

Doubts Mounting About All-Volunteer Force

Congress worried about quality of recruits, particularly in the Army where tests show 46 percent in lowest mental group

Tank gunners who don't know where to aim their battle sights, mechanics who can't repair anything, missile firers who can't tell the difference between a Soviet and a U.S. fighter plane—the evidence is piling up that there is a disturbingly high number of such individuals in today's armed services.

For some years now there have been persistent murmurings about the quality of the all-volunteer force, which has made up the nation's defense manpower since the draft was abolished in 1970. The murmurings are getting louder and louder, particularly in the wake of the recent revelation that almost half of the Army's new recruits belong in the lowest mental category accepted in the armed services.

Some members of Congress are getting worried about the situation and want to put a ceiling on the number of what some have called "dummies" allowed in uniform. So at the end of July the House-Senate conference on the 1981 defense authorization bill agreed to provisions that would limit the proportion of recruits in the lowest allowable mental category to 25 percent in each service, with an ultimate goal of 20 percent. It also told the Army that at least 65 percent of its recruits will have to be high school graduates.

Supplementing these stipulations were \$2 billion worth of additional educational benefits designed to lure better quality recruits.

These measures were in response to a situation that has become increasingly embarrassing for the military. All four services are suffering from shortages of trained technical manpower, and none achieved their full recruiting goals last year. But the Army is having the worst time of it. In 1979 it managed to achieve a 70 percent rate of high school graduates among its recruits; this year, the rate by March (halfway through fiscal 1980) was 38 percent, and it will be lucky to end up with 55 percent.

Particularly discomfiting for the Army have been the results of a study, released in July, recalibrating the results of entry-level Armed Forces Qualification Tests (AFQT's), which are administered to all

potential recruits. The AFQT's bear some similarity to standard intelligence tests, measuring reading skills, ability in arithmetic, and spatial perception: The AFQT (part of a larger test called AS-VAB for Armed Services Vocational Aptitude Battery) was introduced as a measure of general trainability in 1950. The content has changed over the years, but each new AFQT has been calibrated so that its results would be comparable to those of ability tests given the armed forces during World War II.

The accuracy of the new 1976 AFQT began to be suspect in 1977 when Marines noted that recruits arriving at boot camp appeared to be less able than their scores indicated. This led to studies by the Center for Naval Analysis, the Army Research Institute, and the Educational Testing Services in Princeton, N.J. A panel of academic experts was asked to evaluate the results of these studies and came out with the July report. They found that the methods used to convert raw scores into percentiles had resulted in overestimates of the scores of recruits in the lower range of the five mental categories into which scores are assigned. Categories I and II are above average, III is average, IV is below average (the 10th to 30th percentile), and V is out of the question.

The Army had been using test scores to defend the quality of the all-volunteer Army, pointing out that the percentage of recruits in category IV (called "Cat Fours") was around 9 percent, considerably lower than the 21 percent who participated in World War II. However, the corrected scores showed that a whopping 46 percent fell into that category.

This news has come on top of revelations concerning Army Skill Qualification Tests. The skill tests were inaugurated in 1976 and are administered to enlistees after they have been trained in their Military Occupational Specialties and have some field experience in their use. They were intended as a feedback device to gauge the effectiveness of training. Several members of congressional armed services committees, including Sam Nunn (D-Ga.) in the Senate and

Robin Beard (R-Tenn.) in the House, have gotten hold of the results of some of these tests and find them appalling.

Nunn, in a June speech in which he accused the Army of a "massive deception campaign," revealed, for example, that Skill Qualification Tests in 1977 and 1978 were failed by 90 percent of nuclear



U.S. Army photo

Army Secretary Clifford L. Alexander, Jr. says Army mental tests are "fundamentally irrelevant."

weapons maintenance specialists and 98 percent of tank turret and artillery repairmen. In 1979 he reported, 91 percent of aviation maintenance personnel and 51 percent of military intelligence personnel failed.

In a list of Army skill qualification scores obtained by Beard for 370 Military Occupational Specialties, there was a 40 percent or higher failure rate in 179 of them. (The Army band stands out as one of the few specialties in which scores were consistently high.)

These figures reflect what critics of the all-volunteer force perceive to be a grave and deteriorating situation. Contrary to predictions of the Gates Commission, which envisaged a fast and lean military—"a smaller, better trained active force, supported by a larger, well equipped force"—training appears to be inadequate to prepare the type of men who seek to make a career in the all-volunteer Army.

The primary documentation for this is contained in the report of an Army Training Study conducted in 1977 and 1978, which has still not been officially released.

Science took a look at a bootlegged copy of the summary of the report, which had come in over the transom at Representative Beard's office. The report noted that there was "general tolerance of low training standards" among officers and noncommissioned officers and that "many trainers do not know current training philosophy"—that is, "they do not know how to train." The report stated that one and one-half times as much training—in both duration and frequency of repetition—is required for a category IV recruit as a category III one and that the cost of training materials such as ammunition was 40 percent more ("the effect of the lesser qualified trainee is disturbing").

The study zeroed in on a selection of 1288 tank crewmen in the United States and Europe and found that most indicated a need for more and better training. They found low performance levels in both tank commanders and gunners—aggravated by high "turbulence," which means turnover and general lack of job stability—and they also noted that "performance decay" was "significantly greater among lower mental groups."

Specifically, the study found that 17 percent of the tank commanders in Europe and 21 percent of those in the United States "did not know where to aim when employing battlefield gunnery techniques." Among the gunners, 21 and 28 percent, respectively, did not know where to aim when using battle sights. On the whole, they found tank crew proficiency 40 and 50 percent below what should be expected. Of the 1288 tank crewmen, 20 percent of the commanders and 25 percent of the gunners "did not know some of the essential basics of battlefield gunnery."

The study also looked at performance in several other specialties. It found that tank repairmen's chances of correctly diagnosing a repair problem were between 15 and 33 percent, and chances of fixing the problem, once correctly identified, were between 33 and 58 percent. One problem seemed to be that mechanics were hyperspecialized and incapable of working across the "broad spectrum" of their occupational specialties as would be necessary in actual combat.

A survey of men in charge of shooting Redeye missiles revealed that most of them felt inadequately trained. What's more, they found that the gunners in the lower mental category appeared to be in-

capable of learning the Range Ring Profile, which entails being able to differentiate between the silhouettes of Soviet and American planes.

The study also polled officers for their attitudes about training and found a high degree of complacency, with most expressing "apparent satisfaction with poorly trained personnel." There has been "little perceived change in the training environment since 1971. The environment is still seen as hostile to the conduct of good training."

The report lamely notes at one point that in visits to the field, investigators did encounter "many pockets of competence."

The Army is trying to pull up its socks in the face of all this bad news. All its ability and skills tests are undergoing extensive reevaluation, and it plans to develop a coherent Army-wide system of training. But meanwhile, its responses to criticism have been evasive, the tendency being to minimize the problem by lowering standards. Many training manuals, for example, have been rewritten to conform to a 7th grade reading level. Skill qualification scores required for promotion have been lowered from 80 to 60 percent. And last June the Army quietly ordered that AFQT scores be removed from the files of 400,000 soldiers, allegedly to prevent their "abuse."

Trapped in a situation with shrinking resources and shortages of well-trained personnel, the Army has gone heavily into public relations as defense. Although the Defense Department's general stance is one that supports the validity of its various ability and skills tests, Army Secretary Clifford Alexander has done his best to denigrate them.

In June authorization hearings before the House Armed Services Committee, Alexander dismissed the mental categories as "fundamentally irrelevant." He said the AFQT was "really not a useful device" and that category IV was "not a mental category because it is not based on an intelligence test." Alexander said ASVAB was useful for picking people's occupational specialties, but of the AFQT he said "I am not sure that it measures anything." Asked by one member what category he thought a retarded person would end up in, Alexander insisted he didn't know.

As for the Skill Qualification Tests (which are only used by the Army) the Army has taken the stance that these are still in the early stages of development and have not been properly validated against job performance. An Army public relations person explained to *Science*

(Continued on page 1099)

Rational Suicide

Last March, Exit, a British group that supports "voluntary euthanasia," announced plans to publish a manual entitled, "A Guide to Self-Deliverance," outlining nonviolent methods of committing suicide. In July, U.S. public television aired a highly controversial program about the long-planned death of Jo Roman, a New York artist who killed herself with 30 Seconal tablets after learning she had breast cancer. And in August was announced the formation of an American version of Exit, called Hemlock, whose purpose is to promote public discussion of what has been called "rational suicide."

It seems that the death with dignity movement has entered a new, more explicit phase marked by increasing talk about enabling terminally ill and suffering people to bring about their own ends.

Hemlock, based in Santa Monica, was formed by Derek Humphrey, a British journalist who wrote a book in 1978 called *Jean's Way*, a chronicle of his wife's battle with cancer and suicide from a drug overdose. Humphrey says that the group's function will be primarily informational. It also plans to publish a suicide guide of sorts which, rather than being a cold list of recipes, will present detailed case histories of suicides. "We've read the Exit booklet," says Humphrey (to be published in Scotland to avoid running afoul of English laws against aiding and abetting suicide) "and the general feeling is that it is a bit too clumsy and technical." The Exit booklet describes four bloodless ways of committing suicide and contains a long appendix of lethal doses of prescription and nonprescription drugs.

There already exist two major American organizations that worry about death. The Society for the Right to Die lobbies for state legislation giving people control over whether to submit to extraordinary life-preserving measures. Then there is Concern for Dying, which has so far mailed out about 4 million copies of the Living Will, a document in which people can stipulate when they want treatment withdrawn. Both of these groups oppose the dissemination of information on suicide methods. A. J. Levinson, director of Concern for Dying, says that

(Continued from page 1096)

that if a man's job was, for example, maintaining the UH-1 helicopter, he could not very well pass a test on maintaining all Army helicopters. The Army is attempting to get out of the Skill Qualification Test bind by revising tests to minimize pencil-and-paper work and putting the emphasis on evaluations of actual performance.

Whether this will improve the results is open to question. Although the Army, in common with everyone else who attacks aptitude and IQ tests, insists that verbal skills and ability in handling written tests are not necessarily indicators of how a person will actually function, this is a debatable proposition. Literacy in the Army is notoriously low. For example, a check at Fort Benning in 1976 revealed that 53 percent of the enlistees had a 5th grade or lower reading ability. There are many experts who regard literacy not just as one of many desirable skills, but as a fundamental indicator of mental ability. One of these is Juri Toomepuu, a management analyst at Fort Benjamin Harrison in Indianapolis. Toomepuu says there are plenty of studies that demonstrate a correlation between reading ability and ability to perform most jobs, one of them being "Project 100,000," a study conducted in the late 1960's to assess trainability of category IV recruits. Toomepuu (who emphasizes that he is speaking for himself and not for the Army) says there is abundant evidence showing a high correlation between intelligence, as measured by aptitude tests, and combat performance. He also says a high correlation has been demonstrated between the AFQT and the Skill Qualification Tests and between AFQT scores and reading levels. An official at the Army Research Institute confirmed that they had found a strong relationship between AFQT's and Skill Qualification Tests and added, "historically there has been a high correlation between reading and general ability and trainability."

It would appear that Secretary Alexander and the Army are in the uncomfortable position, because they are politically compelled to support the all-volunteer Army, of bucking certain unpleasant facts. Removing the designation of "mental categories" from the AFQT's, as recommended by the authors of the report on test calibrations, may be a step toward bringing the Army in line with enlightened civilian practices (where any form of labeling is now frowned on), but it will not change the composition of the force.

The fact is, as any observer of the



U.S. Army photo

These soldiers have an XM-1 tank worth \$1.3 million. But do they know which way to point it?

armed forces will admit, there is no longer a middle class among Army enlistees. Says one House staffer, "We are now recruiting the cream of the lower middle-class blacks and the dregs of the white community." Toomepuu puts it even more strongly: "We are approaching a homogenous population of high grade morons." And what makes things worse, according to Toomepuu, is that low ability also correlates highly with everything else regarded as undesirable—low morale, poor discipline, lack of motivation, and high rates of attrition.

What makes the problem especially sensitive is the fact that blacks now constitute about 30 percent of the armed forces (they make up 13 percent of the general population). This puts political liberals in a particularly uncomfortable position. It was they who brought to the nation's attention the fact that blacks were being sacrificed disproportionately in Vietnam. And the disproportion will be much greater if another war comes. But Secretary Alexander, who himself is black, finds himself compelled to ignore the arguments about equitable representation of all groups in society in the armed forces in favor of the argument that it doesn't matter what color a soldier is as long as he can fight.

If no changes are made, the problem will only become more severe. Because of the lower birthrates in the 1960's, the manpower pool will continue to shrink through the 1980's. And the discrepancy between poorly trained or incompetent servicemen and the increasingly sophisticated demands being made on their skills by delicate, highly specialized,

and extremely expensive weapons will continue to grow.

One of the adverse effects of denial of unpleasant evidence is manifested in this country's assessment of the outcome of conflict with members of the Warsaw Pact. The DOD's Concepts Analysis Agency each year plays an Omnibus Game with its computer in which Warsaw Pact forces are pitted against U.S. and NATO allies. The computer assumes optimal operating efficiency of both men and machines. But if those who operate and maintain equipment are in the dismal state of readiness that critics allege, then the results of the computer analysis are nothing but fantasy.

The armed services of the 1980's will require more technical competence than ever before. A Marine manpower study, for example, projects a 25 percent increase in the need for high school graduates (who, while not necessarily smarter than their dropout peers, have demonstrated much higher motivation).

If the recent congressional initiatives don't improve the situation, there may still be alternatives to restoration of the draft. Military sociologist Charles Moskos of Northwestern University, for example, believes the problem can be solved by restoring the GI bill, raising pay for officers, and making federal educational assistance contingent on some kind of national service.

"The Navy is a system devised by geniuses to be run by idiots," runs an old saying. If that also applies to the Army, then the "idiots" the geniuses had in mind were not Cat Fours.

—CONSTANCE HOLDEN