9)	20.7 (13.9)	7.0 (10.8)	3.1 (3.4)
1995	17.6	68.3	18.4	9.0	4.3
2000	18.8 (50.2)	62.5 (65.6)	20.0 (14.3)	11.2 (15.0)	6.3 (5.1)

Source: Department of Defense. (2001). *Population Representation in the Military Services: Fiscal Year 2000* .Washington, DC: Office of the Assistant Secretary of Defense [Force Management Policy].

Indeed, the military will have to depend more heavily on women and minorities. Hispanics will soon become the dominant minority group, surpassing Blacks who tend to join and stay in the military at rates well above their population proportions. This is significant in light of the relatively high drop out rates and relatively low representation of Hispanics in the military to date. And these are national demographic trends. Demographics may be more "favorable" in the Midwest and Northeast as compared to the relative military recruiting strongholds of the South and West.

Among the "disturbing" trends with unsettling military manpower implications is increasing college attendance rates. More members of the prime recruitment pool (18-24 year olds) are attending college – a career path that has been at odds with enlisting in the military. College enrollment rates are above 60 percent for 17-21 year old high school graduates (DMR, 2001). Link to this the fact that unemployment rates are inversely related to educational attainment and the news is even more bittersweet. For example, Bureau of Labor Force statistics reveal that 16 through 24 year olds with less than a high school diploma have unemployment rates that range from 6 to 8 percent. The rates for high school graduates, those with some college, and college graduates are 4, 3, and 2 percent, respectively. Thus, with more college bound youth with relatively good employment prospects, the sign are ominous. However, there is some "good" news. And again, the news may be good from the standpoint of military recruiting but not in terms of human capital. The news is that not all of those who enroll in college complete college. In fact, for those who go to 2-year colleges, at least a third drop out (DMR, 2002).

Although immediate college enrollment is up, especially among young women, troubling educational outcomes and lackluster academic performance have not been resolved. For example, the latest available science achievement results from the National Assessment of Educational Progress (NAEP) shows that for the year 2000, 47 percent of 12th graders performed at "below basic" levels, whereas 34 percent scored within the "basic" range and only 18 percent reached proficiency or advanced levels (Department of Education, 2002). Comparable mathematics results were: 35 percent below basic and 15 percent at or above proficient levels. Attitudes are also telling. Attendance, interest, and attention to studies are related to subsequent success. Over the past two decades there has been a declining percentage of 12th graders who think that schoolwork is meaningful or important "down the road." Although high school dropout rates are down for Whites and Blacks compared to rates from the 1970s, the past decade shows no improvement. For Hispanics, dropout rates have climbed. Stubborn academic achievement gaps by race/ethnicity remain with Hispanic and Black students trailing Whites. Black and Hispanic minority members are not as likely to take advanced science and math courses as Whites. Most likely, such disparities are related to disorderly and impoverished learning environments. There is indeed a strong relationship between poverty and achievement with high poverty schools showing lower achievement levels (Department of Education, 2002).

Changing demographics present challenges for our nation's schools and school outcomes should be of concern to the military and civilian labor markets. In the spirit of leaving no child behind and facilitating the school to work transition, employers must take part in shaping the skills, characteristics, and attitudes of its future workforce.

Understanding the New Generation

Generation gaps are nothing new—from "Traditionalists" (born 1900-1945) through "Baby Boomers" (born 1946-1964) and "Generation Xers" (born 1965-1980) to today's Millennials or Net Generation, (born 1981-1999) the generations are different, having been shaped by their unique constellation of factors and experiences (Lancaster & Stillman, 2002). The military, to a great extent, is "stuck" in the traditionalist mode. It is hierarchical and paternalistic with long career pipelines and lock step paths. For the most part, this tact worked for Boomers but comes up short with Xers and Millennials, especially in light of eroding or eroded benefits. Generation X workers want to amass marketable skills rather than time with a single employer; they are building their resumés rather than job tenure. Recent generations tend to value status, workplace flexibility, technology, continuous learning opportunities, and quality of life. They want a more casual and carefree workplace with less hierarchy. Top reasons to join are money for education, job training, patriotism, and pay. The top disincentives are military lifestyle, other career interests, threat to life, and long commitment. For women, family

obligations also rank high on the list. Millennials want meaningful work and want to participate in the decision making process. The notion of a boss is not commonplace.

It may behoove the military to adjust to the new generation and market accordingly—as much as possible. In response to the Millennials, An "Army of One" replaced "Be All That You Can Be" as the marketing theme for the Army. But it will take more than a new slogan to attract and keep today's youth. How much of a "make-over" can the military take? Can the military afford to beef up its benefits? Civilian companies and organizations are supporting continued education, which could undercut the military's recruiting strategy. The private sector has other perks too—flexible benefits in cash and kind.

New generations will be difficult to retain as well as to recruit. Once they become all they can be they will leave. They don't want to pay dues or to patiently wait to pass through the predetermined career pipelines. With the end of the draft, the military ultimately adjusted its recruiting strategy but it has yet to "crack" the retention code. Further, while tangible benefits have been targeted there has been but scant attention paid to the intangibles so as to enhance job satisfaction. Economists have "ruled" and tried to solve all with money but ignored other forms of compensation. Competitive employers must satisfy financial needs, personal needs, provide for the future, and provide a sense of mission or contribute to societal value.

Recruitment vs. Conscription

How should Defense go about meeting the ever- present and entangled manpower challenges sketched above? Is '*the force*' with its current quantity and quality up to fulfilling its many missions at home and in Afghanistan, Iraq, North Korea, and elsewhere around the globe? Will a volunteer, recruited force be viable? Will the lure of economic incentives, training, and education sustain the forces? Will there be enough patriots inspired by the sense of duty and honor to country? What's more, will we be able to fill critical skills such as doctors and nurses, especially if biological and chemical warfare comes to our homeland?

The All-Volunteer Force (AVF) has weathered poor recruiting times before—when the "baby bust" reduced the manpower pool and close to full employment rendered competition fierce. The early years were difficult but the Services eventually learned how to compete, market, advertise, and recruit. Quality statistics peaked in the mid 1990s and in FY 1998, the Army, Navy, and even the Air Force missed their recruiting goals (General Accounting Office, 2000). Of course, the booming "dot com" economy contributed to the Services' woes. With greater recruiting resources (e.g., in terms of recruiters and advertising budgets), less selective entrance requirements (e.g., in terms of aptitude, education levels, and moral character indicators), and a tanking economy, goal achievement has resumed. Still, manpower conditions are unsettling and questions arise. Will recruiting goals and quality objectives continue to be met? Will the relationship between unemployment and enlistment hold? These concerns loom under the prospects of a protracted war against terrorism, a second war against Iraq, and ominous signs from North Korea.

The situation of late has some pondering a return to conscription (cf, Moskos & Glastris, 2001). While Secretary of Defense Rumsfeld is adamantly opposed to a draft (Towell, 2002) and most politicians are silent and presumably in favor of retaining the AVF, Representative Charles B. Rangel (D-NY) is raising the issue. News clips portray Rangel as concerned that Blacks would bear a disproportionate share of the burdens of war. Others express concern over manpower shortages and declining personnel quality. There may be a bit of the old axiom that the grass is greener on the other side surfacing, but nostalgia for the draft aside, there is merit in a discussion of manpower procurement strategy. Among the deep rhetorical questions are: Who should shoulder the responsibility for defending America? How should that responsibility be manifested? On what basis should the burdens and benefits of service to our nation be distributed?

Although the questions flow freely, the answers are elusive. And, before one is struck by the seeming logic and simplicity of the draft, there *are* major drawbacks. Population representation and fairness are central considerations. It would seem that the draft would equalize the burdens of war. But, the draft is designed to "top off" shortages left *after* volunteers have been exhausted. Historically, inductions accounted for only 30 percent of enlisted manpower (Laurence, 2002—this volume). Given that today's manpower requirements pale in comparison to the Vietnam War era, draftees might not even reach 10

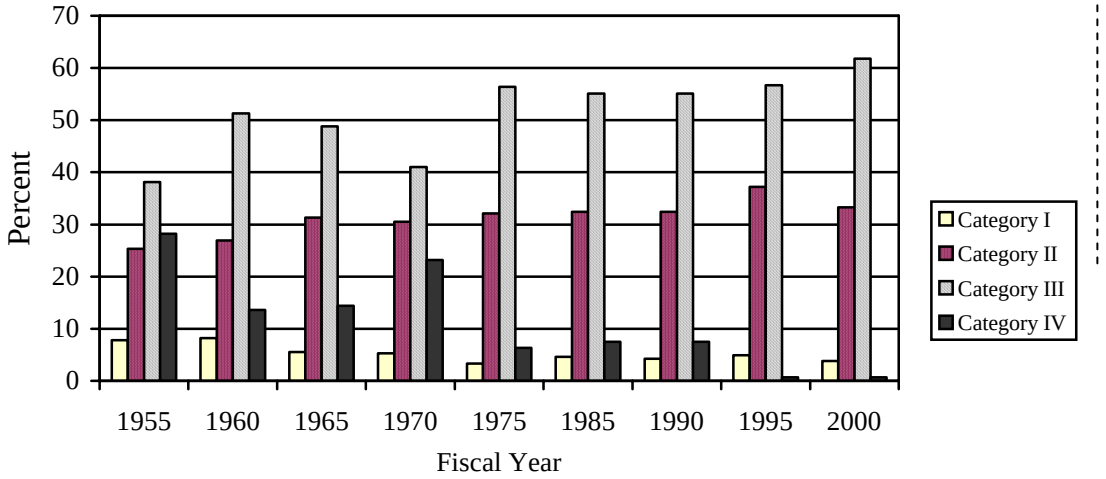
percent. So, equal representation of population subgroups could not be assured. With regard to the issue of fairness, how would Mr. Rangel assess minority representation in times of relative peace and stability? In the past, such minority overrepresentation has been heralded as good news in light of the opportunities and benefits provided by military service (Laurence, 1990; 1991). And it's notable that the dangers associated with duty in the Persian Gulf, Somalia, and Afghanistan pale in comparison to the homicide rates within our nation's borders (Reiss & Roth, 1993).

Try as we might to close the loopholes and eliminate the inequities of a draft, it is likely that "gaming" the system still would be likely. Although "hiding out" in the Reserves or National Guard is far from a "safe" option today, to avoid service, one could intentionally fail to qualify on the grounds of aptitude, moral character, or physical and mental fitness levels. One could move to Canada or claim to be gay. Would the draft require prohibitions against homosexual behavior to be rescinded? And what about women; would they be susceptible to conscription? Could or should we draft for critical requirements only—perhaps medical specialists and other professionals? If so, what would be the career choice and labor market reverberations?

Compensation is also a fairness consideration. Skyrocketing manpower costs are only assuaged by conscription if pay and benefits are cut drastically resulting in decrements to quality of life. One of the arguments against the draft was that it disrupted lives and forced some youth into low paying jobs while their luckier contemporaries got a head start in the labor market. Universal or national service for all youth would be a costly and complicated bureaucratic endeavor, to say the least. Criteria and qualifications for assignment to various agencies (e.g., Homeland Defense, Military, Health Care, and the like) could well be arbitrary and capricious, or at best subjective. Conscription is not a quick fix. Selective Service is in deep standby. It is doubtful at best that there is enough time to orchestrate the draft for the present or near term exigencies.

Figure 3 compares aptitude category statistics pre- and post-draft, showing an advantage for the latter period. The draft would also reduce experience levels and disrupt the personnel pipeline not to mention training implications.

Figure 3. AFQT Category Distribution of Enlisted Accessions: Selected Fiscal Years Pre- and Post-Draft



Note: Data prior to 1975 are for males only and include draftees.

Sources: Mark J. Eitelberg, Janice H. Laurence, & 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) and Department of Defense, *Population Representation in the Military Services: Fiscal Year 2000* (Washington, DC: Office of the Assistant Secretary of Defense [Force Management Policy], 2001).

Indeed, there is evidence that, in contrast to naïve assumptions, quality would be compromised by conscription. Yes, the college "market" and high aptitude youth would be

tapped but so too would nongraduates and those scoring in the Category IV ability range.

Directions to Consider

Even if we avert war with Iraq and ease tensions with North Korea, there are still manpower issues that must be weighed to ensure the continued success of volunteer recruitment. Among the options are to relax personnel quality levels a bit further. Recall that although aptitude and education quality barometers have fallen slightly in recent years, they remain well above critical benchmarks.

Increasing the reliance on women—recruiting more of them and expanding their roles—should be considered. Other changes to the personnel structure deserve attention.

The Reserves are frequently called upon for missions involving peacekeeping, small-scale contingencies, homeland security, and the like. Perhaps we need to have their capabilities (psychological operations, civil affairs, military police, force protection, combat air patrols and border security) increased in the active forces. It may seem counterintuitive but a somewhat larger and engaged force may not be harder to recruit. For a smaller, peacetime force may suffer the perception of organizational irrelevance (Goldich, 1994). A larger active force should not negate the Total Force concept or eliminate Reserve call-ups, but rather, it would enable us to "restock" the Reserves more easily not to mention reduce the strain on Reservists' families and employers.

The Services are adapting their recruiting venues and strategies. In addition to engaging prospects via the internet, the Army and Navy are making inroads into the two-year college market by paying for community college attendance before enlistment. It may be time to consider lateral entry and encourage movement and partnerships between the military and civilian workforce. Furthermore, up-or-out policies may need reconsideration and the rank structure may need a trim. The digital, information age may require fewer at the top.

The military must attend to and tune in to the new generation. It's time to stop lamenting the fact that manpower is no longer just single men marching off to war and begrudging the social compact and a family friendly climate. Attitudes on the part of youth that may not be in sync with military enlistment, present challenges to recruiting today's youth for tomorrow's military. Instead of Baby Boomers resisting the Net Generation, leaders would better promote readiness by attending to human resource issues and thus fostering the volunteer spirit, pride in service, and the perception of military service as a noble profession. The above-mentioned partnerships and networking with the civilian workforce could enhance the image and attractiveness of the military as a career choice.

The military may not need a complete make over but resistance to change must be overcome. It's interesting that, in the case of weapons systems, the latest technology is not seen as a threat to venerable traditions, yet alternative manpower management and training are avoided.

Like weapon systems, personnel need maintenance. Embracing the notion of "people first," and meeting their training, development, and quality of life needs is a wise and strategic manpower investment.

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