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Army Personnel Grade Structure
FY 1975 – FY 2001

John R. Brinkerhoff

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PREFACE

This report is the result of research performed under the task entitled "Organization and Manning of the Institutional Army" conducted by the Institute for Defense Analyses for the Director, Program Analysis and Evaluation. The overall task was to define and assess the Institutional Army by conducting a historical survey of the Army's force structure, personnel, strength allocations, and funds spent on operating and support forces from the end of World War II until the present day. Five previous IDA documents have been published in this project: D-2460, D-2498, D-2563, D-2624, and D-2695.

The sponsor added this analysis of the personnel grade structure after completion of the original scope of the project. The purpose of this work is to examine the grade structure of the Army to determine if there is evidence of excess officers. The present report provides a detailed analysis of the officer corps, its composition, relationship to the civilian work force, and content by functional programs.

Mssrs. John Tillson and Waldo Freeman were the technical reviewers of this paper.

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SUMMARY

Figure S-1 shows the military personnel strength of the Army at the end of FY2001 broken out into officers and enlisted personnel by component. The table reveals that about 15% of the military personnel in the Total Army are officers and that there are fewer than six officers for each enlisted person.

S-1. Army Officer and Enlisted Personnel at the End of FY2001

Component	Officers	Enlisted	Total Strength	Officer Content (%)	Enlisted/ Officer Ratio
Active Army	75,986	400,629	476,615	15.9	5.27
Army National Guard	36,579	311,044	347,623	10.5	8.50
Army Reserve	40,868	161,903	202,771	20.2	3.96
Total Army	153,433	873,576	1,027,009	14.9	5.69

In order to appreciate why the officer content is so high and the enlisted-to-officer ratio so low, it is necessary to consider three factors.

First, there are three basic kinds of Army officers: line officers, specialist officers, and warrant officers. Both warrant officers and specialist officers provide technical or administrative work within limited areas, and their numbers are based on demands for particular skills rather than the numbers of enlisted personnel to be supervised. Line officers provide the commanders and staff officers for the combat, combat support, and most of the combat service support elements of the Army. The proportion of line officers in the officer corps has diminished over the past 27 years, while the proportion of specialist officers (primarily health care specialists) has increased.

Second, the Army has a mixed military-civilian workforce in which military officers supervise civilian employees and are supervised by civilians. The civilian workforce may also be divided into officer-equivalents and workers. Civilians of grade GS-7 and above are officer-equivalents; GS-15s are the equivalent of colonels; and senior executives are equivalent to generals. Civilian officer-equivalents have increased in

recent years and now outnumber civilian workers. There are almost as many civilian officer-equivalents as military officers, and civilian generals comprise one-third of the Army's senior leadership group.

Third, when the Army is divided into programs, officer content varies considerably. The findings for the three major program groups are as follows.

The Expeditionary Army is composed of TOE units that deploy to wage war overseas and consists almost entirely of military personnel. In the units of the Expeditionary Army, the enlisted-to-officer ratios are high in the smaller units and diminish as these small units are aggregated into larger organizations. For infantry units, the enlisted-to-officer ratio is about 36 to 1 for platoons, 18 to 1 for companies, and 15 to 1 for battalions. Enlisted-to-officer ratios for artillery and tank units are smaller because the focus is on operating and maintaining major weapons. A tank platoon has 15 enlisted personnel and 1 officer based on having four tanks, each with a crew of four personnel. The increasing officer content in larger organizations is due to the addition of staff officers, specialist officers, and warrant officers to assist commanders to perform their duties at battalion, brigade, division, and corps level. The officer content of the Expeditionary Army is based on doctrine, tactics, and equipment to be operated and maintained.

Army support for non-Army programs consists of personnel assigned to OSD, Defense agencies, international and joint headquarters and activities, and non-DOD agencies. The officer content of these personnel is about 40% because high-level headquarters need experienced staff officers. The enlisted-to-officer ratio is not relevant for this major program group because these officers do not supervise enlisted personnel except as incidental to their staff work.

The Institutional Army is a mixed military-civilian workforce in which many officers supervise large numbers of civilian employees. Table S-2 shows the officer, enlisted, and civilian strengths and the resulting enlisted-to-officer ratio and officer percentage content in the seven major programs of the Institutional Army. The enlisted-to-officer ratio is not germane to many of these programs. Officer content varies widely and has to be evaluated based on the work performed in each program.

Table S-2. Officer Content of the Program Groups of the Institutional Army End FY2001

Program Group	Officers	Enlisted	Civilians	Total	Officer %	E-O Ratio
Expeditionary Army Support Programs	22,012	33,952	60,193	116,157	19.0	1.5
Logistics Programs	778	1,045	47,351	49,174	1.6	1.3
Materiel Development & Acquisition Programs	1,381	1,113	19,531	22,025	6.3	0.8
Individual Training & Education Programs	21,361	79,002	19,696	120,059	17.8	3.7
Health Care Programs	10,509	15,012	21,701	47,222	22.3	1.4
Military Personnel Programs	3,139	23,560	12,292	38,991	8.1	7.5
Army Administration Programs	2,805	828	5,771	9,404	29.8	0.3
Total Institutional Army	61,985	154,512	186,535	403,032	15.4	2.5

The military and civilian employee grade structures are a function of staffing standards established respectively by the unit designers (for military personnel) and the Office of Personnel Management (for civilian personnel). These standards are applied in detail and when aggregated result in the numbers of officers and civilian-officer-equivalents in the Army. It is beyond the scope of this study to determine the appropriateness of these standards. When the Army's total workforce is addressed, the number of officers appears to be a reasonable consequence of decisions that determine the Army's overall force structure.

Except for an increase in the proportion of health care officers and a slight trend toward higher officer content in the units of the Expeditionary Army, officer content has remained fairly constant from FY1975 to FY2001 despite total strength increases and decreases. There has been a significant increase in the proportion of officer-equivalents in the civilian workforce.

The principal reasons why there are so many officers are that many officers supervise civilian employees and that there are numerous major headquarters staffed primarily by military officers and civilian officer-equivalents. Reducing the numbers of military officers would impair the ability of these headquarters to function. Reducing the numbers of headquarters would allow a reduction in the number of officers.

This analysis does not show whether the Army has the "correct" number of officers. It does show that the officer content appears reasonable when taken in context.

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I.   INTRODUCTION

One of the continuing criticisms of the Army is that there are too many officers. The overall data appear to support this contention. The two measures of officer presence used in this paper are the enlisted-to-officer ratio and officer content, which is the percentage of officers in the total strength of a category or program.   Table 1 shows the officer content as a percentage of military strength.

Table 1. Army Officer and Enlisted Personnel at the End of FY2001

Component	Officers	Enlisted	Total Strength	Officer Content (%)	Enlisted/ Officer Ratio
Active Army	75,986	400,629	476,615	15.9	5.27
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Army Reserve	40,868	161,903	202,771	20.2	3.96
Total Army	153,433	873,576	1,027,009	14.9	5.69

The proportion of officers in the Army does appear to be excessive. Almost 16% of the Active Army's military personnel are officers. This compares to 9.5% in 1944. Twenty percent of the Army Reserve consists of officers. Overall, there are only about 5.25 enlisted personnel for each officer.

This looks bad, but the overall percentages and ratios in Table 1 are deceptive because of the fallacy of averages. This fallacy says, in effect, that one ought not to judge an array by the average value, for doing that does not take into account the distribution of the parameter values. The common illustration of this fallacy has to do with the wisdom of wading across a creek with an average depth of 1 foot but with a depth of 10 feet in the middle offset by depths of 3 inches near the shores.

To avoid relying on the false impression given by an average, it is necessary to examine officer utilization in an orderly manner that explains who they are and what they do. This paper goes beyond the overall enlisted-to-officer ratios and officer contents in Table 1 and examines in some detail the composition of the officer corps and presents the officer content for particular programs. This will be done in three parts:

- Section II divides the officer corps into three subgroups—line officers, specialist officers, and warrant officers—and explains in general terms what the members of each group do.

- Section III shows the composition of the civilian workforce and its relationship to the military workforce. Military personnel work alongside civilian employees.

Military officers supervise civilian employees and are supervised by civilian employees. Moreover, the civilian work force is itself composed of managers, who are the equivalent of military officers, and of workers who are the equivalent of enlisted personnel. In order to appreciate the number of military officers it is necessary to consider the number of civilian officer-equivalents as well.

- Section IV shows the officer content of various Army programs that vary in personnel strength and mix among officers, enlisted personnel, and civilian employees.

Finally, some general observations are made on Army officer content, and reasons for recent trends in the numbers and utilization of officers are advanced in Section V, Observations.

The analytical methodology is to present the officer content of defined parts of the Army by using pairs of area charts that show personnel strengths from the end of FY1975 to the end of FY2001. One chart in each pair shows the absolute strengths of the personnel groups, and the second chart shows the mix or proportions of each group. Enlisted-to-officer ratios are also presented in some cases to provide a better understanding of the composition of a program.

The content and organization of the paper are determined by the data available for the construction of time series for the area charts and detail for the ratios. There appears to be no single database that has information on all of the parameters of interest, and it was necessary to assemble a database from two different sources. One data source permitted an examination of *who* the officers are, and the other data source provided information on *what* they do. It was not possible to combine the two databases, so these aspects are presented separately.

Defense Manpower Data Center (DMDC) data permitted disaggregation along the "who" dimension. DMDC maintains detailed personnel files that show the actual strengths of the Army by grade and skill from the end of FY1975 through the end of FY2001. These data made it possible to stratify the Army into different kinds of people. Military personnel data were differentiated for each component (Active, National Guard, Army Reserve) among commissioned officers, warrant officers, and enlisted personnel. It was also possible to differentiate officers and warrant officers by specialty, such as

lawyer, chaplain, or aviator. Civilian personnel data differentiate between wage grade and general schedule employees and for the general schedule by grade.[1]

Future Years Defense Program (FYDP) data permitted disaggregation along the "what" dimension. The FYDP identifies the number of military personnel and civilian employees by component allocated to each program element.[2] When the program elements are aggregated in accordance with the Army Force Management Categories, it is possible to show for each program the number of civilian employees, military officers, and military enlisted personnel. The FYDP data do not show the grade structure of civilian employees by program element and programs. Although FYDP data is available for end FY2002 and beyond, the time series were ended at end FY2001 to be compatible with the DMDC data.

The results of the analyses are presented by using time series area charts presenting total numbers of personnel and their relative proportions. Line charts showing various ratios are used in some cases to show historical trends. The charts and ratios are commented on as they are presented.

II. COMPOSITION OF THE ARMY OFFICER CORPS

The Army officer corps is composed of three major sub-groups: line officers, specialist officers, and warrant officers.

Line officers are commissioned officers who command combat and support units and organizations and hold most of the staff positions from battalions up through Department of the Army Staff. The number of line officers is a function of the force structure—the number and mix of TOE and TDA units.

Specialist officers are commissioned officers who perform specific professional duties and are ranked as officers but do not command units or hold staff positions outside of their professional specialties. The number of specialist officers is a function of the demand for their professional services.

Warrant officers are technical specialists serving in positions above the enlisted level but whose specialties are too narrow in scope to "permit the effective use and

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[1]   The DMDC data were provided by courtesy of Zee Farris, who went well beyond the call of duty to be helpful.

[2]   Dave Drake, Cost Analysis and Research Division, Institute for Defense Analyses, provided the FYDP data for the FY2002 Budget Estimate Submission.

development of commissioned officers."[3] The number of warrant officers is a function of the amount of technical work to be performed.

All commissioned officers are appointed by the President of the United States to their respective grades and hold a commission to that effect. A warrant officer is a member of the armed forces who holds a warrant from the President or the Secretary of the Army appointing him or her to a grade.[4]

A. Warrant Officers

A warrant officer ranks above the highest enlisted grade and below the lowest commissioned grade. Warrant officers have many of the same privileges as commissioned officers with respect to military courtesy (saluting) and membership in officers clubs. There are five grades of warrant officers. The lowest grade receives pay just below that of a second lieutenant, and the highest grade receives about the pay of a lieutenant colonel. Warrant officers are intended to be specialists instead of generalists. They are paid to do a few things very well. There are two general kinds of warrant officers in the Army: technicians and aviators.

Most warrant officers are technicians who provide a great depth of experience in a fairly narrow field of application, such as personnel administration, vehicle maintenance, and criminal investigation. Technical warrant officers are often older soldiers who have served for years as enlisted men and have taken advantage of an opportunity to increase their pay and join the officer corps. These technical warrant officers may assume leadership positions in their units, but they function primarily as technicians.

Aviation warrant officers provide most of the pilots for the Army's fleet of helicopters and fixed-wing aircraft. In 1962, as the Army was expanding its use of helicopters, the decision was made to use warrant officers to provide most of the pilots, with only a few commissioned officer pilots to assume positions as commanders and senior staff officers of aviation units. This decision proved to be highly cost-effective, although it was necessary to establish several new grades of warrant officers to provide opportunity for promotion and persuade adequate numbers of aviation warrant officers to

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[3] Frank Rush, "Warrant Officer," *The International Military and Defense Encyclopedia*, p. 2914.

[4] Junior warrant officers are appointed by the Secretary of the Army; senior warrant officers, by the President. The words "warrant" and "commission" have been held to be synonymous by the United States Court of Claims. Ibid.

remain in the Army beyond their initial terms of service, thereby providing a group of seasoned pilots. This program benefits the Army in that it provides a corps of flyers whose primary job is flying and who do not have to fulfill the career progression demands placed on commissioned officers.

The Army makes the greatest use of warrant officers of all of the services. The Air Force has no warrant officers and uses commissioned officers to fly all of its aircraft including helicopters. The Navy uses a few warrant officers in the traditional crew functions—boatswains, electricians, carpenters—but also uses commissioned officers to fly fixed-wing aircraft and helicopters. The Marine Corps uses warrant officers in a manner similar to the Army—except for aviators, who are all commissioned officers.

At the end of FY2001, the Army had the numbers of warrant officers shown in Table 2. The major skill areas for warrant officers are shown. The "other" category includes intelligence technicians and criminal investigators. Warrant officers play an important role in the Army, but their duties and their status are not the same as that of the line officers. Their primary jobs involve doing specialized work rather than leading soldiers, although some warrant officers do supervise enlisted personnel and civilians. They may command small units and serve on staffs.

Table 2. Army Warrant Officers by Component—End of FY2001

Component	Aviators	Admin	Maintenance	Technical	Other	Total
Active	4,495	1,773	1,811	1,442	1,668	11,189
Guard	3,676	1,671	1,201	498	567	7,613
Reserve	398	1,103	526	510	407	2,944
Total	8,569	4,547	3,538	2,450	2,642	21,746

Note: DMDC Data for FY01. Aviators are Defense Personnel Occupation Codes 2A & 2B; administrative warrants are 5F to 7, and 8; maintenance warrants are 4D, E, F, G, L; technical warrants are 3 & 4, B, C, H, J, K, M.

B. Specialist Officers

Specialist officers provide professional services for the army. The work they perform is considered important enough to justify their receiving the pay and enjoying the rank of officers. They are not generalists. They are not authorized to command TOE units of the Army in the field other than units within the limited scope of their specialties. Requirements for specialists are based on demands for their particular skills and not on the number of enlisted personnel in the Army. The three major categories of specialists

are lawyers, chaplains, and health care professionals. Each of these specialists is a commissioned officer by virtue of previous policy decisions that certain specialties merit the rank and pay of commissioned officers. The numbers of specialist officers of these categories at the end of FY2001 are shown in Table 3.

Table 3. Army Specialist Officers—End of FY2001

Component	Lawyers	Chaplains	Health Care	Total
Active	1,524	1,332	14,763	17,619
Guard	516	543	3,020	4,079
Reserve	1,514	608	12,132	14,254
Total	3,554	2,483	29,915	35,952

Lawyers provide legal services to the Army, including operation of the criminal justice system, legal counsel for commanders, and legal services for service members and their dependents.   Lawyers serve as staff judge advocates for commanders. They may command legal detachments and teams that provide legal services on an area basis. The number of military lawyers is partly a function of enlisted strength but primarily a function of legal workload emanating from higher headquarters and external sources.

Chaplains provide religious and counseling services. They serve on the staffs of commanders and may provide services on an area or unit basis. The number of chaplains is a function of the desired coverage for religious and counseling services, an appropriate mix of denominations, and the number of soldiers, dependents, and civilians to be served.

Health care specialists in the Army Medical Department include physicians, dentists, optometrists, psychiatrists, veterinarians, nurses, a few other professional level health care specialties, and medical service corps officers. The numbers and types of the health care specialists is a general function of the patient load—wartime demands for medical care, peacetime workload for service members, and health care for their families and retired military personnel. The Army medical department also has a medical service corps that is intended to perform administration of medical hospitals and units, freeing doctors and other professionals from that duty.   However, many medical units are commanded by health care professionals. The number of health care specialists is a function of peacetime workload and potential wartime workload.

A detailed analysis of the Officer Personnel Management System (OPMS) could identify other officer specialties. The Operational Support career field of the OPMS

includes two additional categories of specialists: the acquisition corps and foreign area specialists. Acquisition specialists develop and procure new weapons and equipment. Foreign area specialists provide expertise on particular regions of the world. A new specialty for scientific officers to support Army research programs may be created.[5] The numbers of these specialists are not related directly to enlisted strength.

C. Line Officers

Line officers of the combat arms and the combat support and combat service support branches command most of the Army's units, organizations, and commands and provide most of the military staff officers for Army and Joint headquarters. The numbers and grades of line officers are determined by the numbers and kinds of Army organizations and, particularly in recent years, the numbers and sizes of high-level management headquarters. Table 4 shows the composition of the Army's officer corps at the end of FY2001. The number of line officers is overstated because there are additional specialists that were not identified as such in this analysis. Line officers are the primary group to be considered when addressing the balance between bosses and workers.

Table 4. Army Officers—End of FY2001

Component	Line Officers	Specialists	Warrants	Total
Active	47,178	17,619	11,189	75,986
Guard	24,923	4,079	7,577	36,579
Reserve	23,864	14,254	2,750	40,868
Total	95,965	35,952	21,516	153,433

Commissioned Army aviators are considered line officers rather than specialists because they are to a certain extent fungible with officers of other branches. They fly Army aircraft, command aviation units, serve as aviation staff officers, and also may command other than aviation units. For FY2001, there were 6,540 commissioned aviators: 4,306 in the active Army, 1,625 in the Army National Guard, and 599 in the Army Reserve.

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5   Jim Tice, "General out to overhaul three creaky career tracks," *Army Times*, 4 February 2002, p. 21.

In addition to the officers shown in Table 4, there are two categories of military personnel in pre-commissioning programs that are neither officers nor enlisted personnel. At the end of FY2001, there were about 4,000 United States Military Academy (USMA) cadets who were counted as part of the total military strength of the Army. In addition, at the end of the school year in May 2001, there were 28,479 Reserve Officer Training Corps (ROTC) cadets in the Army.[6] For the purpose of showing the composition of the Army the USMA cadets are shown separately in figures that address the entire Army.[7]

D. Trends of the Composition of the Officer Corps

Figure 1 shows the composition of the officer corps from the end of FY1975 to the end of FY2002 in three categories: line officers, specialist officers, and warrant officers. Figure 2 shows the mix of these three categories over the same period. Over the past 27 years, the number of line officers has increased significantly as the overall strength of the Army expanded or contracted. The proportion of line officers, however, has decreased from about 73% to about 63%. The proportion of warrant officers has remained about the same at about 14%, and the proportion of specialist officers has increased from about 13% to over 23%.

Figures 3 and 4 show the numbers and mix of specialist officers. The recent increase in specialist officers has resulted almost entirely from a significant increase in the number of health care professionals, particularly in the past 10 years. The proportion of health care specialists has increased from 78% to 83%. The proportion of chaplains declined from 11% to 7%, and the proportion of lawyers has stayed fairly constant from 10% to 11%. As shown in Figure 5, the increase in health care specialist officers has occurred in all three components, but mostly in the Army Reserve.
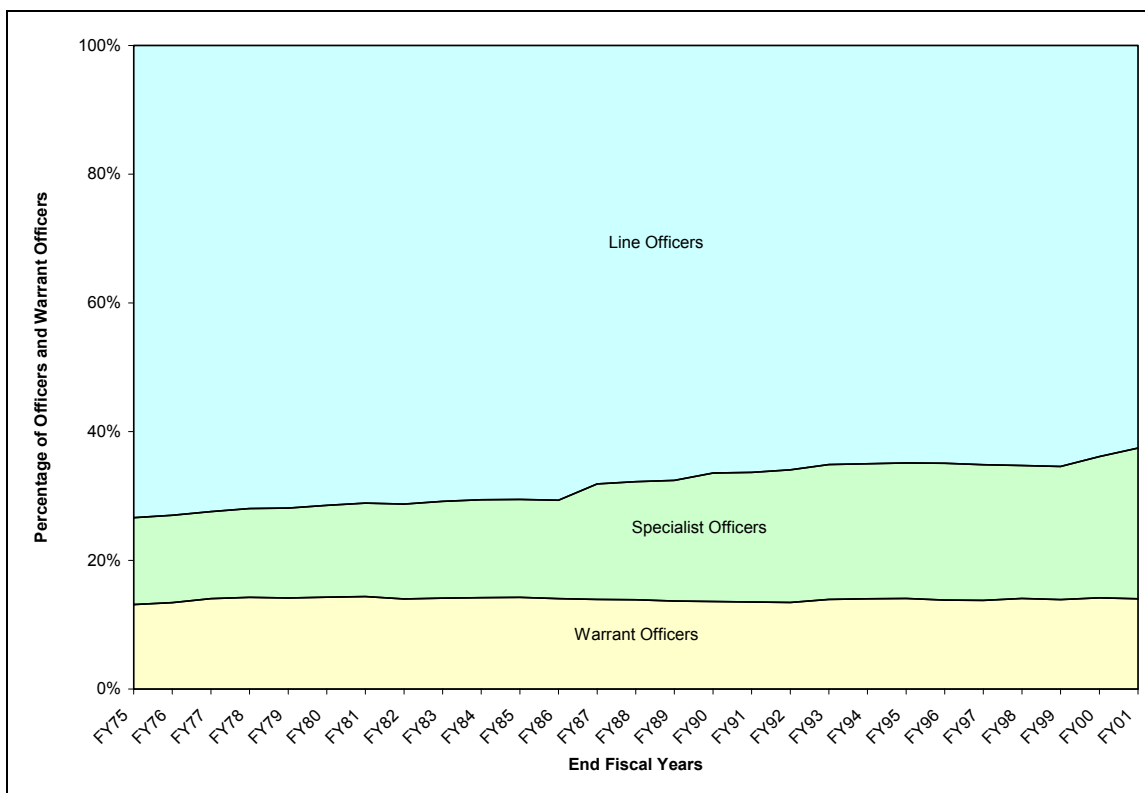
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[6]   LTC Patricia O'Keefe, DA G1, Officer Personnel Directorate, 15 May 2002.

[7]   The Army does not report the number of ROTC cadets in its FYDP submissions. Thus, there are no recent historical data in that record.
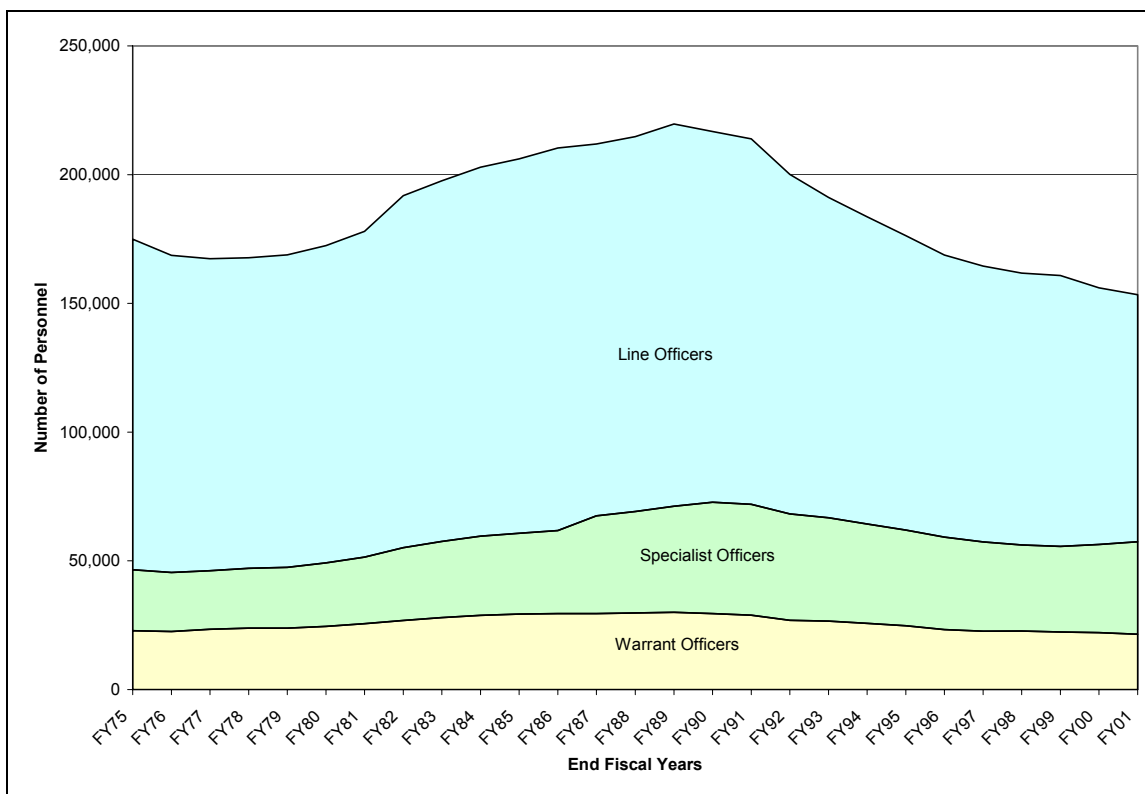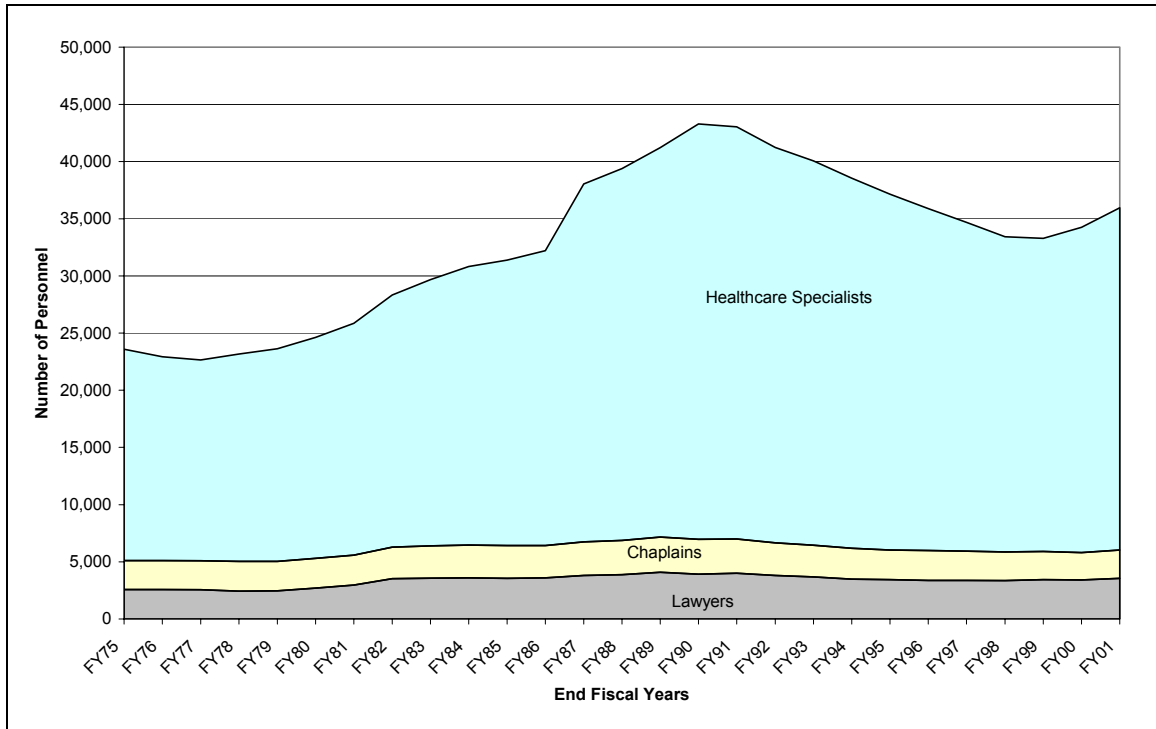
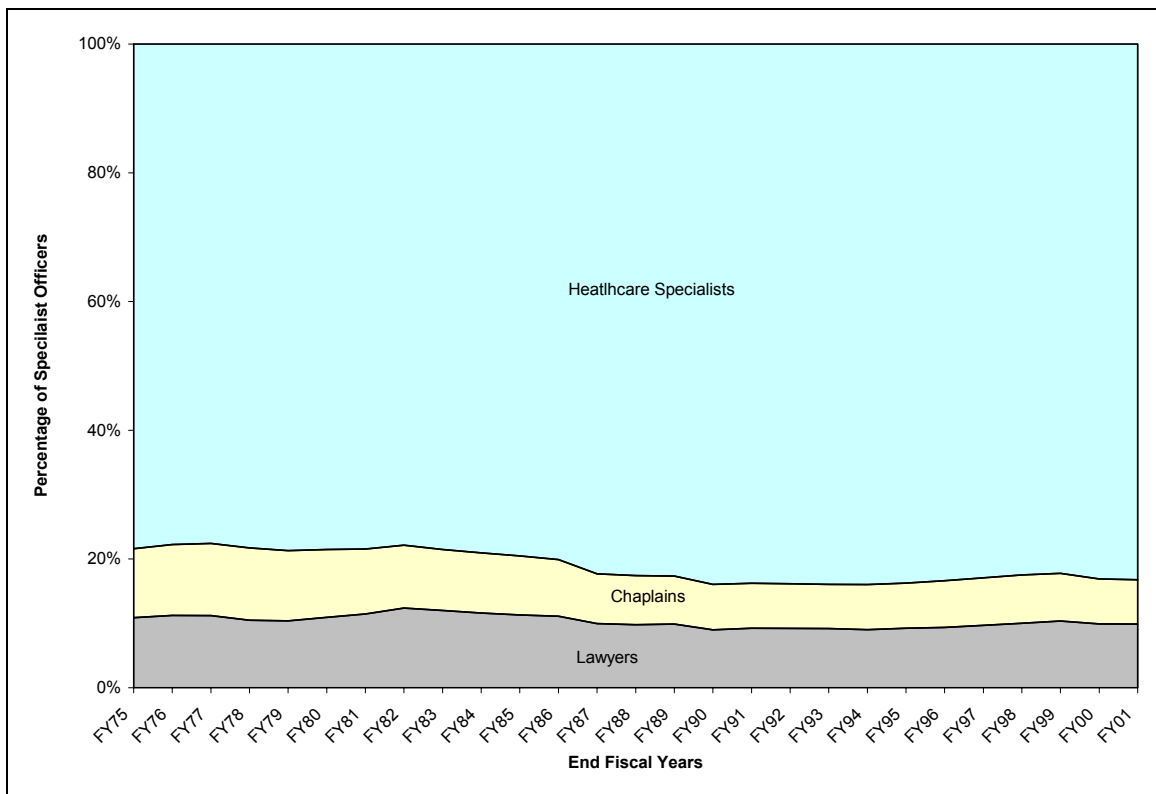**Figure 1. Composition of the Officer Corps FY1975–FY2001**

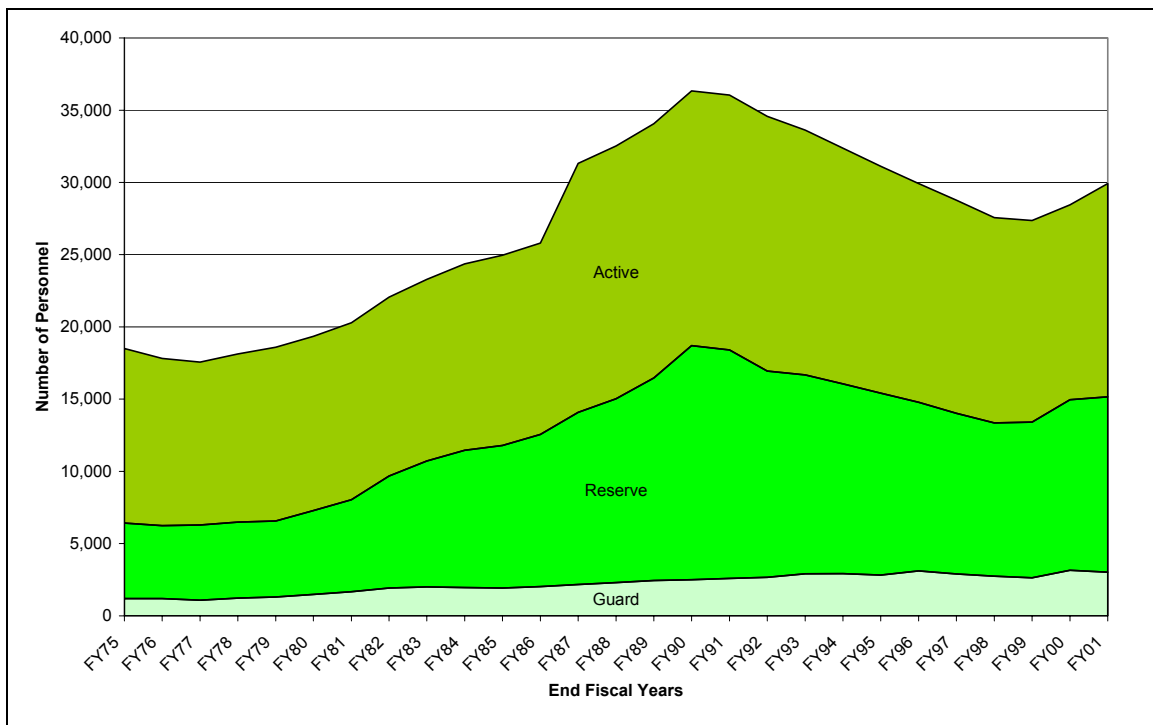**Figure 2. Officer Corps Mix FY1975–FY2001**

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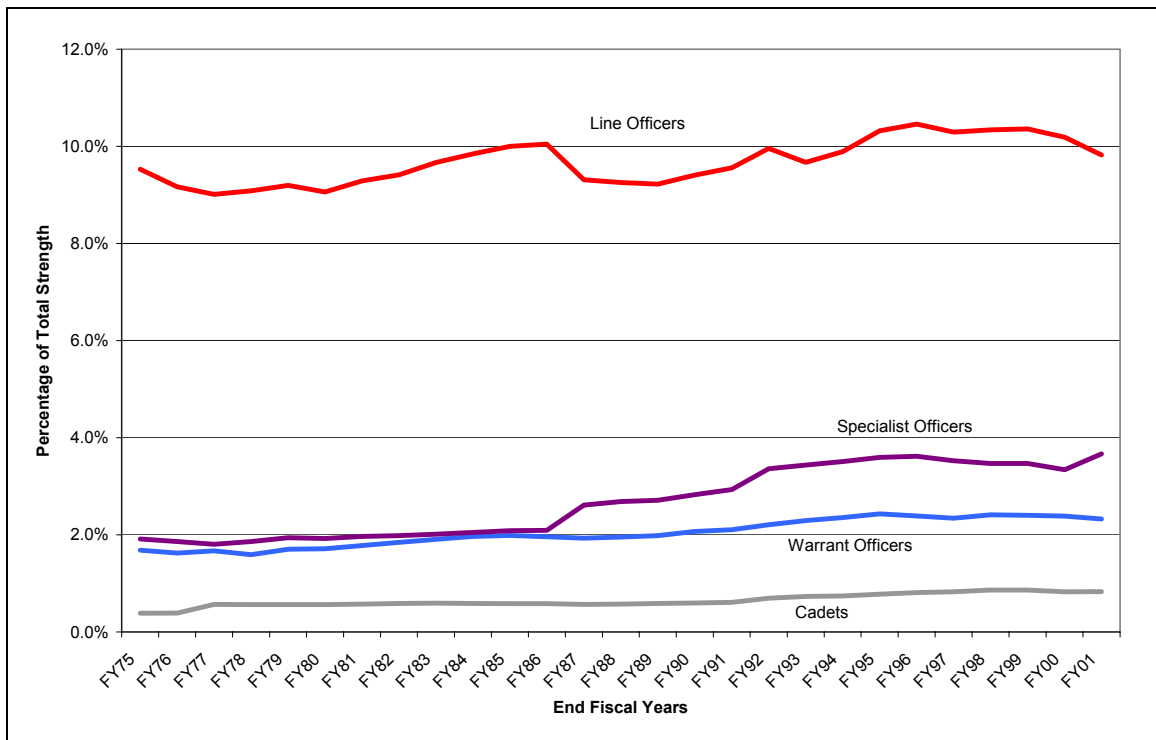**Figure 3. Army Specialist Officers FY1975–FY2001**

Figure 4. Army Specialist Officer Mix FY1975–FY2001

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**Figure 5. Health Care Specialists by Component FY1975–FY2001**

E. Composition of Military Personnel Strength

Figure 6 shows the military personnel content of the Active component, showing the proportions of the total military strength of line officers, specialist officers, warrant officers, and USMA cadets. The number of cadets has remained at about 4,000, but as the total strength of the Army has declined the proportion of cadets has increased slightly. The proportion of warrant officers has also increased from about 1.8% to about 2.4%. As noted earlier, the greatest increase in officers has been the increase in specialist officers from 2% to about 3.5%. The proportion of line officers has increased from about 9.0% to just above 10%. The proportion of line officers has increased because the number of enlisted personnel has declined while the number and size of higher headquarters have not.
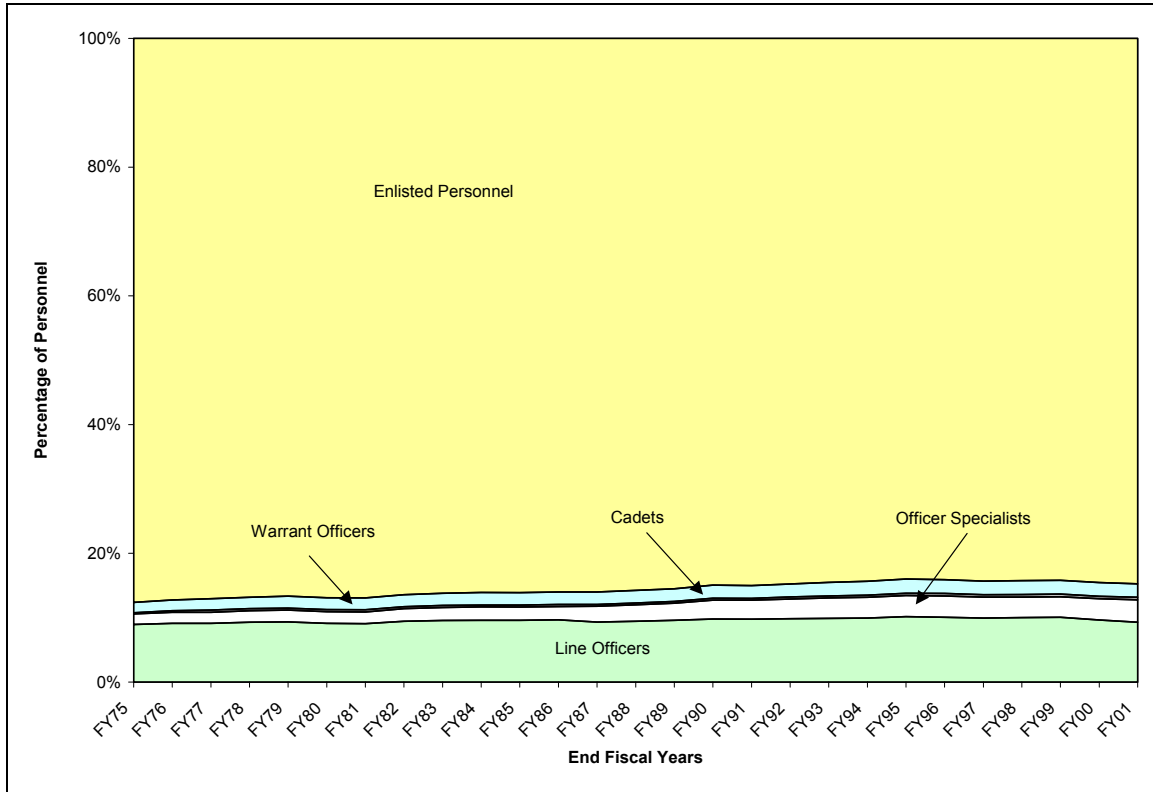

Figure 6. Active Military Officer Content FY1975–FY2001

Figures 7 and 8 show the numbers and proportions of the Total Army military personnel strength divided into line officers, specialist officers, cadets, warrant officers, and enlisted personnel.
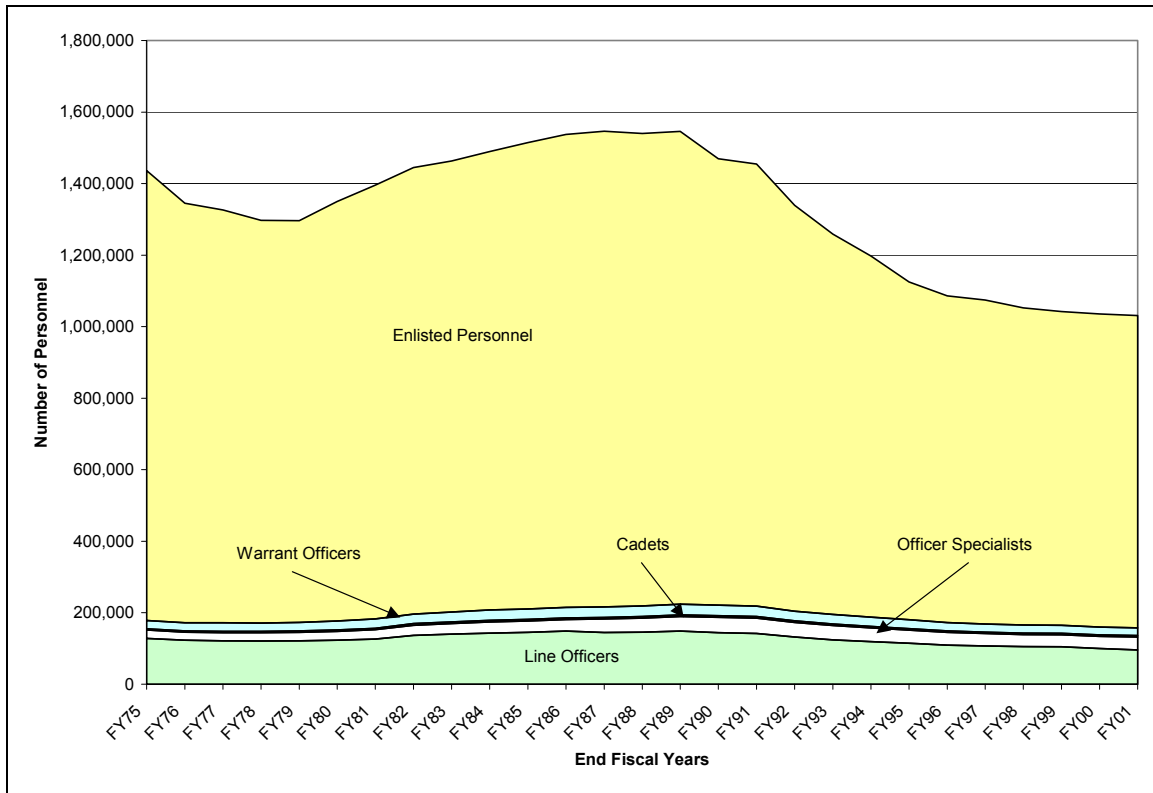
**Figure 7. Total Army Military Personnel FY1975–FY2001**

Figure 8. Total Army Military Personnel Mix FY1975–FY2001

Average line officer content for the Total Army is about 10%, which is equivalent to a boss-to-worker ratio of about 9, or one line officer for every 9 others (enlisted, USMA cadets, warrant officers, and specialist officers) in the total Army.   This is not an exact measure. It would be better, probably, to exclude USMA cadets and specialist officers from the calculation, but it is a more reasonable ratio than is provided by the overall enlisted-to-officer ratio cited in the introduction to this paper.   Additional area charts showing the composition of the Active Army, Army National Guard, and Army Reserve by these grade categories are in Appendix A.

Figure 9 shows the proportion of line officers to total military strength by component. Active Army line officer content is slightly less than 10% at the beginning of the period and slightly higher than 10% at the end.   The higher proportion of line officers is due to efforts in recent years to eliminate "unnecessary" enlisted personnel in combat and support units.

Line officer content in the Army National Guard has ranged from just above 6% to 8% and has averaged about 7%.   This is less than that of the Active component because the Guard is composed almost entirely of deployable TOE units and does not have as many TDA units and higher headquarters as the Active Army.

Army Reserve line officer content averages about 13% and ranges from 12% to almost 14%, considerably higher than for the active Army. One reason for this is that the Reserve contains a large number of high officer content units for training, training support, Civil Affairs, Psychological Operations, and logistics. Another reason is that Reserve line officer strength includes from 10,000 to 8,500 part-time Individual Mobilization Augmentees (IMAs) that augment active units when needed. Average IMA strength over the 27-year period is 8,560, and the maximum number of IMAs was 11,344 at the end of FY1987. IMA strength at the end of FY2001 was 5,872.
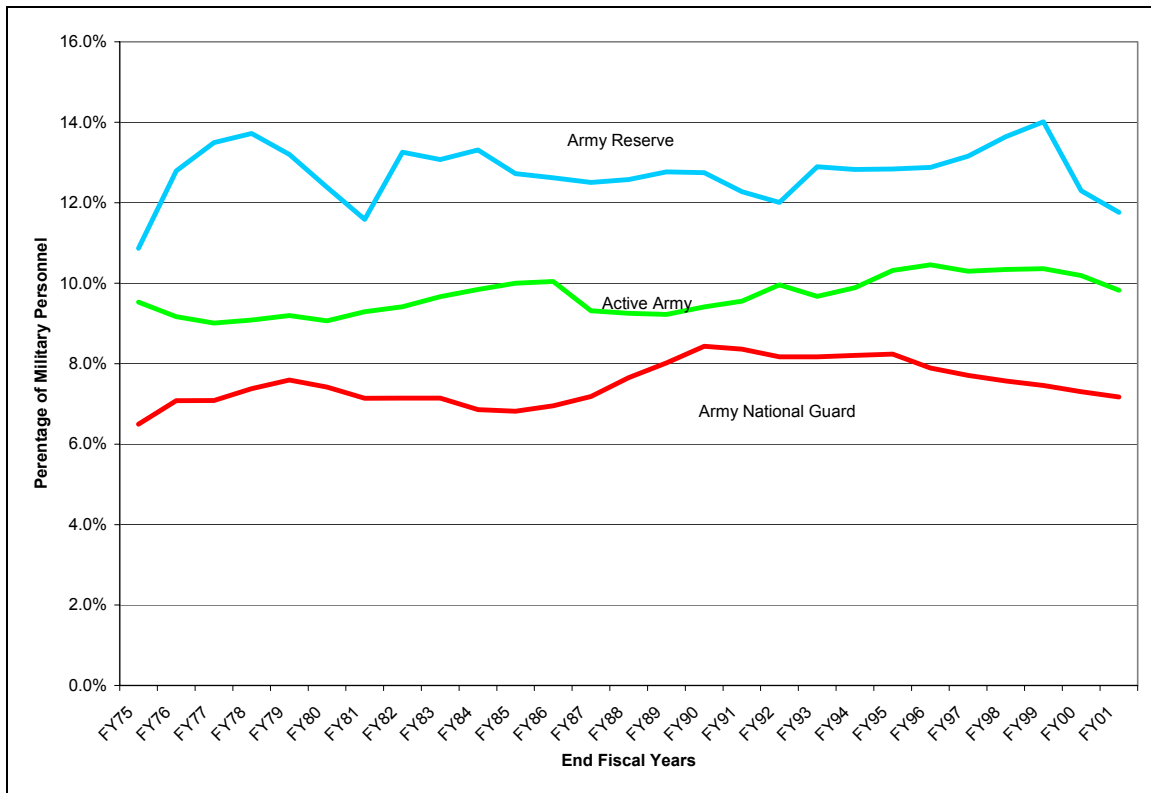
Figure 9. Proportion of Line Officers to Total Military Strength FY1975–FY2001

III. THE CIVILIAN WORKFORCE

In considering the appropriateness of the number of officers, it is necessary to also consider the civilian workforce. The Army makes extensive use of civilian employees. Many military personnel work alongside civilian employees. Many military officers supervise civilian employees, and some are supervised by civilian employees. In addition, the civilian workforce is stratified into officer-equivalents and enlisted-equivalents. So the number of "bosses" in the Army has to include both military and civilian managers.

A. Civilian Officer-Equivalents

Table 5 shows the equivalency between military personnel and civilian employees. All civilians of grade GS-7 and above are officer-equivalents. Civilian GS-15s are equivalent to colonels. Civilian senior executives are the equivalents of general officers. The impact of the equivalency depends to some extent on the location of

the unit. In Department of the Army Headquarters, a GS-14 is liable to outrank a lieutenant colonel, but at a field installation, the lieutenant colonel is liable to outrank the GS-14.

**Table 5. Military-Civilian Grade Equivalency**

Military	Civilian
General Officers	Senior Executives
Colonel	GS-15
Lieutenant Colonel	GS-14 & GS-13
Major	GS-12
Captain	GS-11 & GS-10
First Lieutenant	GS-9 & GS-8
Second Lieutenant	GS-7

The basis for this equivalency is protocol (order of precedence), pay, and criteria for staffing TDA units that include both military and civilian authorizations (see Appendix B for a detailed discussion). The real situation is more complicated because some wage system employees and DoD teachers are also officer-equivalents. For the purpose of this analysis, only GS employees are considered as officer-equivalents, and the other civilian employees are considered equivalent to enlisted personnel. This assumption understates the number of civilian officer-equivalents in the Army because some wage service employees are officer equivalents—some of them up to field grade military rank.

Figure 10 shows the stratification of the Army's civilian workforce into three categories. General schedule employees of grade GS-7 and above are officer-equivalents. General schedule employees from GS-1 through GS-6 and all wage system employees are enlisted-equivalents. Figure 11 shows the mix of these categories of civilians. Since FY1975, the proportion of officer equivalents in the civilian workforce has increased from about 38% to about 60%. The proportion of general schedule employees in grade 6 and below has gone from about 30% to about 20%. The proportion of wage service employees has gone down from about 32% to about 20%.
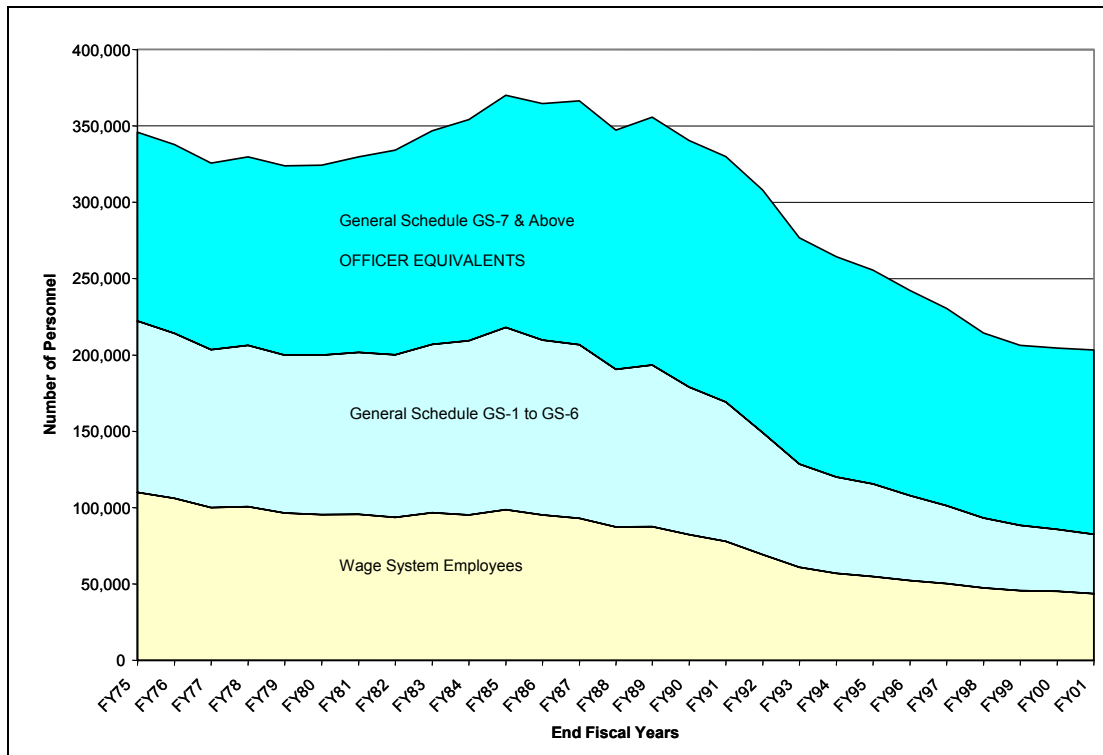
Figure 10. Army Civilian Workforce Grade Structure FY1975–FY2001
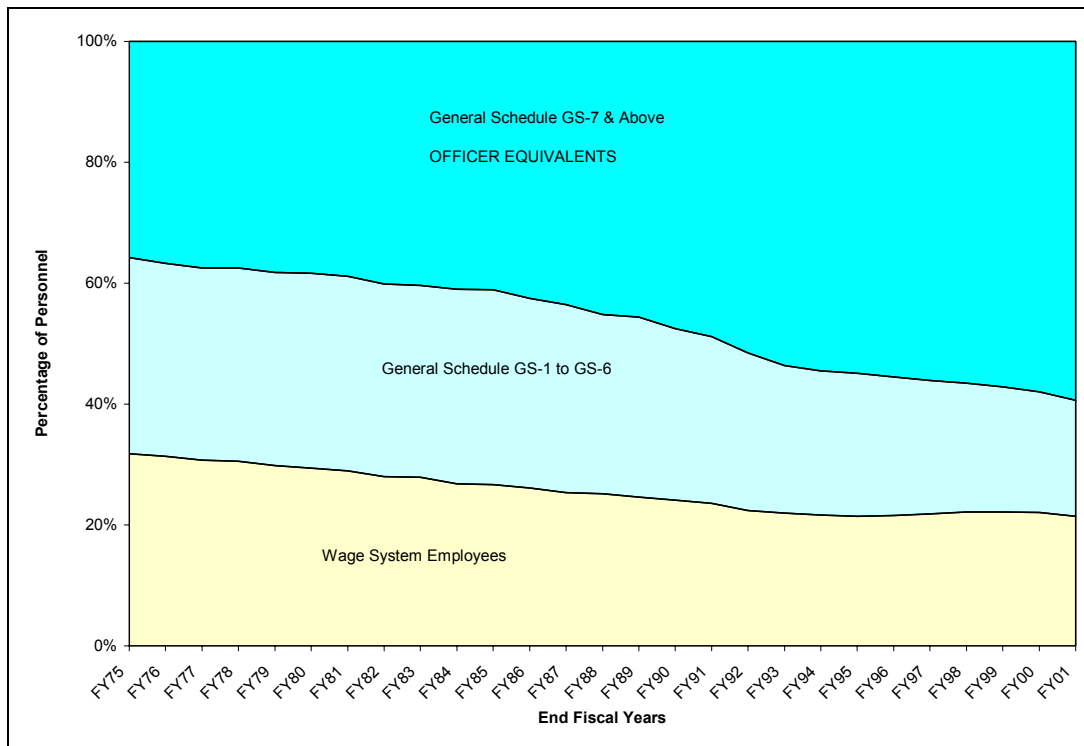
**Figure 11. Army Civilian Workforce Mix FY1975–FY2001**

Figure 12 shows the strengths of the military commissioned officers and civilian officer-equivalents. Figure 13 shows the relative proportions of military commissioned officers and civilian officer-equivalents. Since FY1975 the proportion of the Army's "officer" positions that have been filled by civilian officer-equivalents has slowly but steadily increased. In FY1975, military commissioned officers were about 58% of the total group, but in FY2002, military officers are only about 53%.

There has been a steady and substantial increase in the proportion of civilian employees who are officer-equivalents and a corresponding decrease in the proportion who are wage service employees. One reason for this is a steady upgrading of GS positions to assist in recruiting and retention of civilian employees. The decline in the number of wage service employees may be attributed to a change in the Army's job mix away from technical (blue-collar) work toward administrative (white collar) work. Another reason for the decline in wage service employees is the practice of outsourcing much of that kind of work to contractors.

To illustrate the amalgam of military and civilian workers, the combined workforce is divided into "bosses" and "workers." Bosses are defined as all military commissioned officers, warrant officers, and civilian officer-equivalents. Workers are defined as enlisted personnel plus general schedule civilian employees in Grades 1 through 6 and all Wage Service employees. Cadets are not counted. As noted earlier, this division is not exact, for some civilian wage service employees are also officer-equivalents, and some general schedule employees above GS-7 are not really bosses. The net effect is to understate the number of bosses somewhat.

Figure 14 shows the numbers of bosses and workers over the past 27 years, and Figure 15 shows the relative proportions of these categories. At the end of FY2001, about 22.5% of the people in the Army's combined work force were bosses and the other 78.5% were workers. The proportion of both military and civilian bosses has increased 4.8% since FY1975, when the proportion of bosses was only 17.7%. The increase in the proportion of bosses is due to increases in both military officers and civilian officer equivalents. As noted earlier, military health care specialist officers have increased as a proportion of the officer corps. The increase in civilian officer-equivalents appears to be due to grade creep in the general schedule and a significant reduction in lower-grade general schedule employees and wage service employees. It also appears that the leadership and management of the Army are shared about equally between military commissioned officers and civilian officer-equivalents.
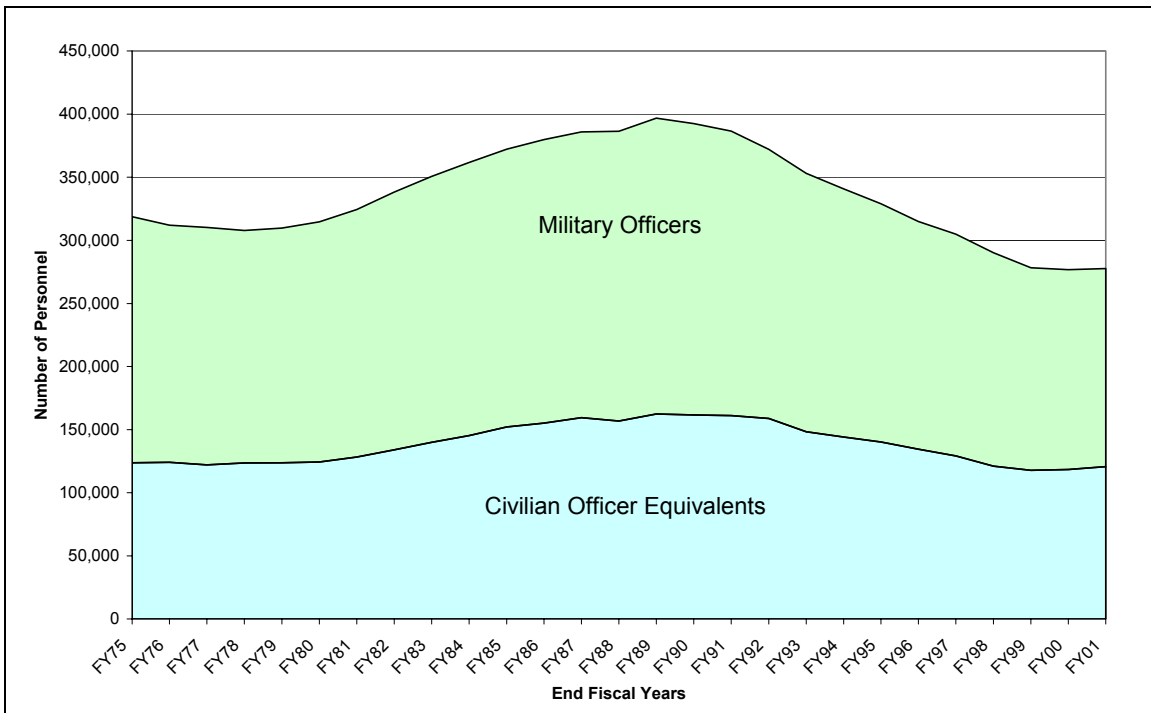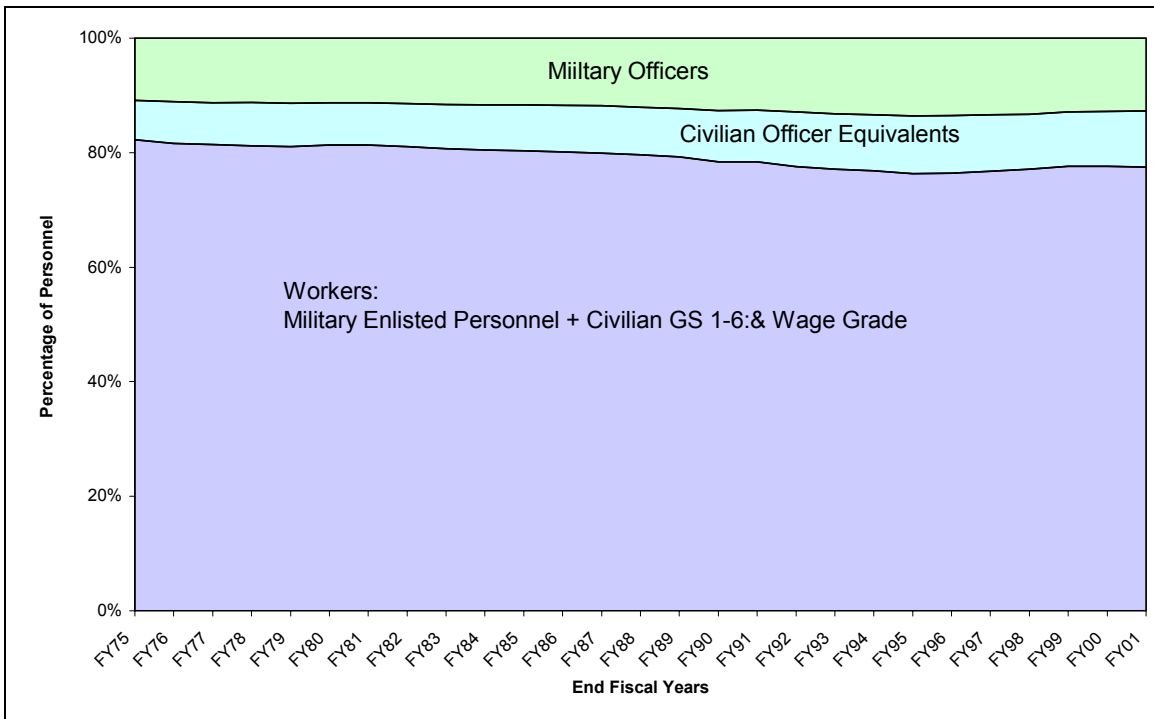
Figure 12. Military Officers and Civilian Officer-Equivalents FY1975–FY2001
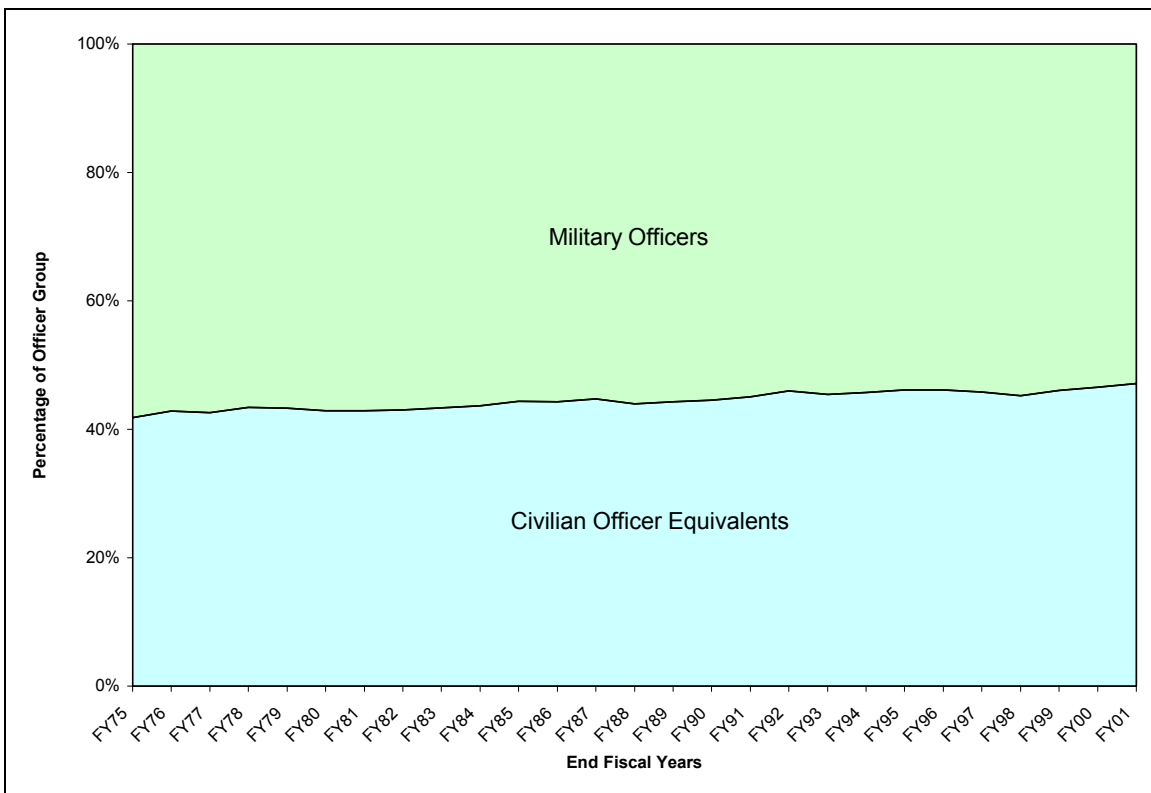
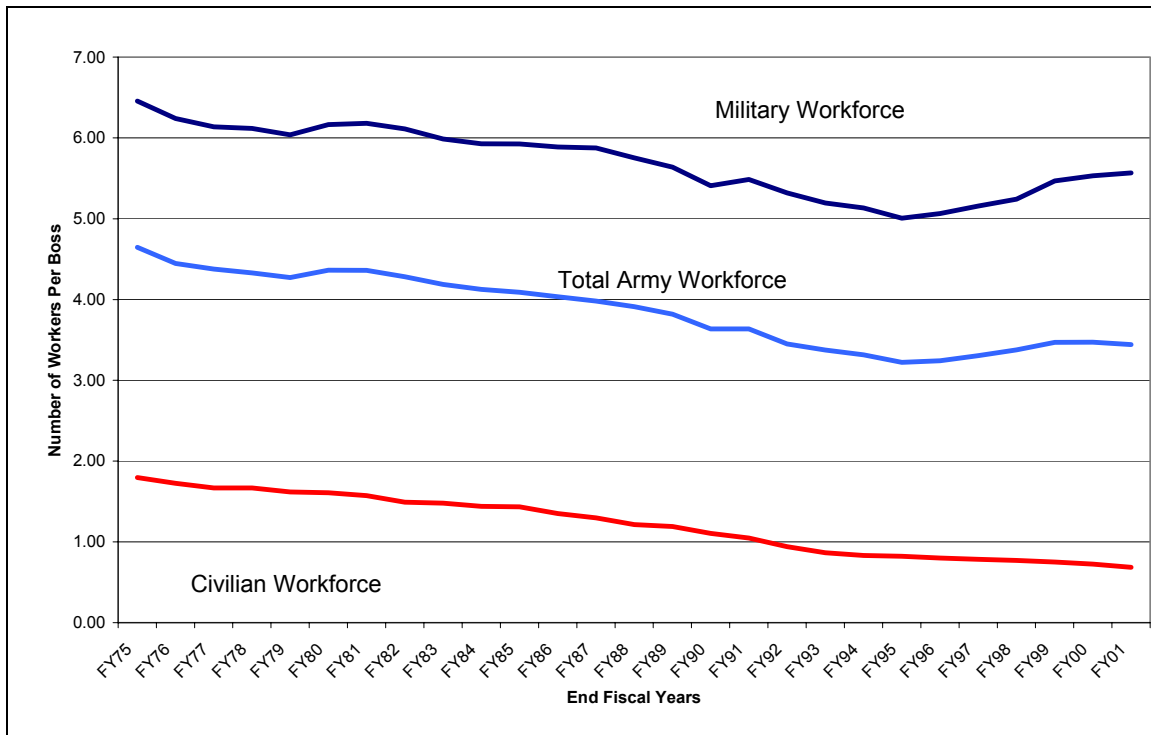**Figure 13. Military Officer and Civilian Officer-Equivalent Mix FY1975–FY2001**
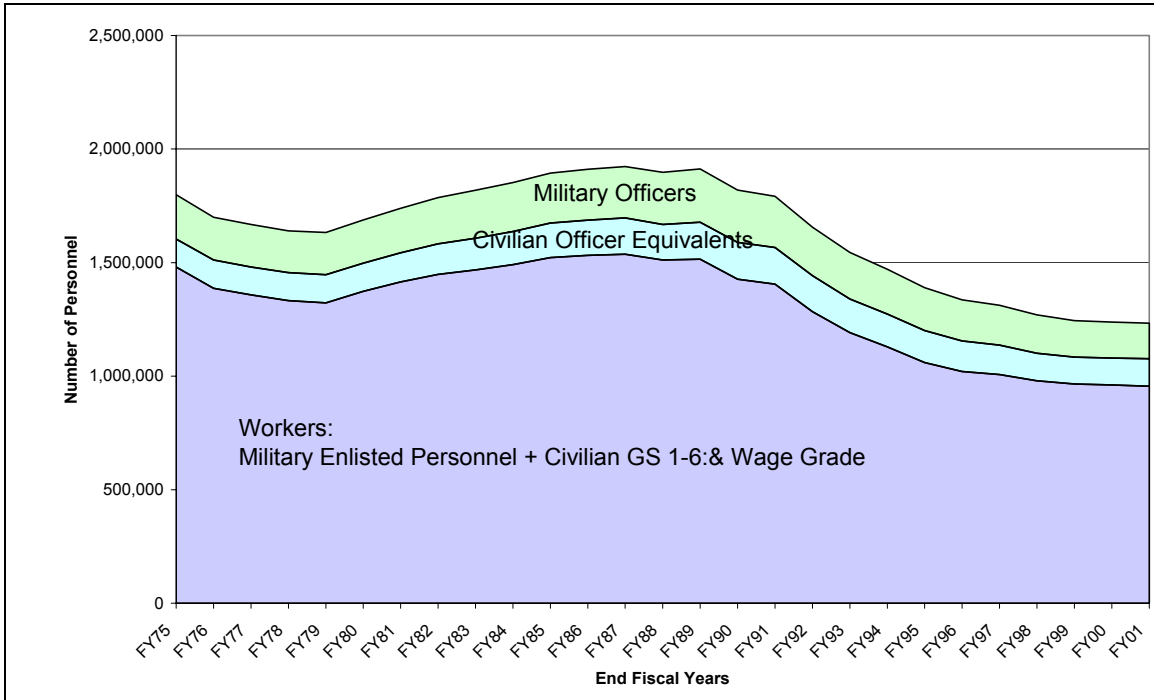
Figure 14. Army Bosses and Workers FY1975–FY2001

Figure 15. Army Bosses and Workers Mix FY1975–FY2001

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Figure 16 shows the worker-to-boss ratios for the military workforce, the civilian workforce, and the combined workforce for the Army. The ratio for the military workforce was about 6.5 at the end of FY1975 and declined to about 5.6 at the end of FY2001. The ratio for the civilian workforce declined steadily from almost 1.8 workers per boss in FY1975 to about two-thirds of a worker for every boss at the end of FY2001. There have been more bosses than workers in the civilian workforce since FY1992.

The combined ratio shows a decrease in workers per boss over the period, so that at the end of FY2001 the Army has about 3.4 workers per boss. This situation is offset to some extent by the increased use of contract employees, most of whom presumably would be workers. Even given prevailing standards, however, the Army civilian workforce appears to be top-heavy.


Figure 16. Army Worker-to-Boss Ratios FY1975–FY2001

B. Army Senior Leadership Group

A special topic of interest is the number and mix of Army senior leaders—general officers on the military side and senior executives on the civilian side. Figures 17 and 18 show respectively the numbers and the mix of generals and senior executives from FY1975 to FY2001. About one-third of the Army's senior leaders are civilians. In the 1970s pressure from Congress constrained the number of generals, and the Army met its perceived need for senior leaders by having more senior executives. In the 1980s the growth of senior executives appears to have stopped, and for the past 15 years or so the relative proportions and numbers of senior leaders has remained about the same.
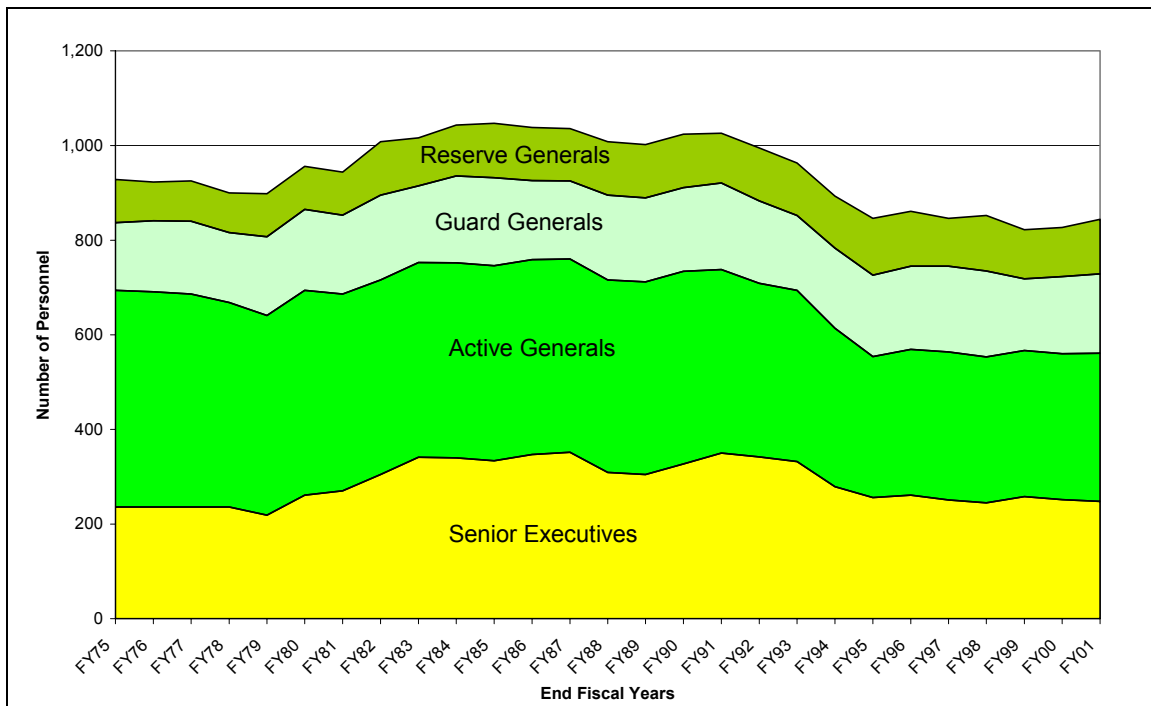
Figure 17. Army Senior Leadership Group FY1975–FY2001
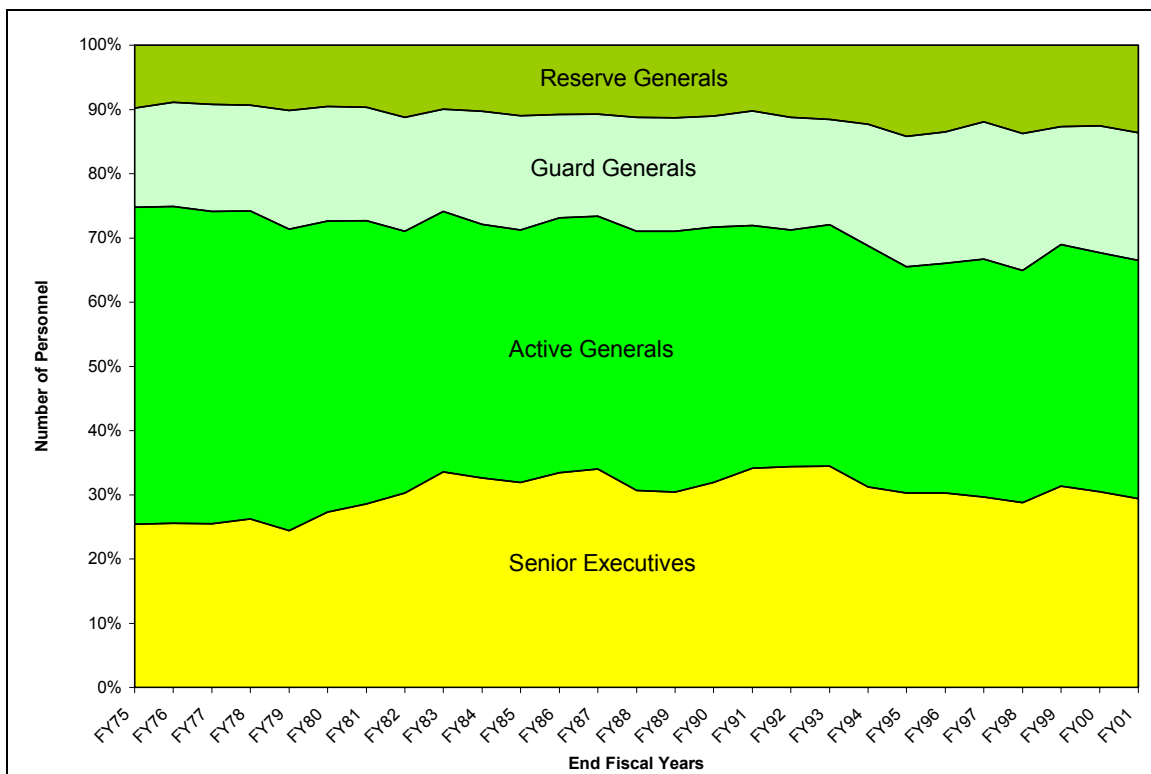
Figure 18. Army Senior Leadership Group Mix FY1975–FY2001

IV. OFFICER CONTENT BY FORCE MANAGEMENT CATEGORY

This section presents a view of the personnel grade structure of the Army arranged by what the people do. The mix of military and civilian personnel and military and civilian managers differs significantly within the Army. A few programs are performed entirely by military personnel, but most programs are accomplished by a mix of military and civilian personnel. Some programs are accomplished primarily by civilian employees, and in these programs military officers supervise civilian employees or manage contractors instead of commanding military personnel. For these programs, enlisted to officer ratios are not relevant.

A. Army Force Management Categories

For the purpose of this analysis, the Army is organized in accordance with the Army Force Management Categories (AFMCs) developed in earlier work to provide a basis for assessing the nature of the Institutional Army.[8] In this approach, the Army is divided into three major categories.

1. The Expeditionary Army

Army units, personnel, and resources provided to the unified commands for military operations constitute the Expeditionary Army. The Expeditionary Army consists almost entirely of TOE units (battalions, separate companies, and detachments) and headquarters that command intermediate organizations ranging from brigades, divisions, corps, theater commands, and field armies to Army component commands of unified commands. Expeditionary Army units are either forward deployed or deployable to a theater of operations. Some TDA units may deploy entirely or in part to support military operations overseas. The principal role of the Army is to create, train, and sustain the Expeditionary Army.

2. Army Support of Non-Army Programs

This category consists of the military personnel, civilian employees, and some services that the Army provides DoD to perform work that is not part of the Expeditionary Army or a contributor to it. The Army has a headquarters and small supporting activities in support of the Strategic Forces of the Air Force and Navy. The Army had a major role in strategic defense during the first part of the Cold War and will

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8   John R. Brinkerhoff, IDA Document D-2695, *The Institutional Army FY1975–FY2002*, June 2002.

play a major role again when a national missile defense system is deployed. Army military personnel and civilian personnel are assigned to the headquarters and supporting activities of agencies outside of DoD, international organizations, the Office of the Secretary of Defense, defense agencies, the Joint Staff, Joint Activities, and the headquarters and joint activities of all of the unified commands. Finally, the Army supports Defense-wide programs, such as intelligence, communications, foreign military sales, counternarcotics, and the base closure and realignment program, that benefit DoD as a whole but do not contribute directly to the Army. Non-Army programs are important to DoD but do not contribute to the Army's Title 10 responsibilities to raise, train, and sustain deployable TOE units for use by the combatant commanders. They are overhead for DoD but not for the Army.

3. The Institutional Army

The Institutional Army creates, organizes, equips, supplies, trains, readies, and sustains the units of the Expeditionary Army. In the Force Management Categories language, it is composed of seven major program groups:

- Expeditionary Army Support Programs
- Logistics Programs
- Materiel Development & Acquisition Programs
- Individual Training & Education Programs
- Health Care Programs
- Military Personnel Programs
- Army Administration Programs

In this section, Army personnel are stratified into three groups: commissioned officers and warrant officers, enlisted personnel, and civilians. Warrant officers are aggregated with commissioned officers because warrant officers were not identified separately in the FYDP until FY1998, and the DMDC data that does identify warrant officers cannot be correlated to FYDP elements. Similarly, the FYDP does not identify civilian employees by grade, so it is not possible to identify civilian officer-equivalents by program element or AFMC. As shown in the earlier section, about half of the Army's civilians are officer-equivalents, but this general ground rule cannot be applied to each of the AFMC programs.

For each of the major program categories and for selected major program groups and programs of the Army Force Management Categories language, the time series data

from the FYDP are shown both in absolute terms as numbers of personnel and in relative terms as the mix or percentage of each kind of personnel. The mix charts reveal the trends in proportions of the categories and can be used to estimate the officer content, but the absolute numbers are needed to keep the mix data in overall perspective. In some cases, officer content has been calculated and shown in line diagrams.

B. Officer Content of the Expeditionary Army

The Expeditionary Army includes the TOE units that deploy to overseas theaters to wage war and conduct other military operations, and one would expect it to hew to the traditional notions of military organization, including a substantial enlisted-to-officer ratio. Indeed, that is the case. While the overall Army has a ratio of about six enlisted personnel to every officer and warrant officer, or when counting civilians, three workers to ever boss, the Expeditionary Army, which is composed entirely of military personnel, has about nine enlisted personnel per officer and warrant officer.[9] When addressing the Expeditionary Army, the enlisted-to-officer ratio is a good measure of officer content because there are no civilian employees in these TOE units.

Figures 19 and 20 show the breakout of officers (including both commissioned and warrant officers) and enlisted military personnel in the Expeditionary Army. Officer content has increased from about 9% at end FY1975 to just over 12% in at end FY2001. The officer content has increased due partially to the increase in health care officers but also because of a conscious decision to design TOE units that have fewer enlisted personnel than earlier units had. Overall officer and warrant officer content is an average spread over several echelons of command. The percentage of officers is less in the small units at the lower levels of the echelon and increases as the organizations become larger.

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[9] The FYDP does show a small number of civilians in the Expeditionary Army for the Guard and Reserve, but this is an anomaly. See IDA Document D-2625. For this analysis, the Expeditionary Army is limited to military personnel.
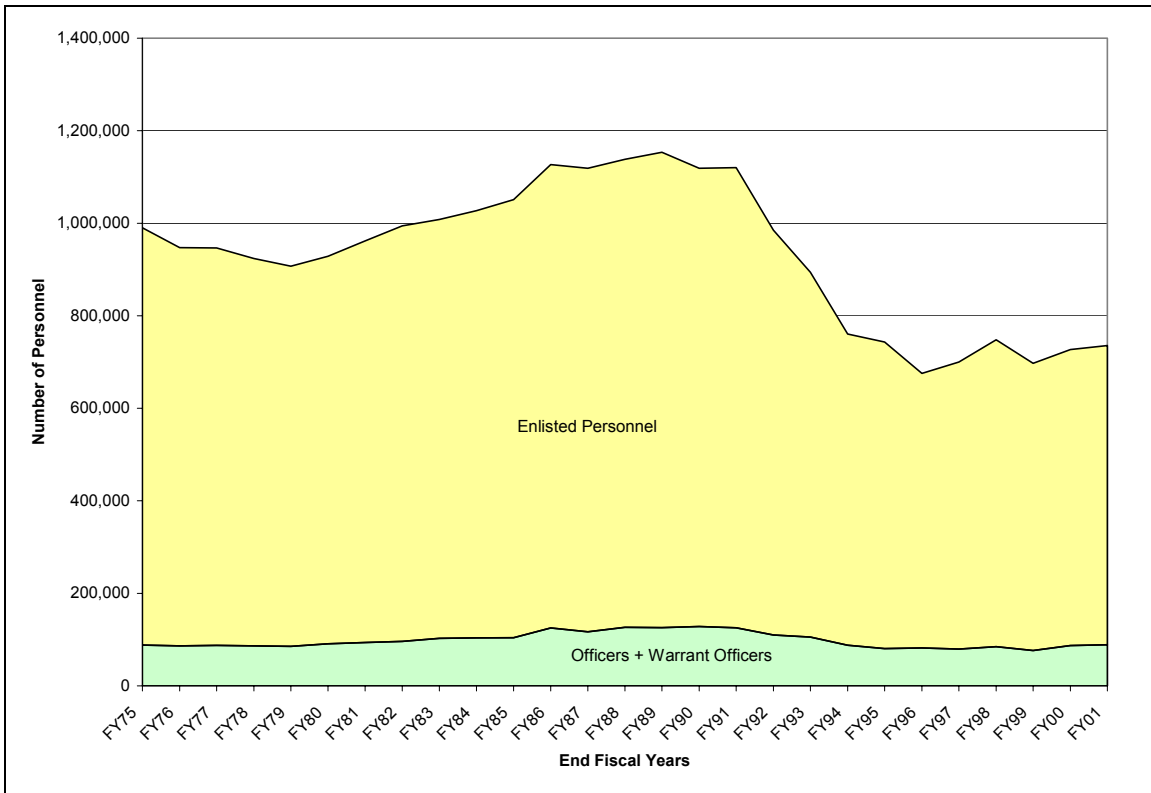
Figure 19. Expeditionary Army Military Personnel FY1975–FY2001
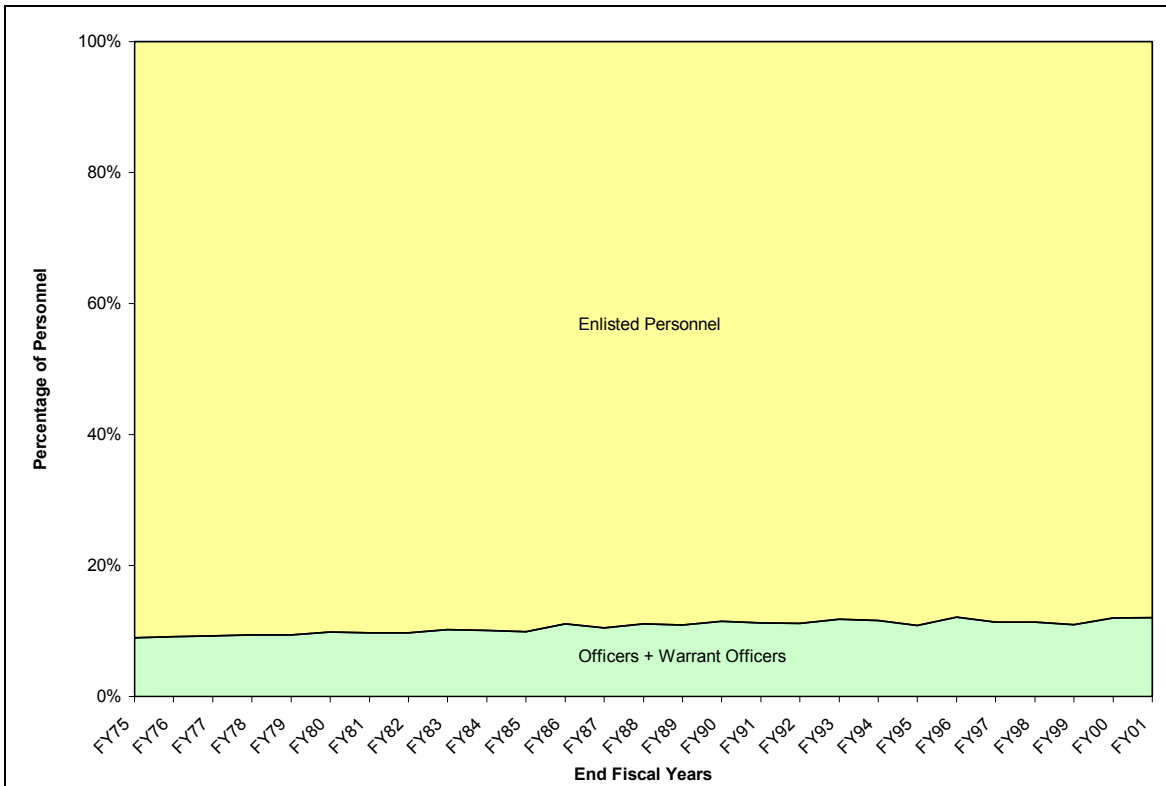
Figure 20. Expeditionary Army Military Personnel Mix FY1975–FY2001

In this section, the historical background for the numbers and grades of officers is explored, and variation of officer content vertically and laterally is explained.

The standards for grade and rank of line officers have not changed for over 200 years. In today's Army as in the Revolutionary War, the Civil War, and World War II, captains command companies, colonels command regiments/brigades, and major generals command divisions.[10] However, over the course of the past 200 years, the organizations commanded by these officers have increased greatly in terms of strength, combat potential, and capital investment. The rank of commanders in the Army's hierarchy of command is shown in Table 6.

Table 6. The Army Hierarchy of Command

Organization	Personnel Strength	Rank of Commander
Field Army/Theater Army	200,000 – 1,000,000	General
Corps	50,000 – 250,000	Lieutenant General
Division	10,000 – 20,000	Major General
Separate Brigade	3,000 – 6,000	Brigadier General
Brigade, regiment, group	1,500 – 4,000	Colonel
Battalion, Squadron	300 – 1,200	Lieutenant Colonel
Company, Battery, Troop	100 – 300	Captain
Platoon	20 – 60	Lieutenant

The difference between then and now can be illustrated by examining colonels. A colonel commanding a regiment in the Civil War had about a thousand soldiers (or fewer) equipped primarily with rifled muskets, but a colonel commanding a brigade or regiment in today's Army has several thousand soldiers equipped with weapons, vehicles, radios, and other equipment that cost several million dollars to procure and millions more to maintain. The grade of a colonel in command has not been elevated, but the responsibilities of a colonel in command have escalated.

Another difference between the past and now, however, is that there are now a lot more colonels than are needed to command brigades and regiments. Most colonels during the Civil War commanded regiments (or some other equivalent command), but

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[10] Until recently, the Army was quite parsimonious about high-ranking officers. George Washington was a major general throughout the Revolutionary War and was made a lieutenant general only in 1798 when he was recalled during a period of tension with France. During the Civil War, all of the US Army's corps and army commanders were major generals, except for U. S. Grant, who was promoted to lieutenant general in 1864 when he was put in command of all of the Union armies. During World Wars I and II, many corps commanders were major generals at the outset, although most were later promoted to lieutenant generals.

only a few colonels today command brigades.   Most of the colonels today serve on staffs of major management headquarters.   Colonels are relatively rare in the major organizations of the Expeditionary Army.   Table 7 shows the number of colonels and the ratio of total troops to colonels at the levels in the hierarchy of command for a set of generic organizations.   At the brigade and division levels, colonels are rare, but they become more prevalent relatively at the corps and theater army levels. Only one of the seven colonels at the division level is a staff officer—the division chief of staff. At the corps level, about one-third of the colonels are staff officers. At the theater army level, about 40% of the colonels are staff officers. To appreciate the officer content of the combat formations, consider that a corps of three divisions and 120,000 soldiers would have only 15 generals and 60 colonels.

Table 7. Colonels in the Expeditionary Army

Organizational Level	Colonels			Troops	Troops/ Colonel
	Commanders	Staff	Total	Troops	Colonel
Theater Army (3 corps)	150	100	250	400,000	1,600
Corps (3 divisions + corps troops)	40	20	60	120,000	2,000
Division (Reinforced)	6	1	7	18,000	2,570
Brigade Combat Team	1	0	1	5,000	5,000

Most colonels serve outside the Expeditionary Army on staffs. Table 8 shows the number of colonels and the number of colonel command positions for FY2001.[11] The Total Army has about 1,200 command positions for its 7,000 colonels, so only 17% of the colonels can be a commander at any one time. The other 83% (about 6,000 colonels) will fill staff positions. The same thing applies to lieutenant colonels, who command battalions, and to a much lesser extent to captains who command companies. Majors do not normally command but serve as principal staff officers at battalion and brigade level and as assistant staff officers at higher headquarters.

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[11]   Number of colonels taken from DMDC data.   Colonel Command positions from G1, Officer Management Directorate for the active Army, Mr. Charles Martin, NGB for National Guard officers, and Office Chief Army Reserve for Reserve officers.

Table 8. Army Colonels and Colonel Command Positions FY2001

Component	Colonels	Command Positions	Percentage (%) in Command
Active	3,568	561	15.7
Guard	1,430	411	28.7
Reserve	2,007	246	12.3
Total	7,005	1,218	17.4

The enlisted-to-officer ratio is greatest in the battalions that comprise the basis of the Expeditionary Army. This ratio grows smaller as the battalions are assembled into larger organizations, such as brigades, divisions, and corps. Tables 9 through 11 show the number of officers, warrant officers, and enlisted personnel in the required columns of the tables of organization and equipment (TOEs) of selected combat and support units.

The basic enlisted-to-officer ratio is established at the platoon level, where a lieutenant commands a group of enlisted personnel directly and personally. The enlisted-to-officer ratio diminishes as platoons are formed into companies; companies, into battalions; and battalions, into brigades. This occurs because commanders, deputy commanders or executive officers, and staff officers are added at each echelon above platoon. Table 9 shows the effect of having additional officers at higher levels for an engineer combat brigade for a heavy division.

Table 9. Enlisted-to-Officer Ratios for an Engineer Combat Brigade
TOE 5-330L, 1993

Unit	Officers	Warrants	Enlisted	E-O Ratio
Engineer Combat Platoon	1	0	27	27.0
Engineer Combat Company	5	0	98	19.6
Engineer Combat Battalion	25	1	410	15.8
Engineer Combat Brigade	88	4	1274	13.3

Table 10. Legacy Force L-Series TOEs, 1990s

Unit	Officers	Warrants	Enlisted	E-O Ratio
Platoons				
Light Infantry Rifle Platoon	1	0	34	34.0
Mechanized Infantry Rifle Platoon	1	0	36	36.0
Tank Platoon	1	0	15	15.0
Companies				
Light Infantry Rifle Company	5	0	125	25.0
Mechanized Infantry Rifle Company	5	0	107	21.4
Armored Cavalry Troop	6	0	120	20.0
Tank Company	5	0	57	11.4
155mm Howitzer Battery	8	0	121	15.1
Battalions				
Light Infantry Battalion	34	1	535	15.1
Mechanized Infantry Battalion	45	2	766	16.3
Tank Battalion	50	2	756	14.5
155mm Howitzer Battalion	40	2	508	12.1
HEADQUARTERS*				
Separate Infantry Brigade	49	4	210	4.0
Airborne Division	77	8	192	2.3
Mechanized Infantry Division	91	8	179	1.8

* Headquarters and Headquarters Companies.

Table 11. Interim Brigade Combat Team TOE (3rd Brigade, 2nd Infantry Division)

Unit	Officers	Warrants	Enlisted	E-O Ratio
Rifle Platoon	1	0	36	36.0
Weapons Platoon	1	0	14	14.0
Rifle Company	7	0	164	23.4
Anti-Armor Company	6	0	45	7.5
MI Company	6	6	59	4.9
Engineer Company	6	0	113	18.8
Signal Company	4	3	67	9.6
Infantry Battalion	41	0	624	15.2
Field Artillery Battalion	28	2	255	8.5
RSTA Squadron	39	1	369	9.2
Support Battalion	37	9	225	4.9
Brigade HHC	41	6	69	1.5
Brigade Combat Team	290	27	3184	10.0

This sample of enlisted to officer ratios reveals the logic underlying the design of Army TOE units. The ratio is greatest for infantry and reconnaissance units, ranging from 40 in platoons to 15 in battalions. Units equipped with large, expensive equipment tend to have smaller enlisted-to-officer ratios. The current tank platoon, for example, consists of 4 tanks, each with a crew of 4, for a total of 1 officer and 15 enlisted personnel, and an enlisted to officer ratio of 15. A tank company, however, has a ratio of 11 or 12, and a tank battalion has a ratio of 15, comparable to that of an infantry battalion. This is because the supporting elements for fuel and maintenance to keep the tanks going are centralized in the battalion headquarters and service company or in a separate service company. Artillery batteries and battalions also have a low enlisted-to-officer ratio because they are designed to operate and maintain their cannons or missile launchers. Support units with complex equipment have more officers proportionately, including warrant officer technicians. Finally, headquarters, which are composed of commanders, staff officers, and communicators, have a very high officer content with an enlisted-to-officer ratio of 4 or less. The numbers of officers and enlisted personnel in these TOE units is a function of tactical doctrine, the equipment to be operated and maintained, and the provision of adequate command in combat.

Figure 21 provides another view of the officer content of the Expeditionary Army. The average officer content of the entire Expeditionary Army ranges from 9% to 11%. The content of three major kinds of units varies according to their composition.

- Combat organizations (divisions, separate brigades, and separate combat organizations) have the lowest officer content, ranging from about 6% to 10%.

- Support units have a higher officer content than the combat units, ranging from 10% to 11%, because of the need to operate a variety of support functions and because there are many specialist officers and warrant officers in these units.

- Special Operations Forces have a high officer content of about 20% or more in the past 15 years because these units are designed to consist of officers and NCOs with only a few junior enlisted personnel.

There has been, however, a distinct increase in officer content over the past 27 years. This is noticeable particularly for the combat elements. The increase in officer content reflects the movement from infantry to armored and mechanized formations and the increase in the complexity of both weapons and tactics in recent years. It is also the result of a deliberate effort to create smaller combat units and support units for the demands of modern warfare for strategically mobile and tactically agile units. The leaner

units tend to have fewer enlisted personnel but more technicians and officers to deal with and operate the new equipment, which is sophisticated and expensive.
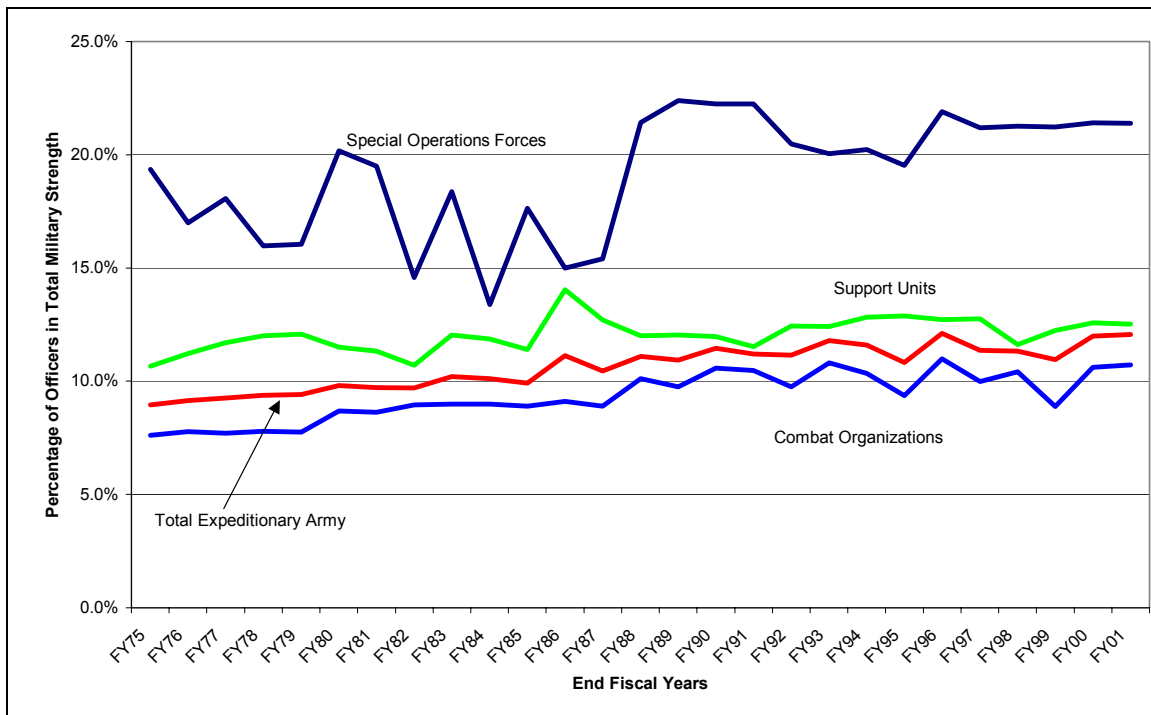
Figure 21. Officer Content in the Expeditionary Army FY1975–FY2001

C.   Officer Content of Army Support of Non-Army Programs

Army support of non-Army programs is of three general kinds: Strategic Forces, Army personnel assigned to non-Army Headquarters, and management of DoD-Wide Programs. With a few exceptions these elements have high officer content.   Army personnel assigned to the Office of the Secretary of Defense, the Joint Staff, or the unified command headquarters are primarily field grade officers and generals, with only a few enlisted personnel—usually senior NCOs. This is because high-level staff positions require experienced and educated personnel characteristic more of lieutenant colonels and sergeants major than lieutenants or privates.

Figures 22 and 23 show the officer content of Army support for all non-Army programs. This is a combined workforce with many civilian employees. The number of officers assigned to these activities has remained at about 8,000, but the officer content has increased as the number of enlisted personnel and civilians has been reduced sharply.
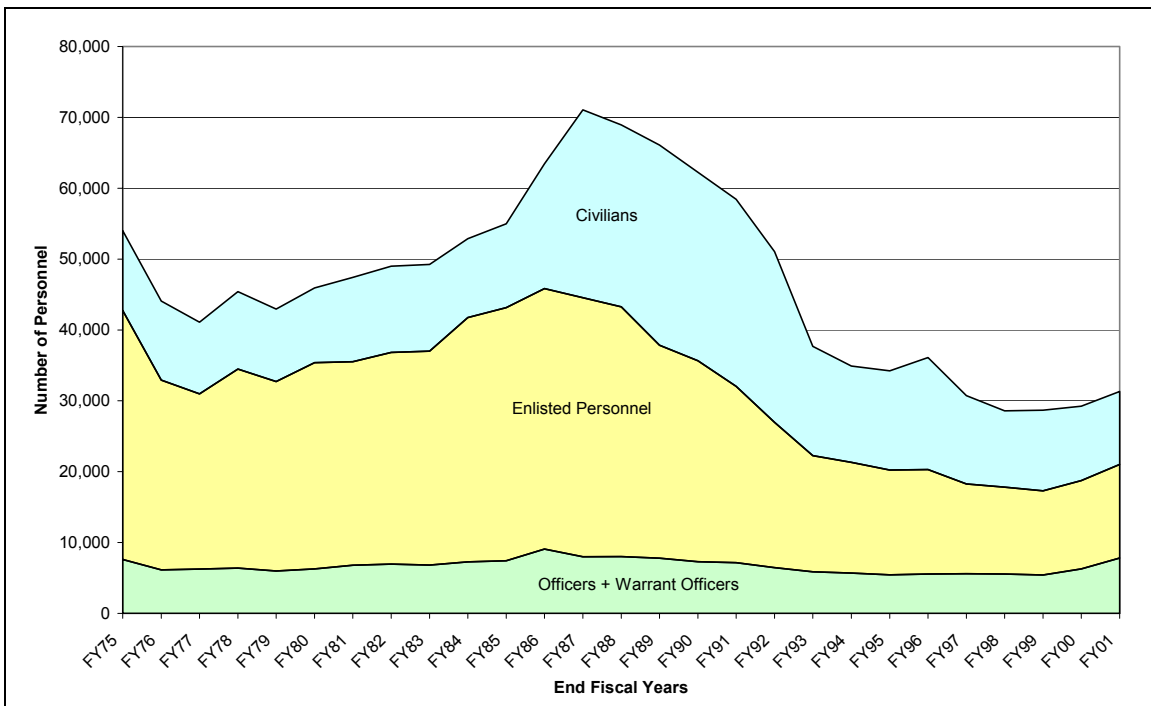
Figure 22. Army Personnel in All Non-Army Programs FY1975–FY2001
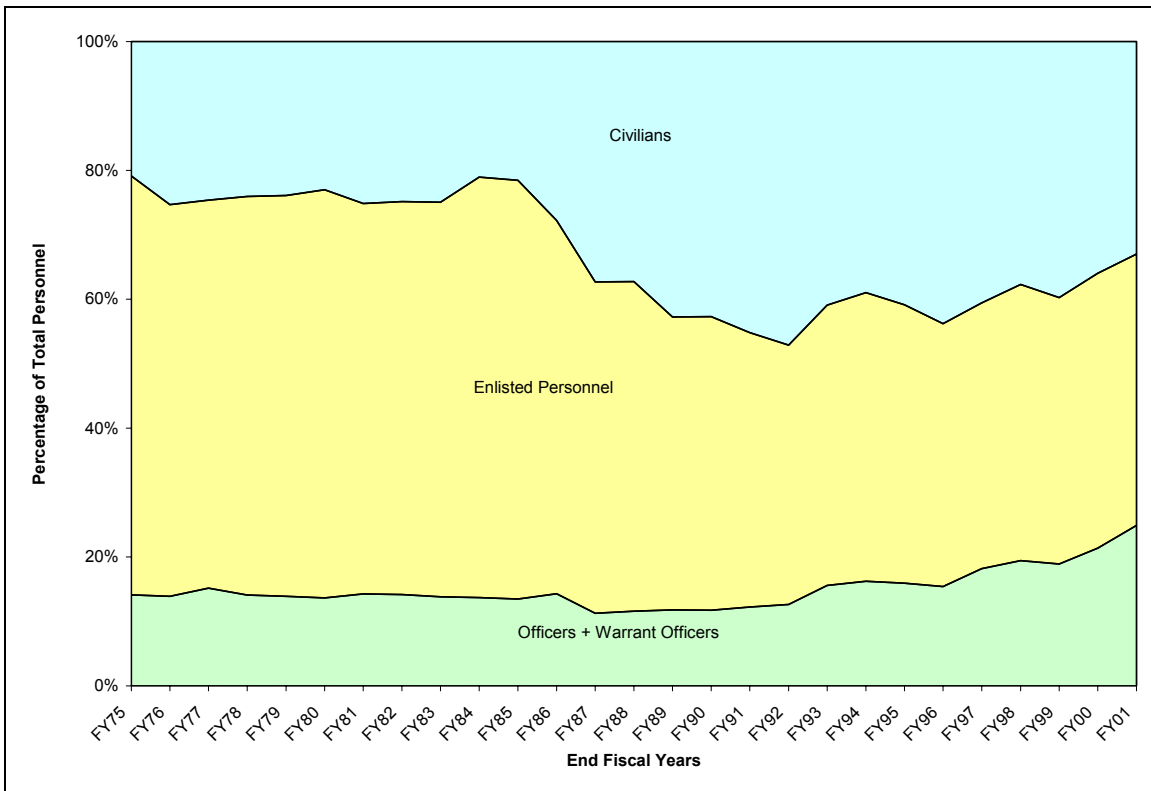
Figure 23. Mix of Army Personnel in All Non-Army Programs FY1975–FY2001

Figures 24 and 25 show Army personnel working in non-Army headquarters and activities. There has been an increase in the number and proportion of officers in this category because of recent increases in the staffs of joint headquarters and activities, particularly the assignment of more Guard and Reserve officers to joint headquarters.
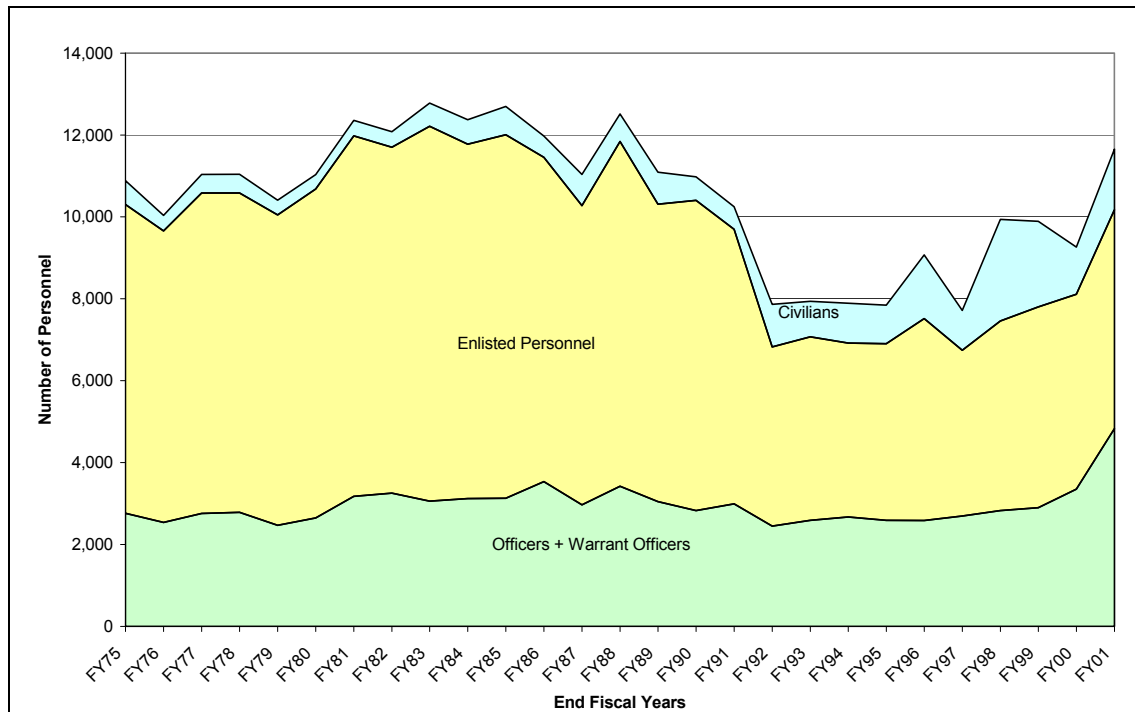
Figure 24. Army Personnel in Non-Army Headquarters FY1975-FY2001
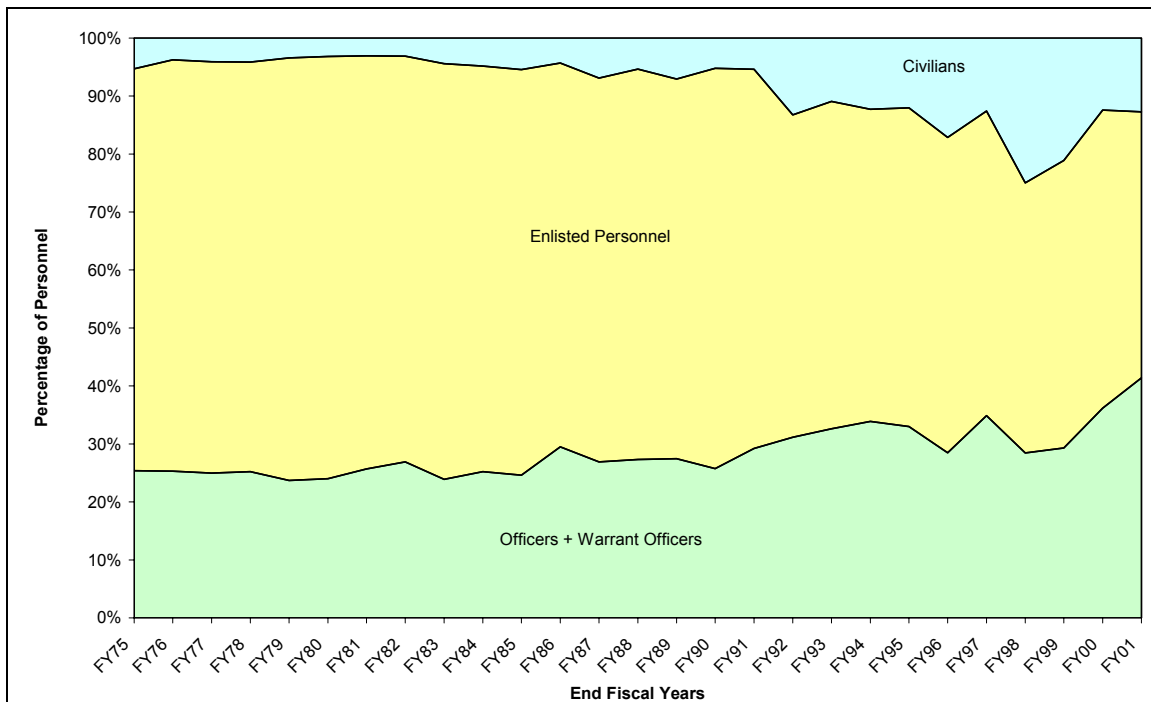
Figure 25. Army Personnel Mix in Non-Army Headquarters FY1975–FY2001

The personnel grade structure of Army support for non-Army programs at the end of FY2001 is shown in Table 12. Note the high officer content and the low enlisted-to-officer ratios characteristic of these kinds of organizations.

Table 12. Personnel Grade Structure of Non-Army Programs, End of FY2001

Program Category	Officers + Warrant Officers	Enlisted Personnel	Civilians	Total	Officer Content (%)	Enlisted-to-Officer Ratio
Strategic Programs	64	29	67	160	40.0	0.5
Non-Army Hqs	4,827	5,292	1,539	11,658	41.4	1.1
DoD Programs	2,830	7,956	8,730	19,516	14.5	2.8
Total	7,721	13,277	10,336	31,334	24.6	1.7

The numbers and grades of the personnel the Army provides to these programs depend on the requirements established by OSD and the joint headquarters, and program managers. While the total number of personnel provided for these non-Army activities is a small proportion of Army strength, it is a major reason why the Army has so many officers.

D.   Officer Content of the Institutional Army

The Institutional Army offers a distinctly different view of officer content, for it consists of a variety of workforce mixes and includes most of the civilian employees of the Army. These programs are the ones in which, as noted above, military personnel work side by side with civilian employees and—now to an increasing extent—with contractor personnel. In many cases military officers supervise civilians and contractors. In some cases civilian officer-equivalents supervise military officers and enlisted personnel.   In some programs the enlisted-to-officer ratio is irrelevant because the designed composition of the program calls for few enlisted personnel.

To illustrate the officer content of the Institutional Army, the following figures show officer and warrant officer content, enlisted content, and total civilian content. It would be much more instructive to be able to show the mix of civilians between officer-equivalents and workers, but the data available in FYDP element level of detail does not make this distinction. It would be useful, however, to remember that about half of the

civilians are officer-equivalents. For programs such as supply operations and maintenance operations that entail blue-collar work, most of the civilians will be workers, but for programs that involve high-level headquarters, most of the civilians will be officer-equivalents.

To avoid repetitious detail, only six area charts showing the content and trends of the various programs of the Institutional Army are included. The first pair of charts shows the entire Institutional Army. The second pair shows Logistics Programs, and the third pair, Army Administration Programs. Charts for each of the seven program groups and some of the programs are in Appendix A.

Figures 26 and 27 show the content and mix, respectively, of the Institutional Army. Although there have been significant reductions in enlisted personnel and civilian employees during the 27-year period, the number of officers and warrant officers has remained about the same, leading to a significant increase in the percentage of officers and warrant officers. The decreases in enlisted personnel and civilian employees may be attributed in part to increased use of contractors, as well at to actual program reductions and increased efficiency. This has not led to a corresponding decrease in officers used to supervise the programs.
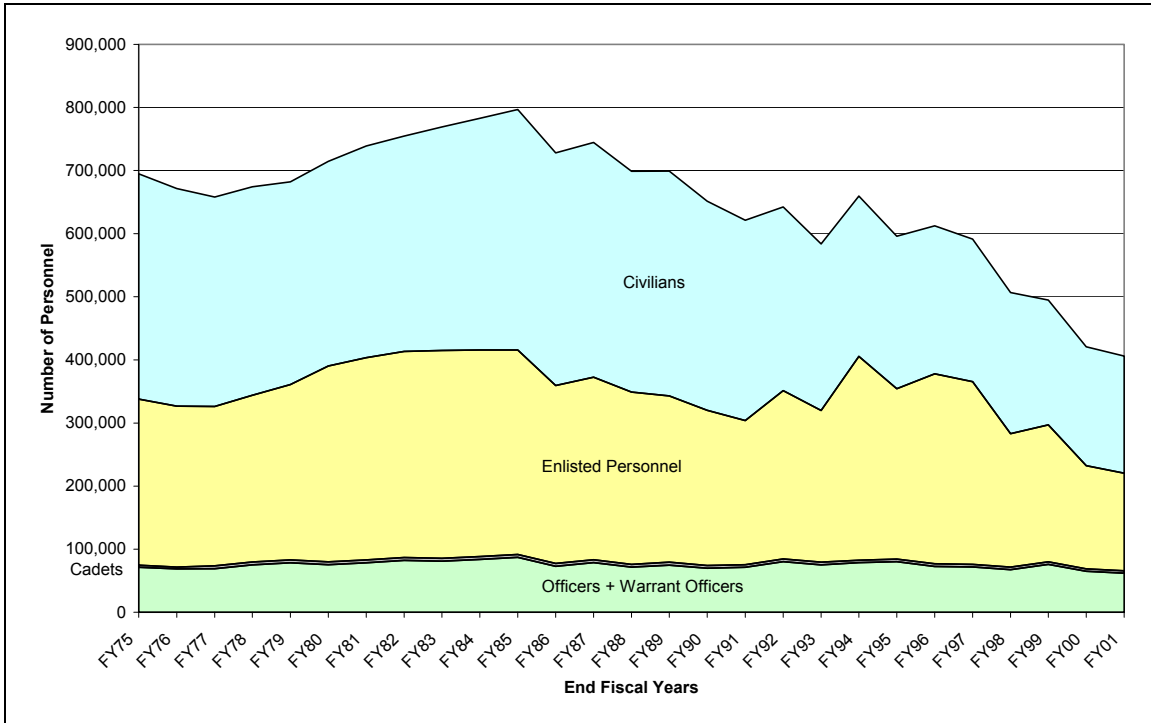
Figure 26. The Institutional Army FY1975–FY2001
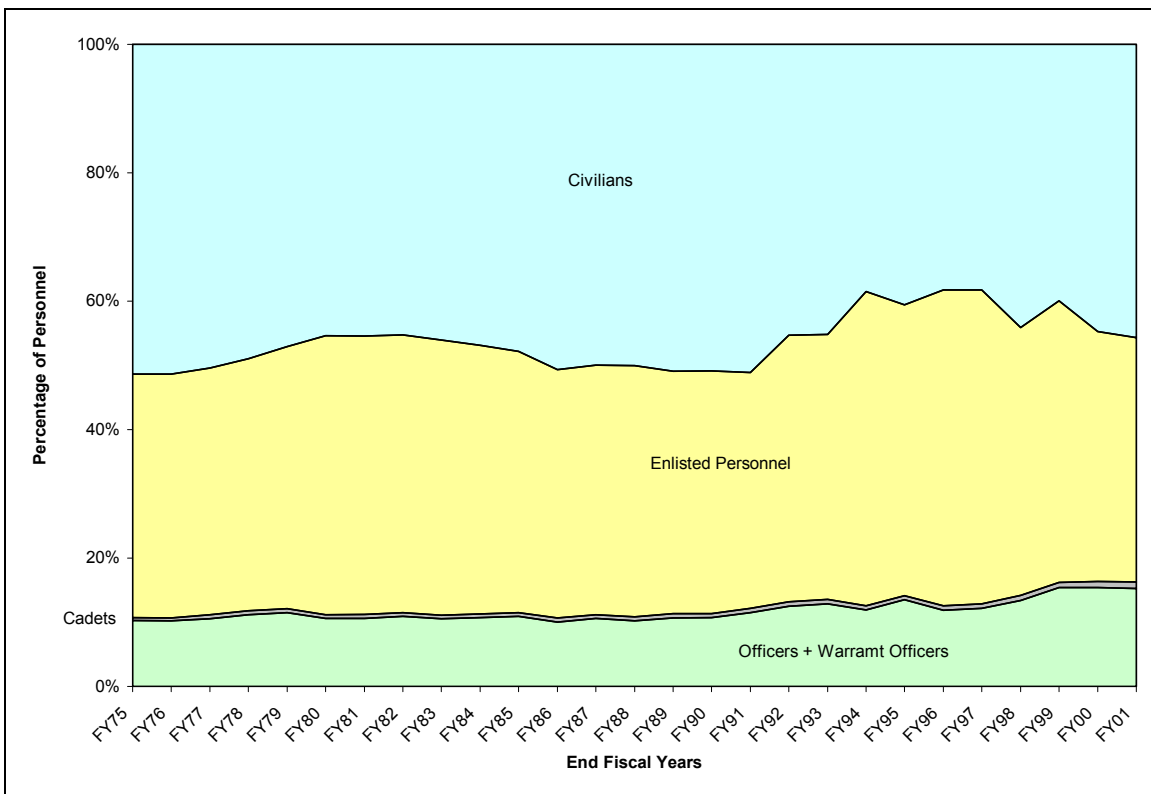
Figure 27. The Institutional Army Mix FY1975–FY2001

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Figures 28 and 29 show the content and mix of the Logistics Program Group. In these programs the number of military personnel—both officer and enlisted—is a tiny part of the total workforce. There are a few senior and field grade officers involved to provide military supervision and expertise to the largely civilian workforce, which undoubtedly includes a large number of civilian officer-equivalents. In this program group, the military enlisted-to-officer ratio has no significance, and indeed in FY2001 there is about one enlisted person for each officer. In these programs, there has been a great deal of outsourcing, which does not necessarily allow for fewer officers and civilian officer-equivalents needed to manage the contracts and see that the work is done well.
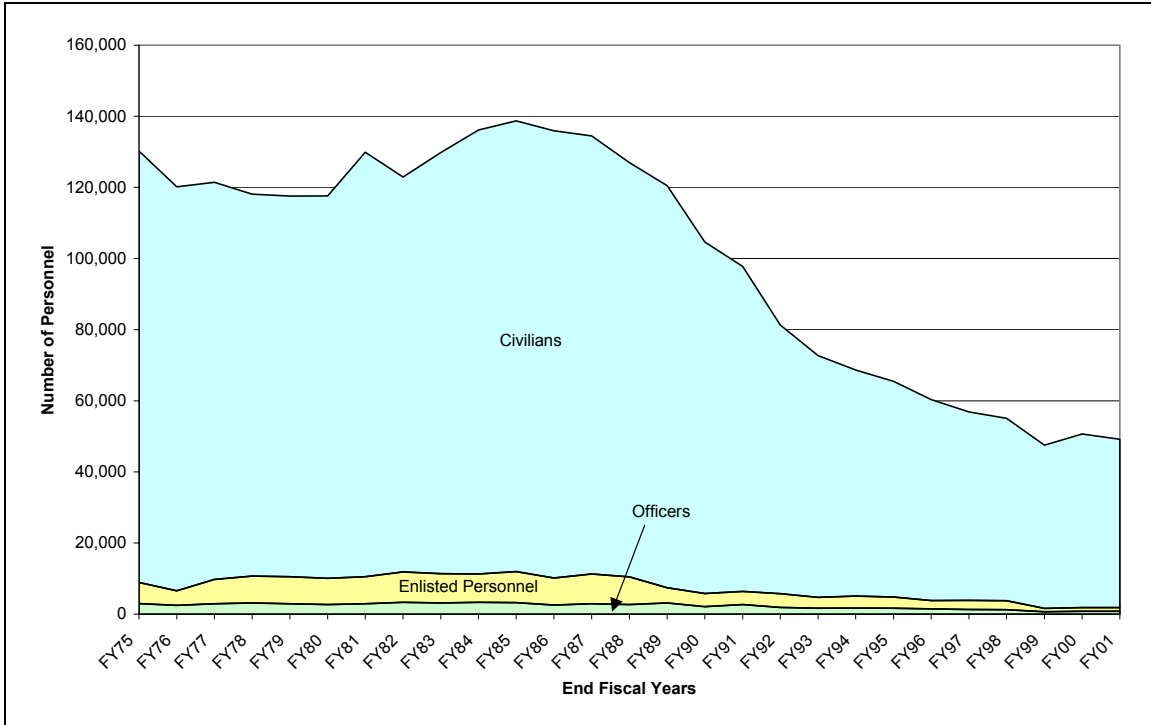
Figure 28. Army Logistics Programs FY1975–FY2001
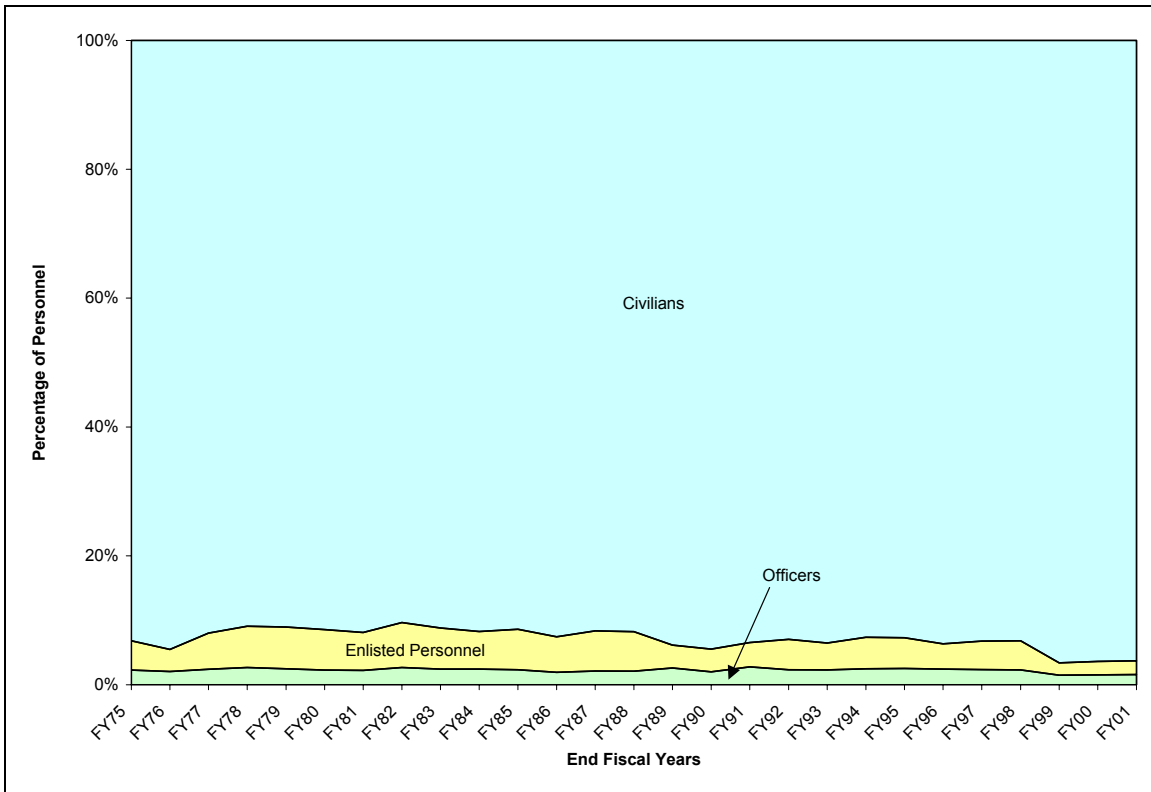
Figure 29. Army Logistics Programs Mix FY1975–FY2001

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Figures 30 and 31 show the content and mix for Army Administration Programs, which include the management headquarters and activities responsible for managing the entire Department of the Army. There have been significant reductions in the personnel workforce for these activities. There has also be a reduction in the number of enlisted personnel, so that there are about one-quarter enlisted person for each officer. Although the numbers of officers and warrant officers in this program group have also been reduced, because of the greater reduction in workers the percentage of officers and warrant officers increased from 20% to about 25%.
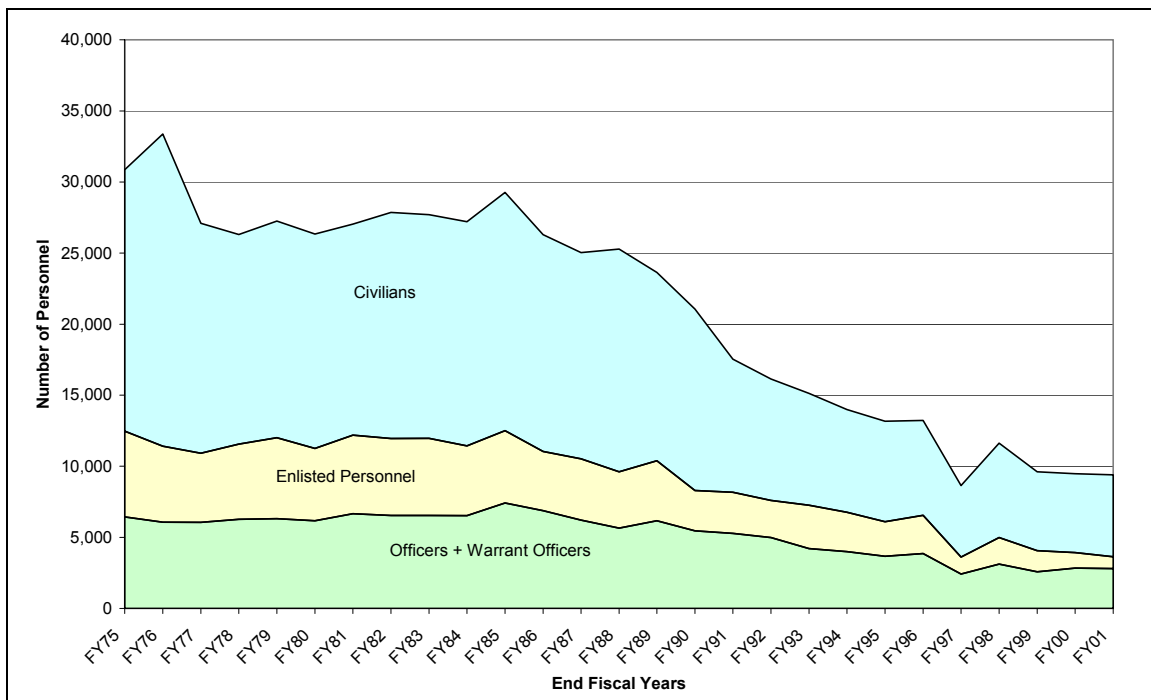
Figure 30. Army Administration Programs FY1975–FY2001
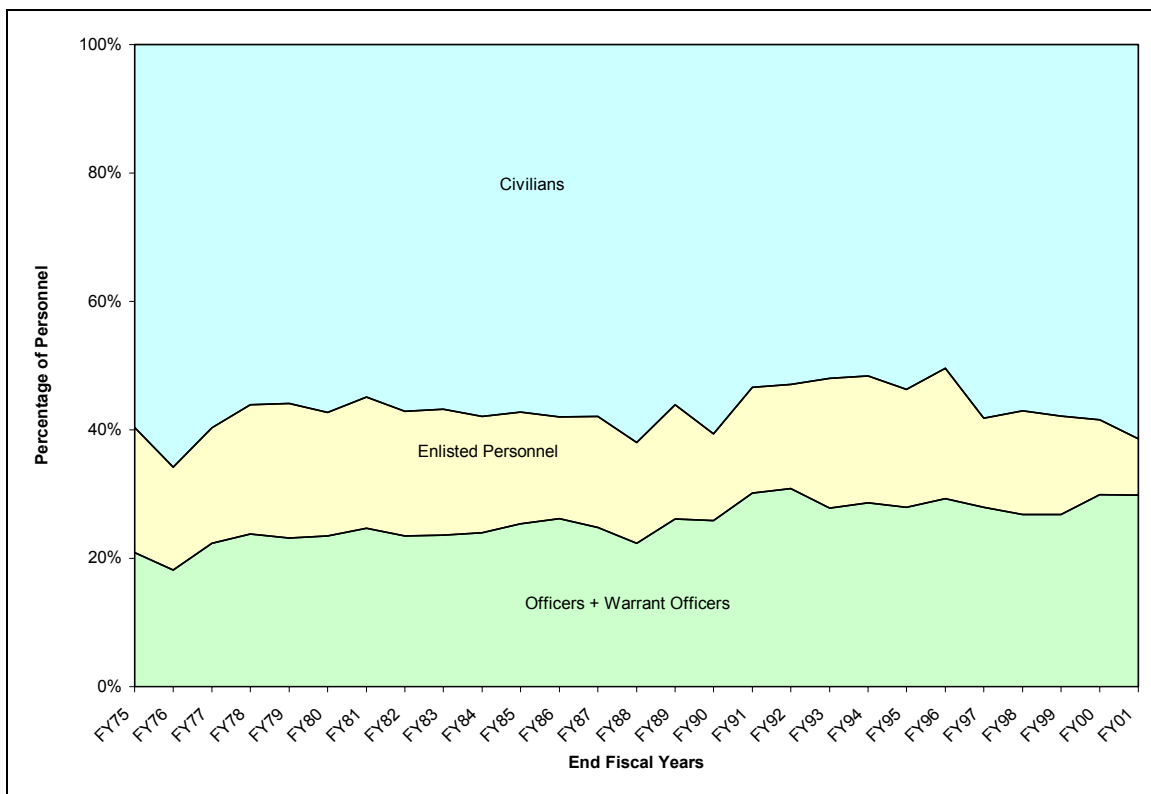
Figure 31. Army Administration Programs Mix FY1975–FY2001

The variety within the Institutional Army is illustrated by the data in Table 13, which shows the composition of each of the major program groups. Detailed data on each of the programs within the program groups is in Appendix A. The composition of each program and program group is determined by the nature of the work to be done.

Table 13. Personnel Content of Programs of the Institutional Army, End of FY2001

Program Group	Officers	Enlisted	Civilians	Total	Officer %	E-O Ratio
Expeditionary Army Support Programs	22,012	33,952	60,193	116,157	19.0	1.5
Logistics Programs	778	1,045	47,351	49,174	1.6	1.3
Materiel Development & Acquisition Programs	1,381	1,113	19,531	22,025	6.3	0.8
Individual Training & Education Programs	21,361	79,002	19,696	120,059	17.8	3.7
Health Care Programs	10,509	15,012	21,701	47,222	22.3	1.4
Military Personnel Programs	3,139	23,560	12,292	38,991	8.1	7.5
Army Administration Programs	2,805	828	5,771	9,404	29.8	0.3
Total Institutional Army	61,985	154,512	186,535	403,032	15.4	2.5

- *Expeditionary Army Support Programs* include training support, readiness support, and installation support for the entire Expeditionary Army. Officers and NCOs provide training support, and these units are characterized by high officer content. Readiness support includes a variety of activities that are also high in officer content. Base operations and maintenance, on the other hand, is performed primarily by civilian employees and contractor personnel, with military officers in charge.

- *Logistics Programs* are staffed almost entirely by civilians, with a few officers and even fewer enlisted personnel to provide high-level supervision and the benefit of military experience.

- *Materiel Development & Acquisition Programs* are also dominated by civilian employees, with military officers providing military expertise, particularly in testing of new items, and a few enlisted personnel for operational testing management.

- *Individual Training and Education Programs* consist of both the trainers, who develop and deliver the training, and the trainees and students who benefit from the training. Almost all of the trainees and students are military personnel—either officer or enlisted as required to replace losses and provide

personnel with the required skills. Officers and NCOs deliver military training. The civilians in this program group are engaged primarily in operating and maintaining the training installations and facilities.

- *Health Care Programs* are also officer heavy because doctors, nurses, and many other kinds of health care specialists are commissioned officers. Most of the civilian employees are engaged in operations and maintenance of health care installations and facilities.

- *Military Personnel Programs* include recruiting and processing, military personnel management, military family housing, and the individuals accounts. NCOs do the recruiting and processing, with a few officers for command and staff positions in the hierarchy. Military personnel management is also staffed mostly by military personnel—all officers and NCOs. Military Family housing, on the other hand, is operated almost entirely by civilian employees. Finally, the individuals accounts are all military personnel.

- *Army Administration Programs* have a high officer content and three times as many officers as enlisted personnel. There are also a substantial number of civilians, most of whom are officer-equivalents.

This detailed examination of the personnel grade structure of the Institutional Army reinforces the view that averages are dangerous—particularly when dealing with organizational staffing. Each of the programs of the Institutional Army is staffed in accordance with the needs of a particular set of work centers—each in turn staffed to produce specified outputs.

A broad appraisal of the Institutional Army does not reveal any obvious examples of overstaffing of officers. Instances of high officer content in some programs appear to be consistent with the nature of those programs, and there are no obvious cases of excessive officer strengths. The irrelevance of the enlisted-to-officer ratio as a criterion for staffing these kinds of activities is made clear in this analysis. The data do not indicate that there are too many officers with respect to enlisted strength, and may in some cases suggest that low enlisted-to-officer ratios are the result of commendable actions to reduce the number of enlisted personnel in programs staffed primarily by civilian employees.

It is possible that officer presence call be reduced further in some of the program groups of the Institutional Army. When the large number of civilian officer-equivalents that are in these program are taken into consideration, it is likely that several of these programs are already being managed by civilian employees. The question is the

extent to which military personnel are needed in these support functions to assure that they will remain relevant to the support of the Expeditionary Army.

V. OBSERVATIONS

The Army is a complex organization, and its personnel grade structure reflects that complexity. The Army is a blend of three components, two basic kinds of personnel, many inconsistent external constraints, and internal constraints resulting from tradition and inertia. This analysis, although hampered by incommensurable databases, does shed some light on the personnel grade structure and supports some general observations.

The personnel grade structure appears to be appropriate. There are no glaring instances in which it is obvious that the Army has more officers than is reasonable and normal for modern armies. Table 14 shows the distribution of officers and warrant officers by component and major program group, and Table 15 shows the percentages.

Table 14. Distribution of Army Officers and Warrant Officers, End of FY2001

Program Group	Active	Guard	Reserve	Total
Expeditionary Army	32,595	34,627	21,489	88,711
Non-Army Programs	6,224	136	1,444	7,804
Institutional Army	38,401	3,693	20,017	62,111
Total Army	77,220	38,456	42,950	158,626

Table 15. Percentage Distribution of Officers and Warrant Officers, End of FY2001

Program Group	Active	Guard	Reserve	Total
Expeditionary Army	42.2%	90.0%	50.0%	55.9%
Non-Army Programs	8.1%	0.4%	3.4%	4.9%
Institutional Army	49.7%	9.6%	46.6%	39.2%

About 56% of Army officers serve in the units of the Expeditionary Army. The distribution of officers in the Expeditionary Army is consistent with prior such utilization. Whether there are too many officers in the Army's TOE units is not a personnel issue but one of the role of officers in combat. The demand for these officers depends on military tactics, doctrine, and organizational concepts.

About 5% of Army officers work on non-Army programs. Some 4,800 officers work outside of the Army in high-level positions on the staffs of the Secretary of

Defense, the Chairman of the Joint Chiefs of Staff, the joint combatant commanders, international headquarters, Defense Agencies, and other Federal agencies. Another 3,000 work inside the Army on DoD-wide programs. The demand for these officers is established by the Office of the Secretary of Defense on behalf of the ultimate users of experienced military personnel.

About 39% of Army officers are assigned to the units of the Institutional Army. These officers are part of a combined military-civilian workforce. The demand for these officers, and for NCOs and civilian employees, is a product of the manpower process, which starts with a description of work to be done. The manpower process translates work to be done into a position description that specifies the knowledge and experience an incumbent needs to be able to do that work. Knowledge translates into skill, training, and education. Experience translates into time in service, and then translates into grade by current rules. Grade is a statement of relative rank and compensation. The standards applied to military personnel assigned to TDA units that have a combined military-civilian workforce are based on grade standards that, while separate for military and civilian personnel, are coordinated by informal understanding of equivalent ranks.

It is very likely that the demand for officers exceeds the supply. The supply of military personnel is constrained by multiple laws, regulations, and policies that tend to be both ambiguous and conflicting. Constraints include strength ceilings, officer ceilings, grade ceilings, man-day ceilings, and—most of all—budgets. Without these constraints, the numbers and grades of officers would increase by a great deal, which is of course why the constraints exist.

The analysis makes explicit the large and growing role of civilian senior executives and managers in the management of the Army. About one-third of top management and 40% of middle management of the Army are civilian employees. The number of civilian officer-equivalents in the Institutional Army undoubtedly exceeds the number of military officers by a significant amount. The issue is the number of military officers needed for programs that are essentially commercial in nature.

When the Army is broken down into its separate parts, the grade structure of each part appears by inspection to make sense. That is not to say that there are too many or too few officers in one or more of the parts. When the parts are aggregated, the overall content or ratios do appear to indicate a high proportion of officers and civilian officer-equivalents. This does not occur in the Expeditionary Army where, despite some increases in specialist officers (particularly medical), the distribution of officers is

reasonable. The problem, if there is one, is in the Institutional Army and in the high-level management headquarters of the Army and DoD. Yet, even in these headquarters, and perhaps particularly in these headquarters, the experience and ability indicated by promotion to field grade rank is necessary for proper oversight, management, and leadership of the enterprise. The problem of excessive middle managers occurs in many large organizations, civilian as well as governmental. Simply cutting managers or officers may exacerbate the problem by leaving layers of management less able to do their work. The solution that apparently does work for corporations in this situation is to eliminate entire layers of management and then staff the remaining headquarters with managers whose rank is sufficient to assure that they have the experience and ability do their jobs well.

The grade structure of the Army workforce is an artifact of staffing standards applied to the design of military units and the composition of the Civil Service. The Army establishes the numbers and grades of personnel believed appropriate to fight on the tactical level, and this construct is carried upward hierarchically to establish the overall enlisted and officer grade structure. A similar process is carried out for civilian employees in the design of units that have both military personnel and civilian employees. When there is a unit with a mixed military-civilian workforce, there has to be a method of equating military and civilian grades. When the grade structures of each of the Army's units are aggregated, the result may or may not be reasonable. Indeed, the multiple constraints applied by Congress and OSD on grades of military officers and civilian employees indicate that there is a lot of dissatisfaction with the results. The logical remedy for perceived excesses in military officer or civilian officer-equivalent personnel strength is to start at the bottom and revise the grade standards downward. That is unlikely to happen, however, because it goes against the historical trend toward higher and higher grades. Overall, the Army's military grade structure appears to be consistent with the experience and expectations of those in charge. Whether the grade structure of DoD's military personnel and civilian employees can be reduced en masse, is another question—and one worthy of contemplation.

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Appendix A
ADDITIONAL DETAIL ON THE GRADE STRUCTURE
OF THE ARMY

CONTENTS

FIGURES

Appendix A
ADDITIONAL DETAIL ON THE GRADE STRUCTURE
OF THE ARMY

This appendix provides detailed information on the grade structure of the Army that was not included in the main report. The bulk of the appendix consists of area charts. There is also one table. The information is presented without commentary. The information in this appendix is organized into three sections.

Section I consists of charts showing the composition of the officer corps and the Army. The Army is divided into six groups: line officers, specialist officers, USMA cadets, warrant officers, and enlisted personnel. The definitions of these groups are in the body of the report. There is a pair of charts for each subject. One chart shows personnel strengths and the other chart shows the mix or relative proportions. Chart pairs are shown for the following: Active Army, Active Army Officers, Army National Guard, Army Reserve.

Section II provides detail on the content of the Expeditionary Army. Charts show the composition of Expeditionary Army programs in two groups: officers and warrant officers as a group and enlisted personnel. Charts are included for the following: Divisions, Separate Combat Units, Corps Support (plus tactical support), Theater Support, Special Operations Forces.

Section III consists of charts and one table providing detail on the Institutional Army. Each chart shows three groups: officers and warrant officers, enlisted personnel, and civilian employees. The charts show the workforce of each of the programs and program groups of the Army Force Management Categories language.

I. THE COMPOSITION OF THE ARMY
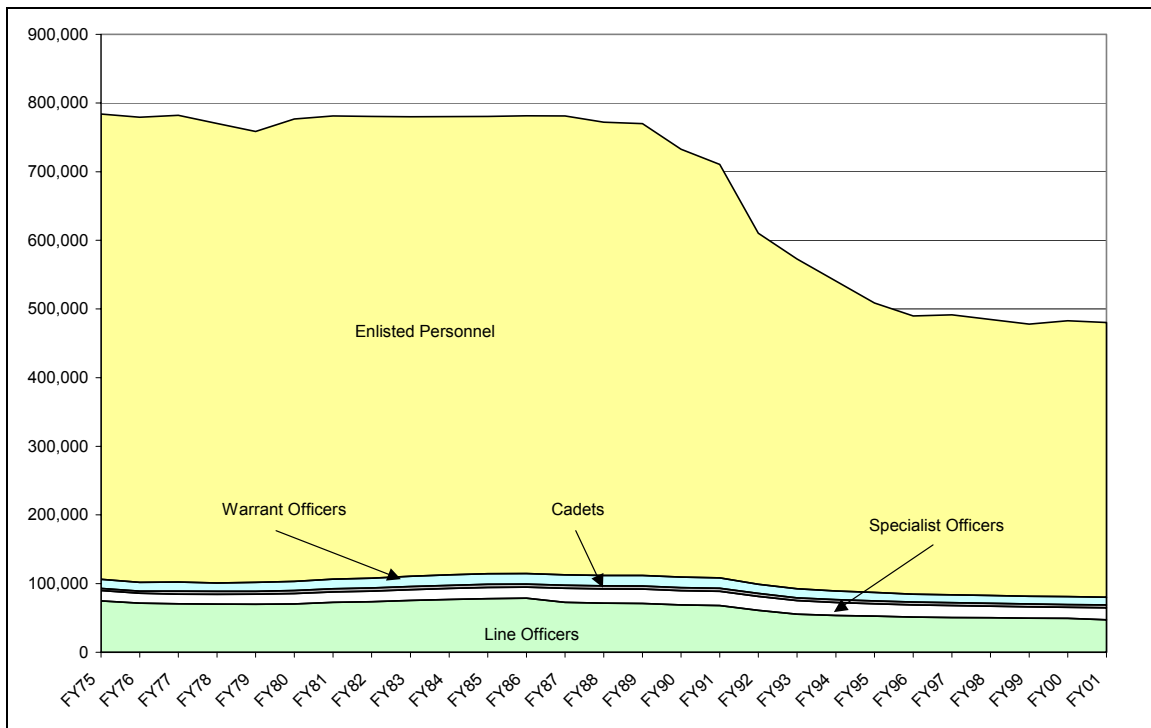
Figure A-1. Active Army Military Personnel FY1975–FY2001
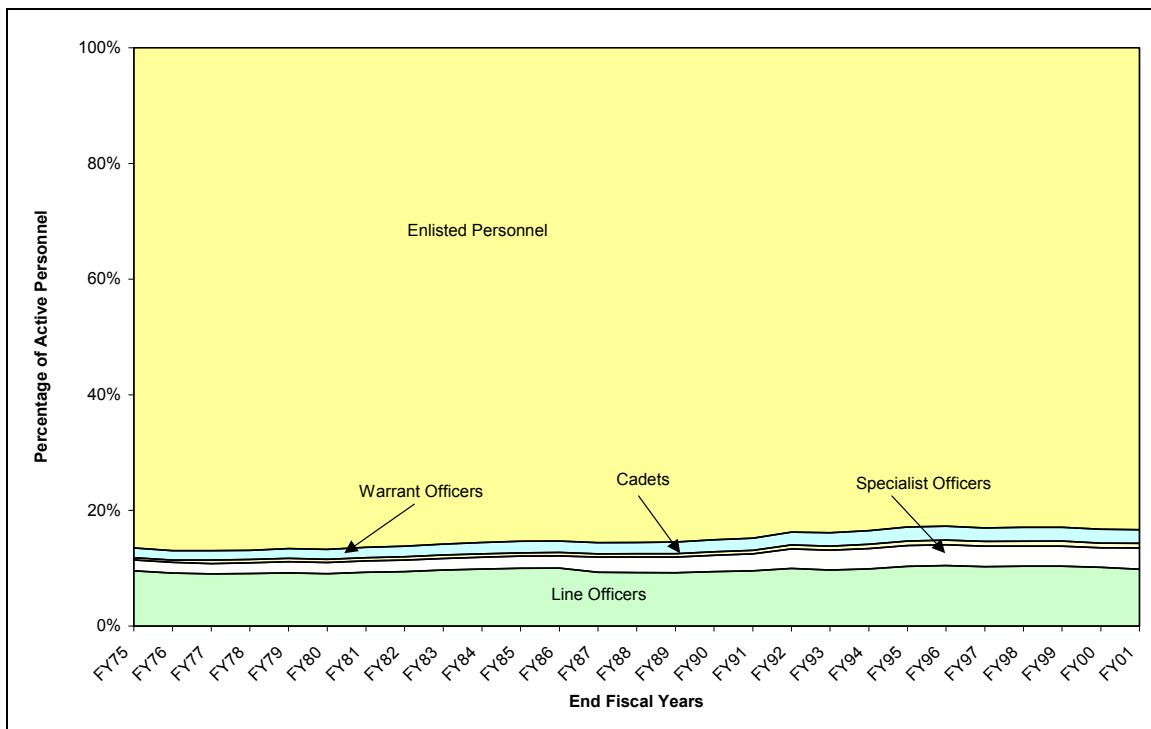
Figure A-2. Active Army Military Personnel Mix FY1975–FY2001
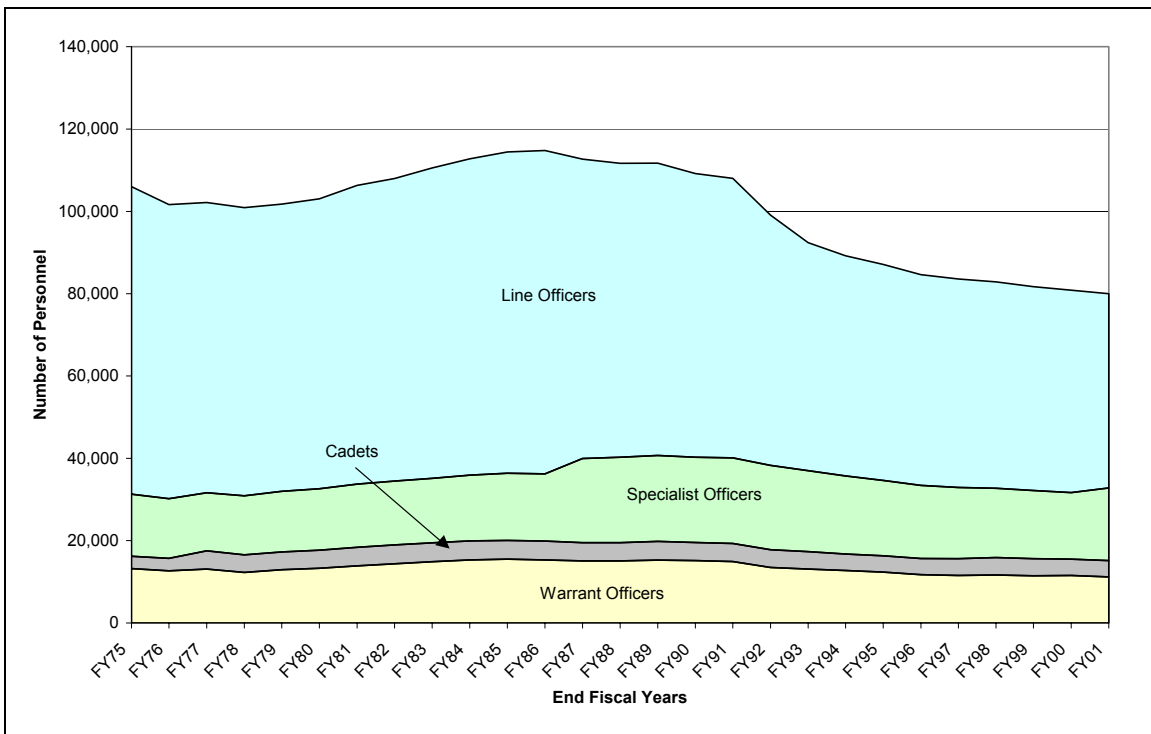
Figure A-3. Active Army Officers FY1975–FY2001
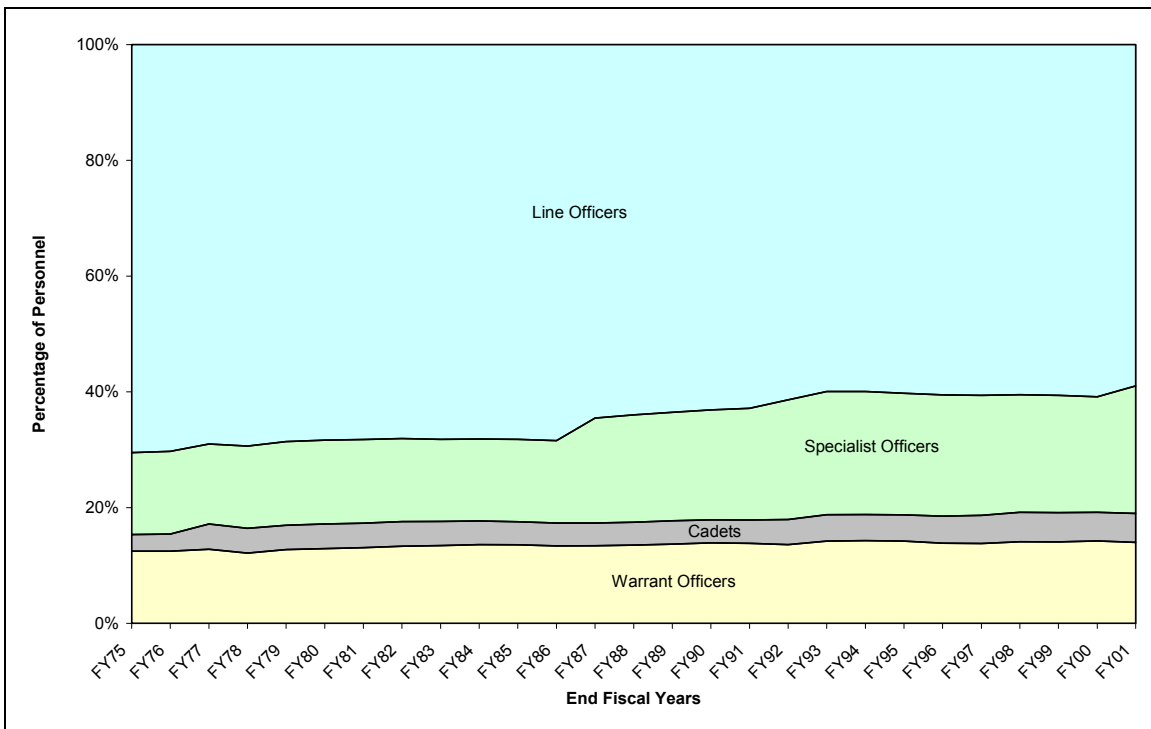
Figure A-4. Active Army Officer Mix FY1975–FY2001

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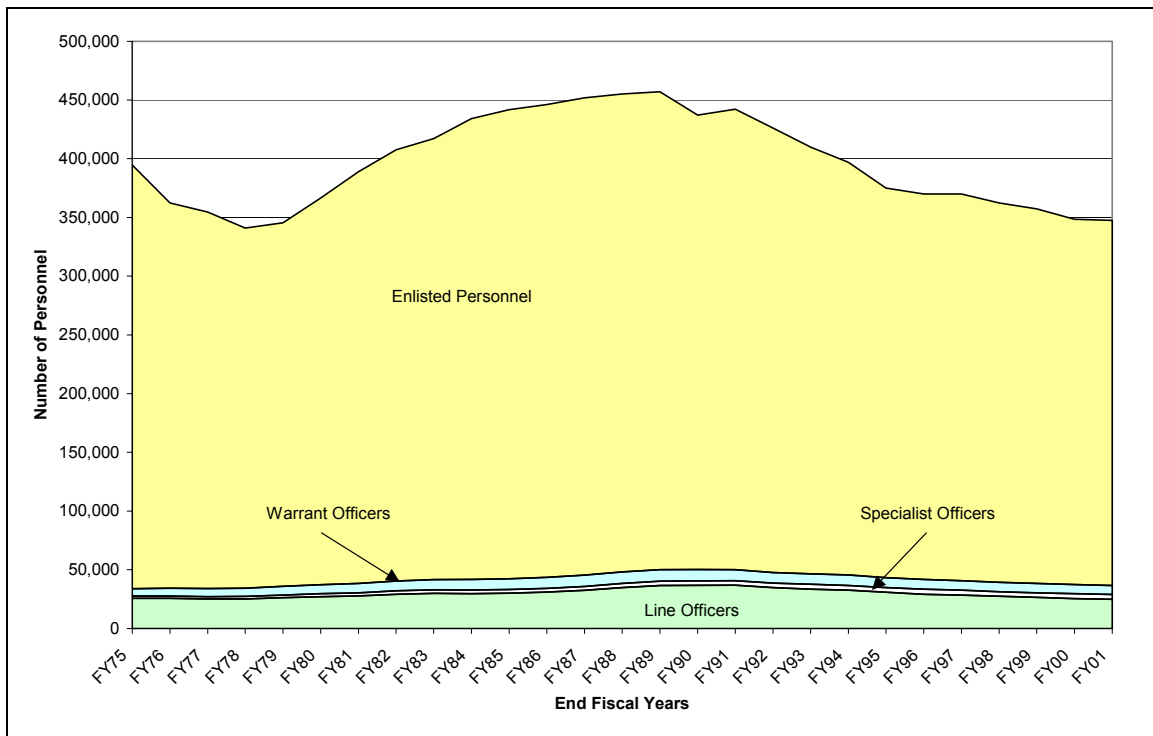
Figure A-5. Army National Guard Military Personnel FY1975–FY2001
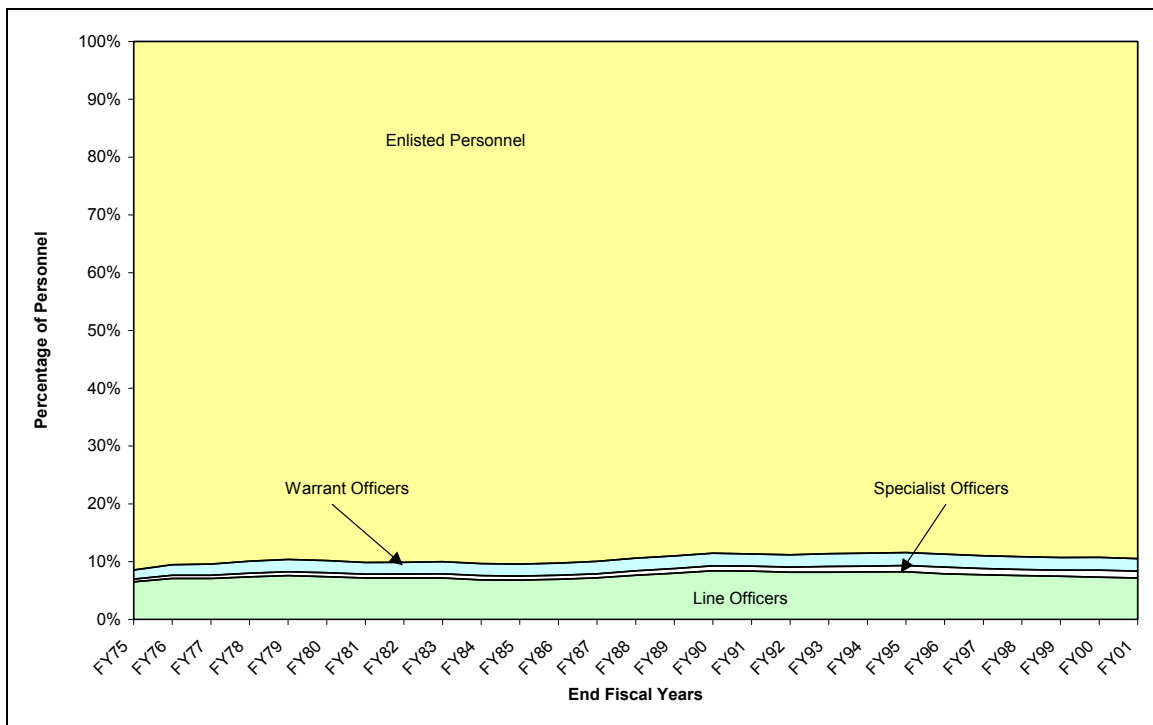
Figure A-6. Army National Guard Military Personnel Mix FY1975–FY2001

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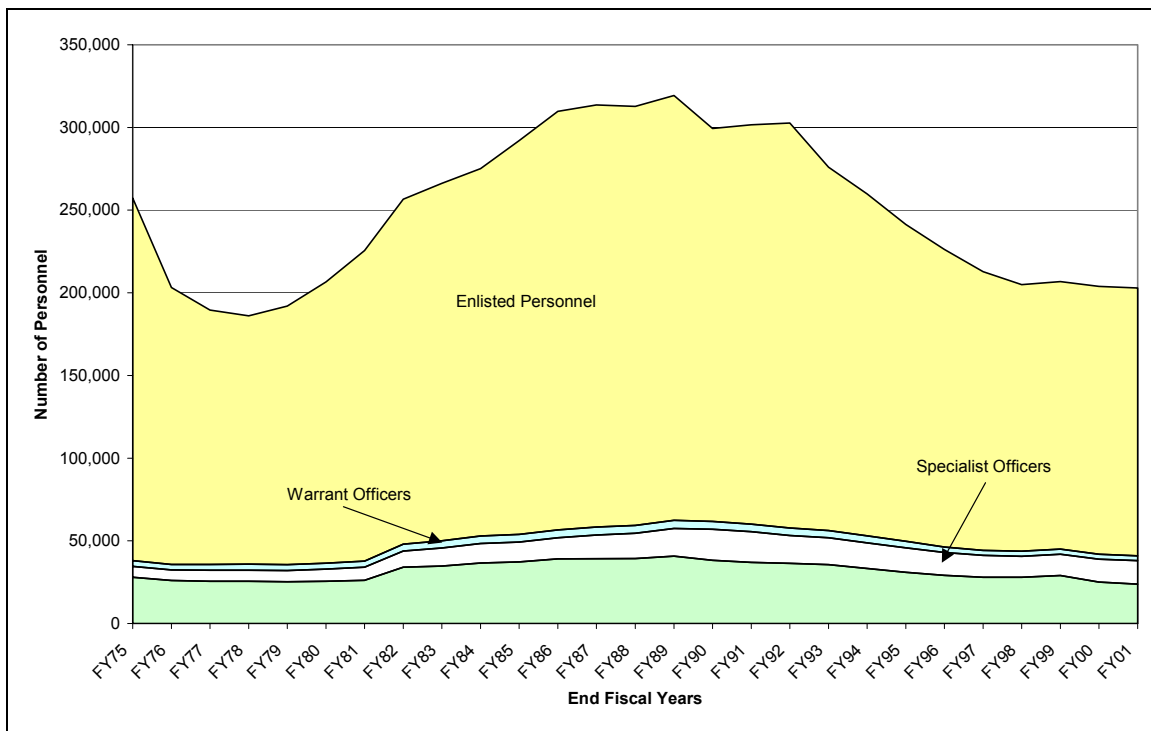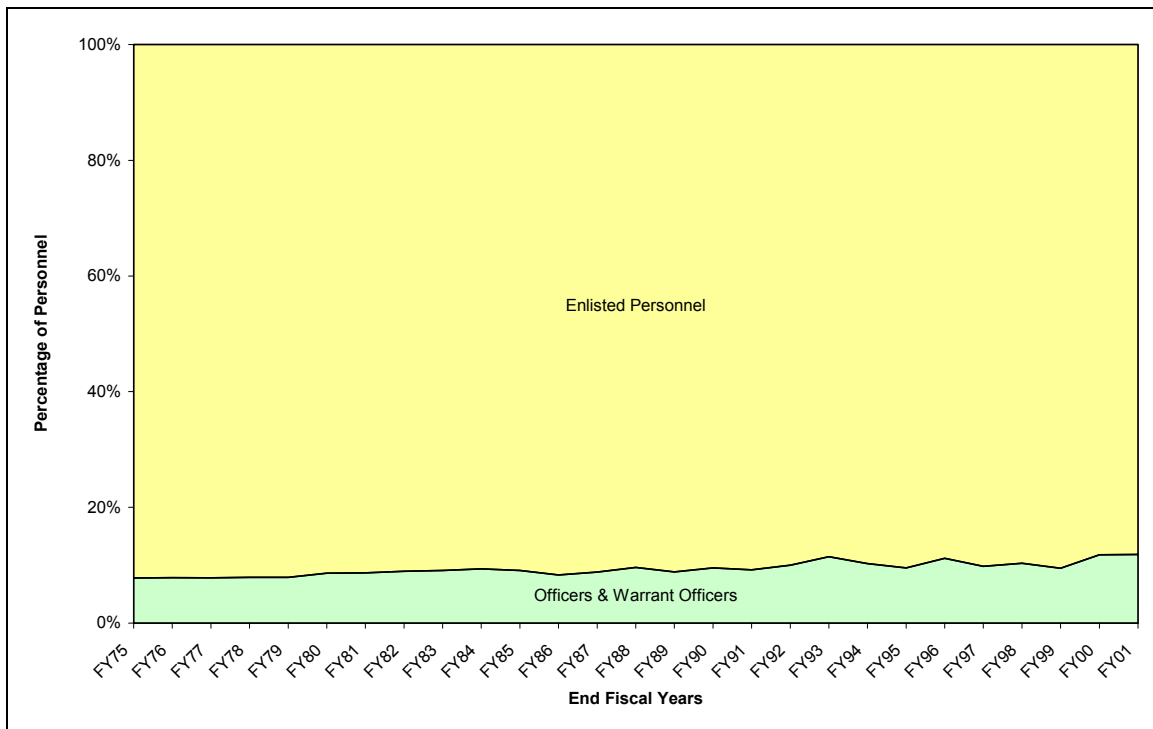
Figure A-7. Army Reserve Military Personnel FY1975–FY2001
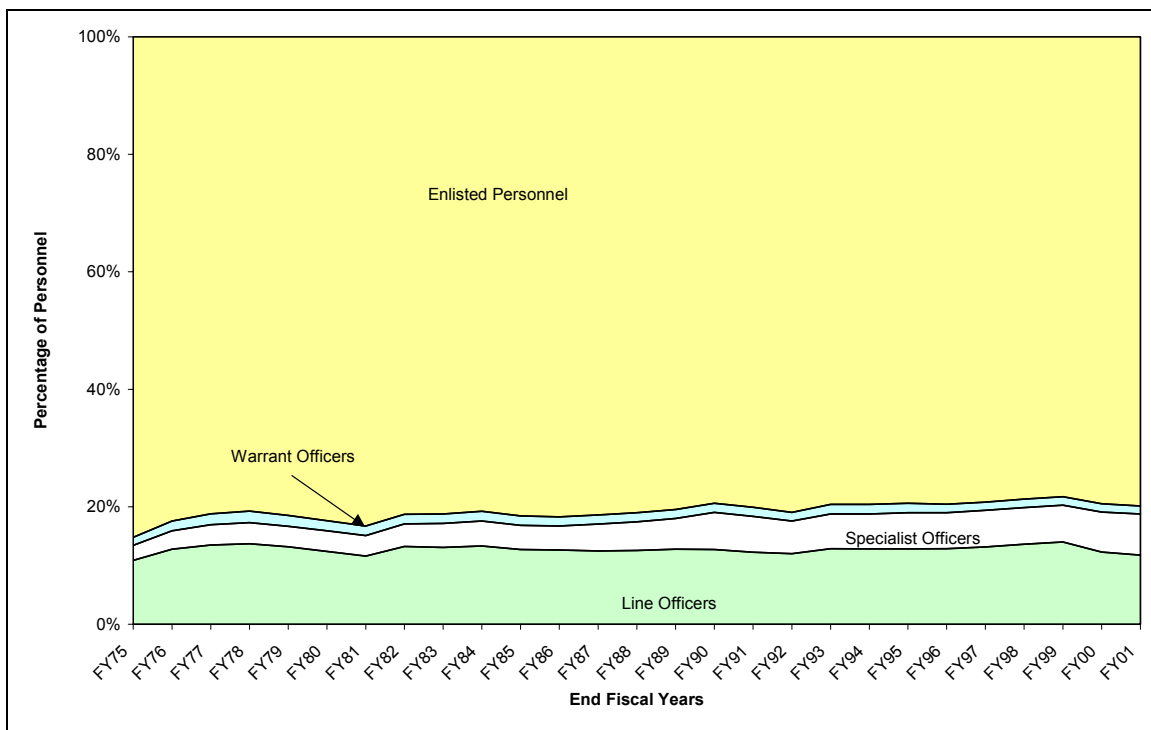
Figure A-8. Army Reserve Military Personnel Mix FY1975–FY2001

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II. THE EXPEDITIONARY ARMY
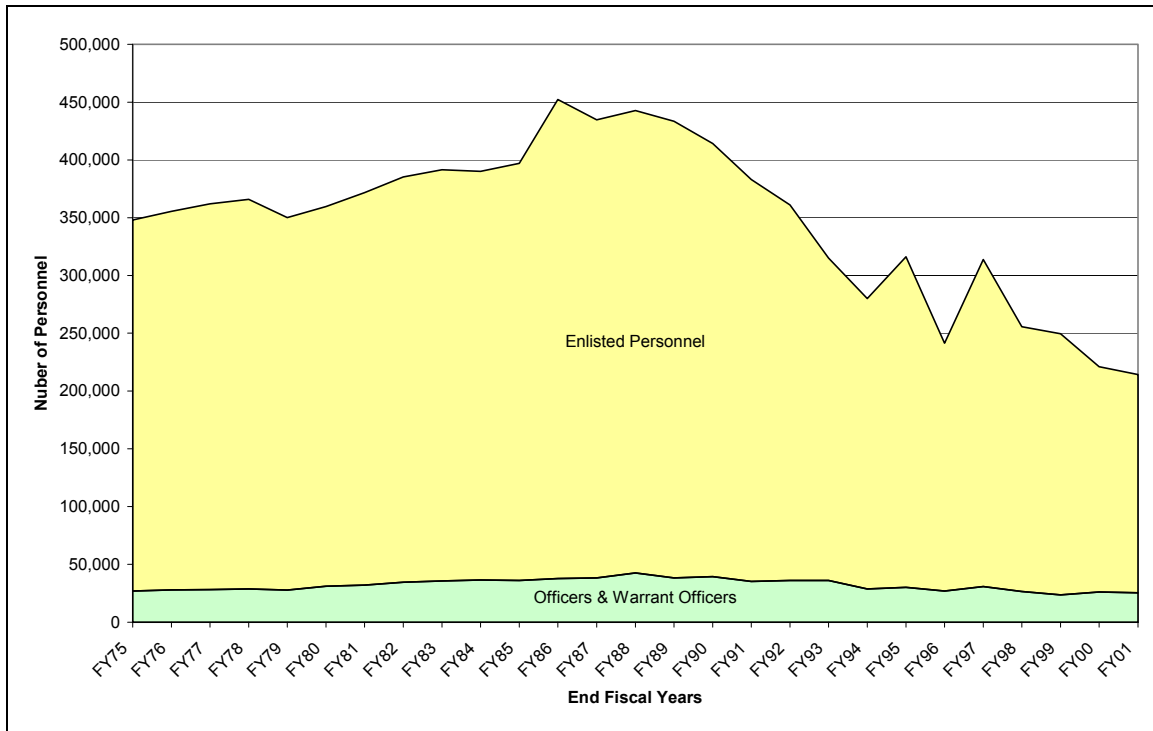
Figure A-9. Military Personnel in Divisions FY1975–FY2001

Figure A-10. Military Personnel in Divisions Mix FY1975–FY2001

III. ADDITIONAL INFORMATION ON THE INSTITUTIONAL ARMY

Table A-1. Personnel Content of Programs of the Institutional Army End FY2001

| Program Group & Programs	Officers	Enlisted	Civilians	Total	E-O Ratio	Officer%
Expeditionary Army Support Programs	**22,012**	**33,952**	**60,193**	**11,6157**	**1.5**	**19.0**
Unit Training Support Programs	7,221	11,363	4,296	22,880	1.6	31.6
Unit Readiness Support Programs	12,802	15,827	25,040	53,669	1.2	23.9
Unit Support Programs	1,989	6,762	30,857	39,608	3.4	5.0
Logistics Programs	**778**	**1,045**	**47,351**	**49,174**	**1.3**	**1.6**
Supply Programs	96	89	7,333	7,518	0.9	1.3
Ammunition Programs	36	16	1,422	1,474	0.4	2.4
Depot Maintenance Programs	36	12	16,478	16,526	0.3	0.2
Real Property Programs	73	8	6,936	7,017	0.1	1.0
Transportation Programs	183	358	2,659	3,200	2.0	5.7
Logistics Support Programs	354	562	12,523	13,439	1.6	2.6%
Materiel Development & Acquisition Programs	**1,381**	**1,113**	**1,9531**	**2,2025**	**0.8**	**6.3**
General Research & Development	1,087	1,017	16,508	18,612	0.9	5.8
Field Research & Development	11	0	89	100	0.0	11.0
Acquisition Programs	283	96	2,934	3,313	0.3	8.5
Individual Training & Education Programs	**21,361**	**79,002**	**19,696**	**119,059**	**3.7**	**17.9**
Initial Entry Training Programs	593	24,031	211	24,835	40.5	2.4
Skill Training Programs	13,037	44,593	4,328	61,958	3.4	21.0
Aviation Training Programs	1,517	1,018	578	3,113	0.7	48.7
Intelligence Training Programs	400	2,156	76	2,632	5.4	15.2
Civilian Training & Education Programs	14	0	919	933	0.0	1.5
Pre-Commissioning Programs	1,459	1,795	2,342	5,596	1.2	26.1
Professional Military Education Programs	2,964	837	640	4,441	0.3	66.7
Training Support Programs	1,377	4,572	9,602	15,551	3.3	8.9
Health Care Programs	**10,635**	**15,012**	**21,701**	**47,348**	**1.4**	**22.5**
Health Care Delivery Programs	6,691	12,130	18,145	37,266	1.7	18.8
Health Care Management & Research Programs	126	358	2,095	2,579	2.8	4.9
Health Care Training & Education Programs	3,402	2,358	352	6,112	0.7	55.7
Health Care Support Programs	116	166	1,109	1,391	1.4	8.3
Military Personnel Programs	**3,139**	**23,560**	**12,292**	**38,991**	**7.5**	**8.1**
Recruiting & Processing Programs	936	10,809	2,735	14,480	11.5	6.5
Military Personnel Management Programs	403	1,328	5,421	7,152	3.3	5.6
Military Family Support Programs	10	27	4136	4,173	2.7	0.2
Individuals Accounts	1,790	11,396	0	13,186	6.4	13.6
Army Administration Programs	**2,805**	**828**	**5,771**	**9,404**	**0.3**	**29.8**
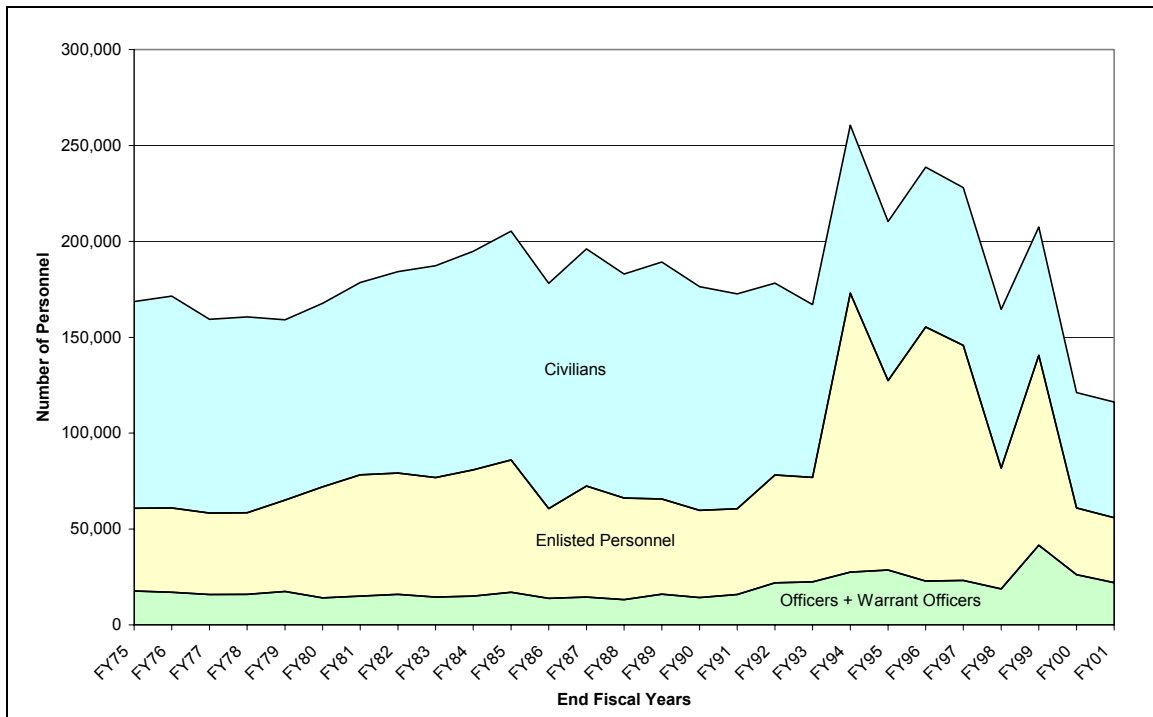
Figure A-11. Expeditionary Army Support FY1975–FY2001
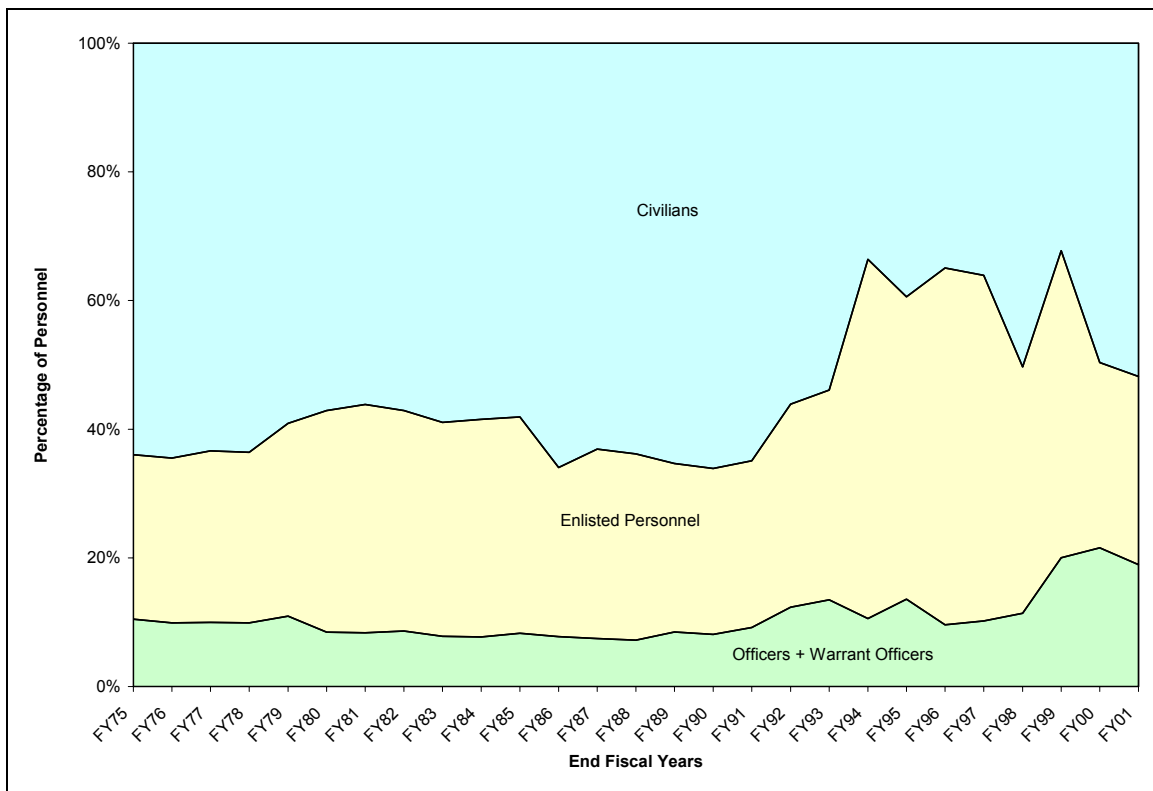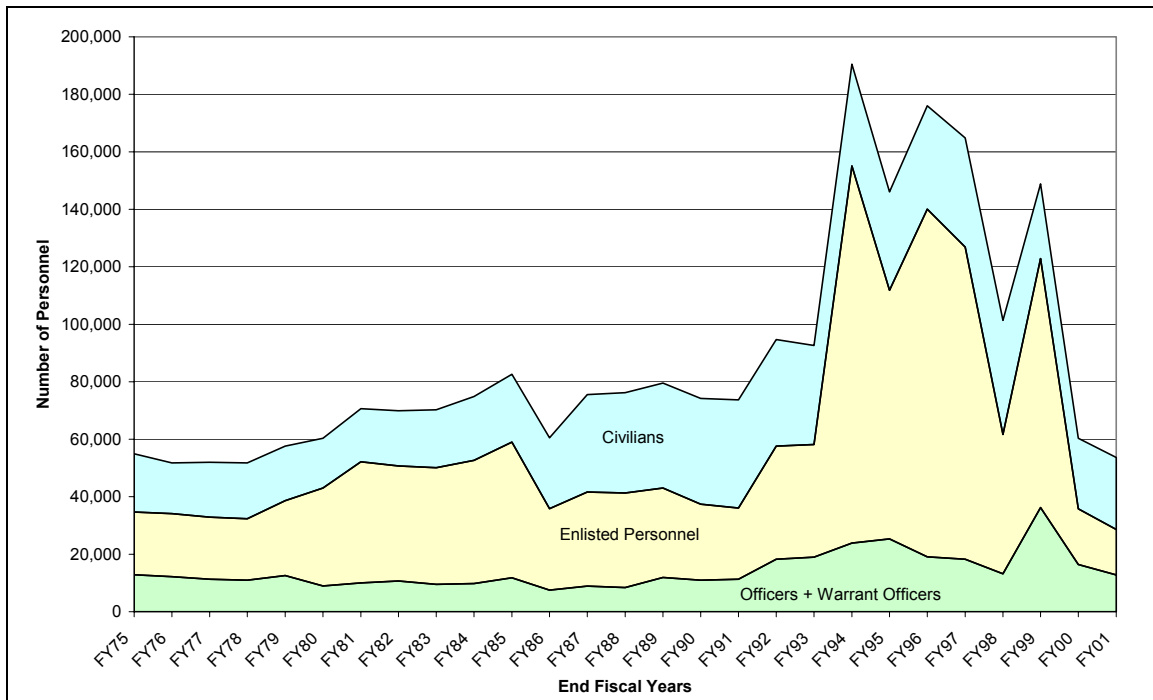

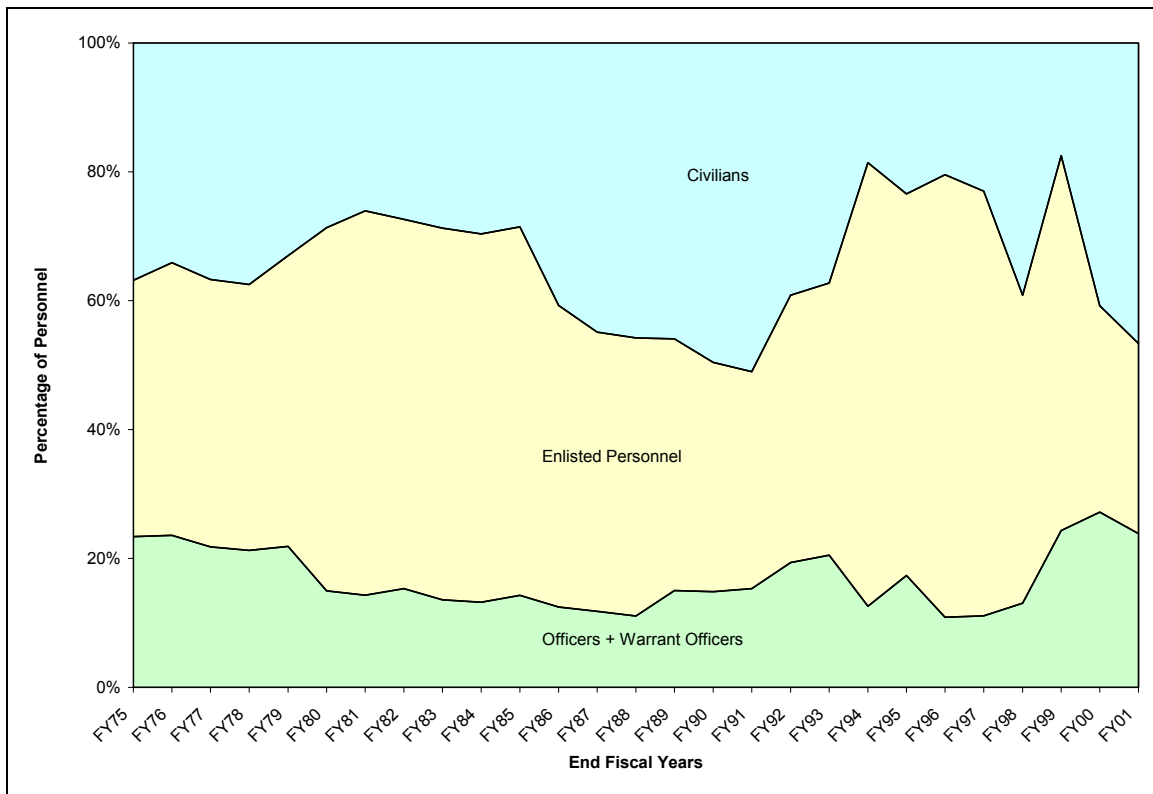**Figure A-12. Expeditionary Army Support Mix FY1975–FY2001**
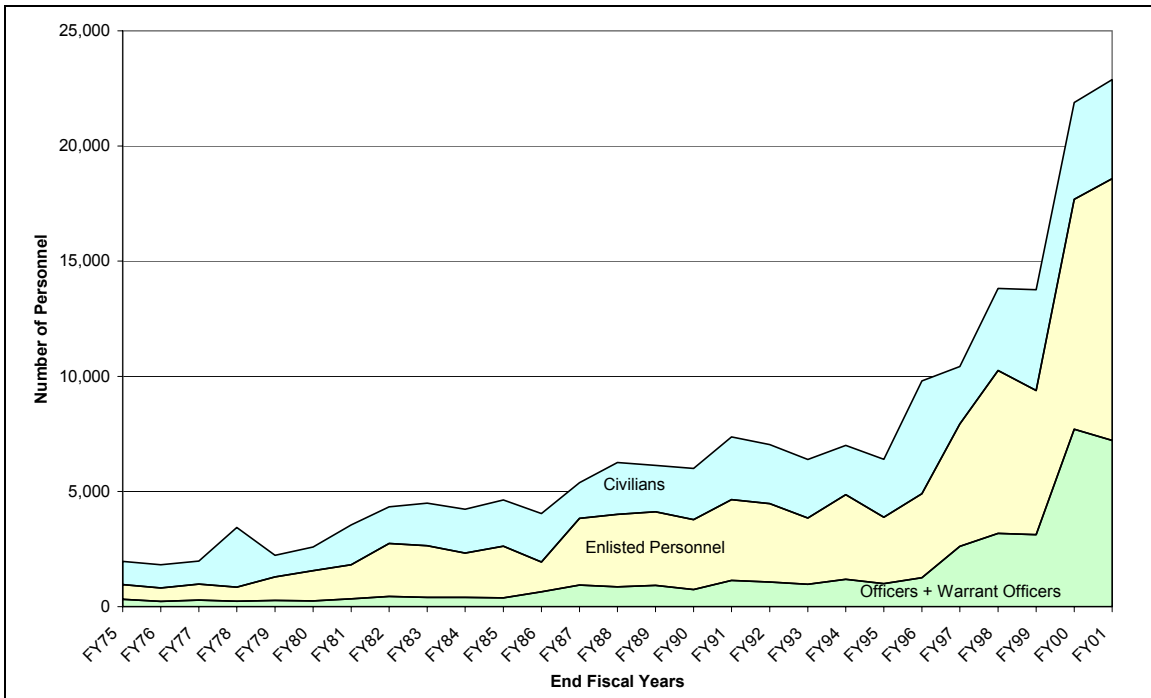
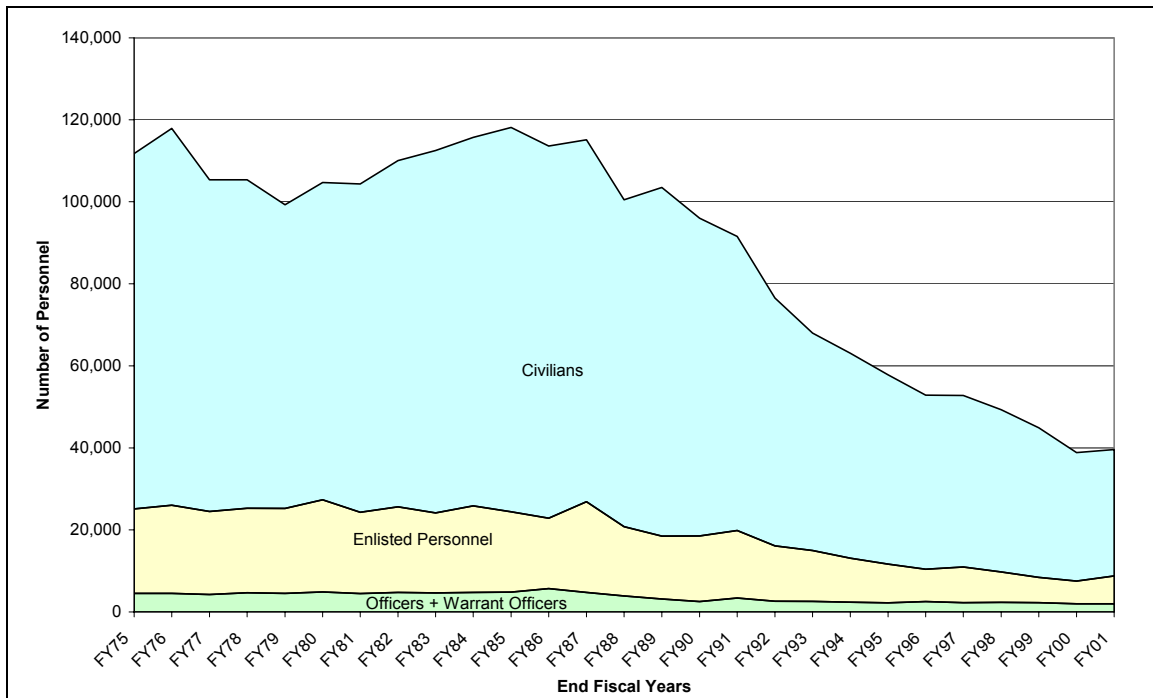**Figure A-13. Unit Training Support FY1995–FY2001**
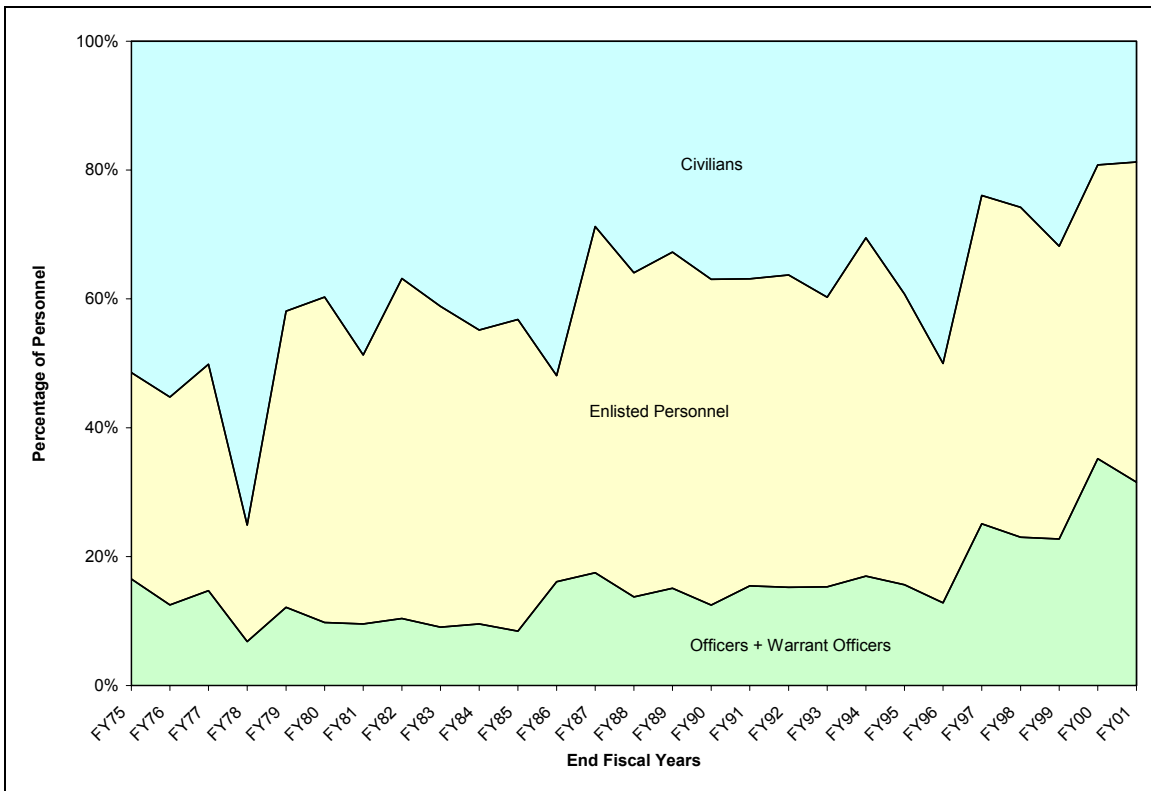
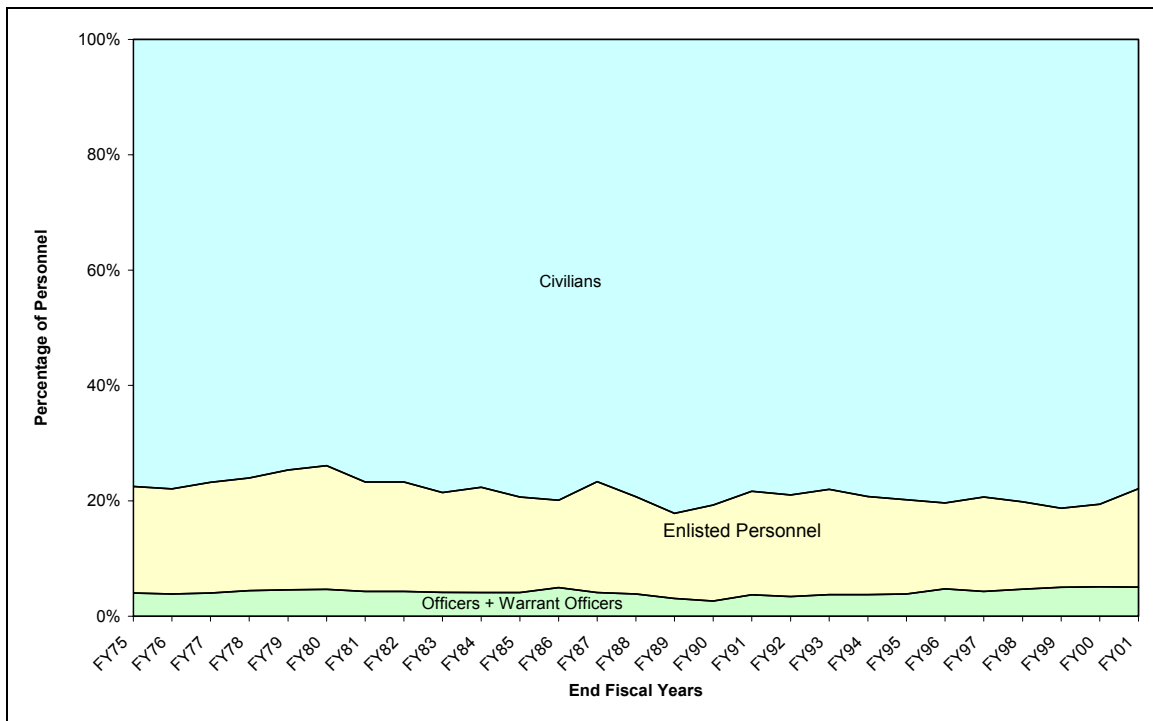**Figure A-14. Unit Training Support Mix FY1995–FY2001**
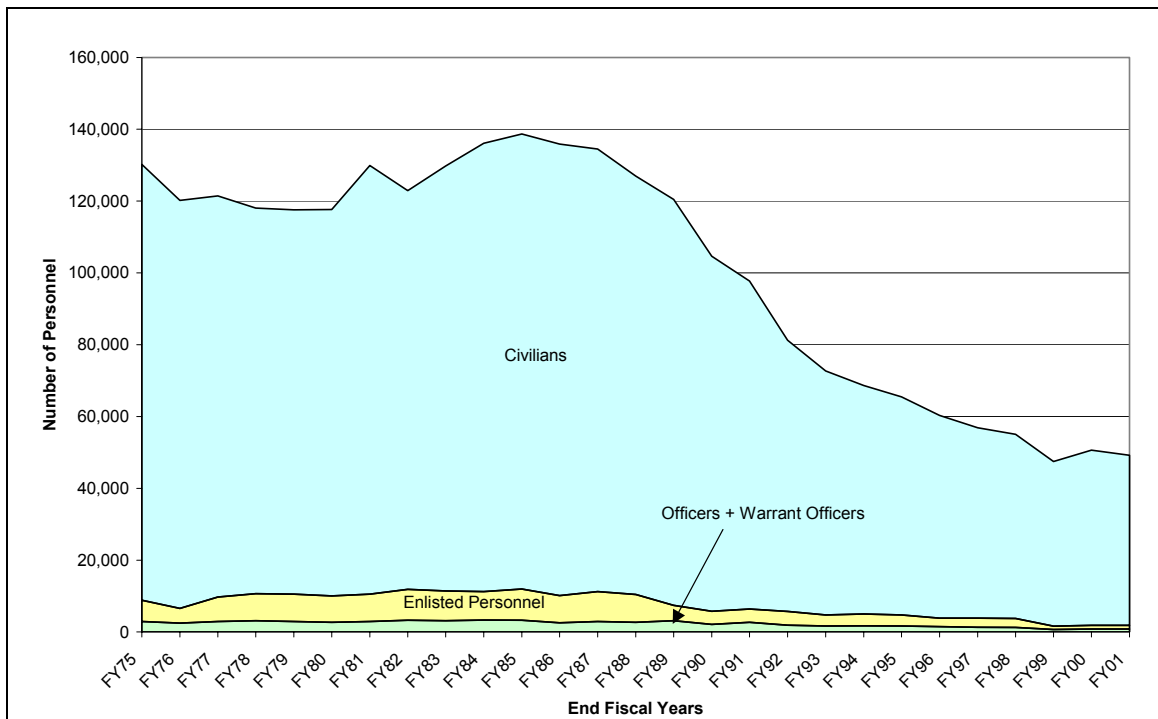
Figure A-15. Unit Readiness Support FY1975–FY2001

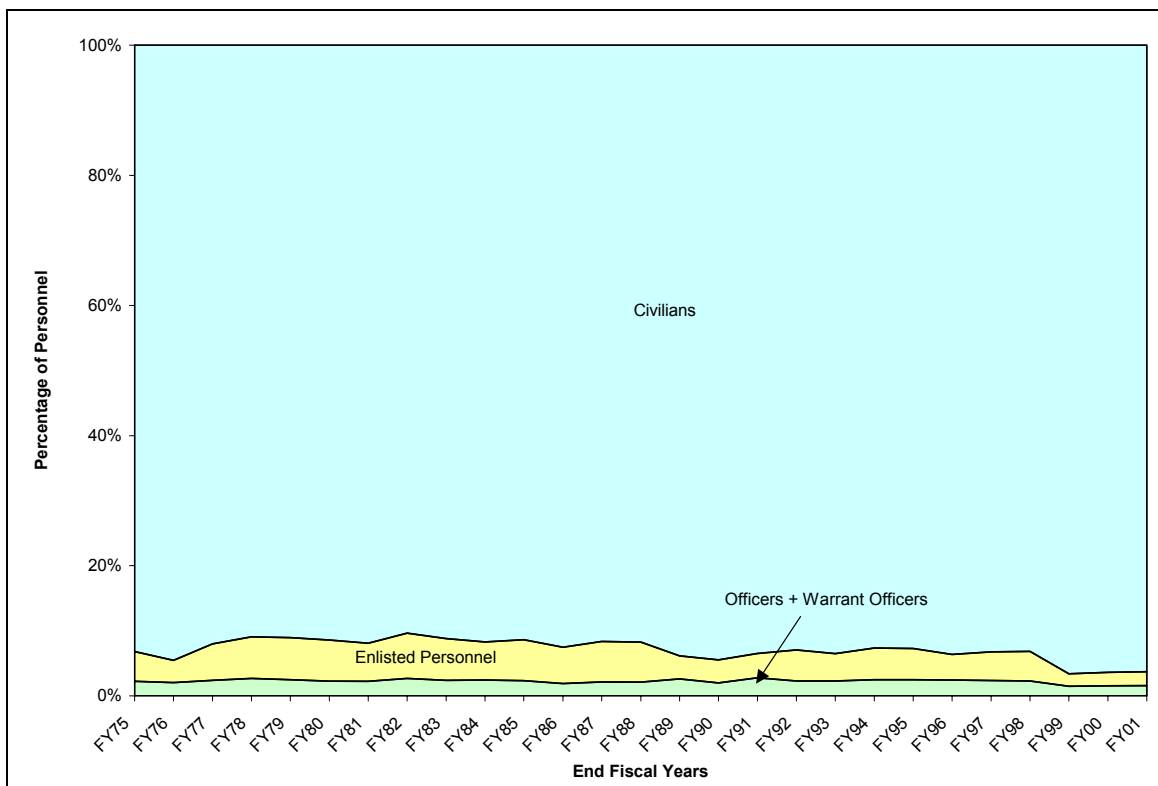**Figure A-16. Unit Readiness Support Mix FY1975–FY2001**

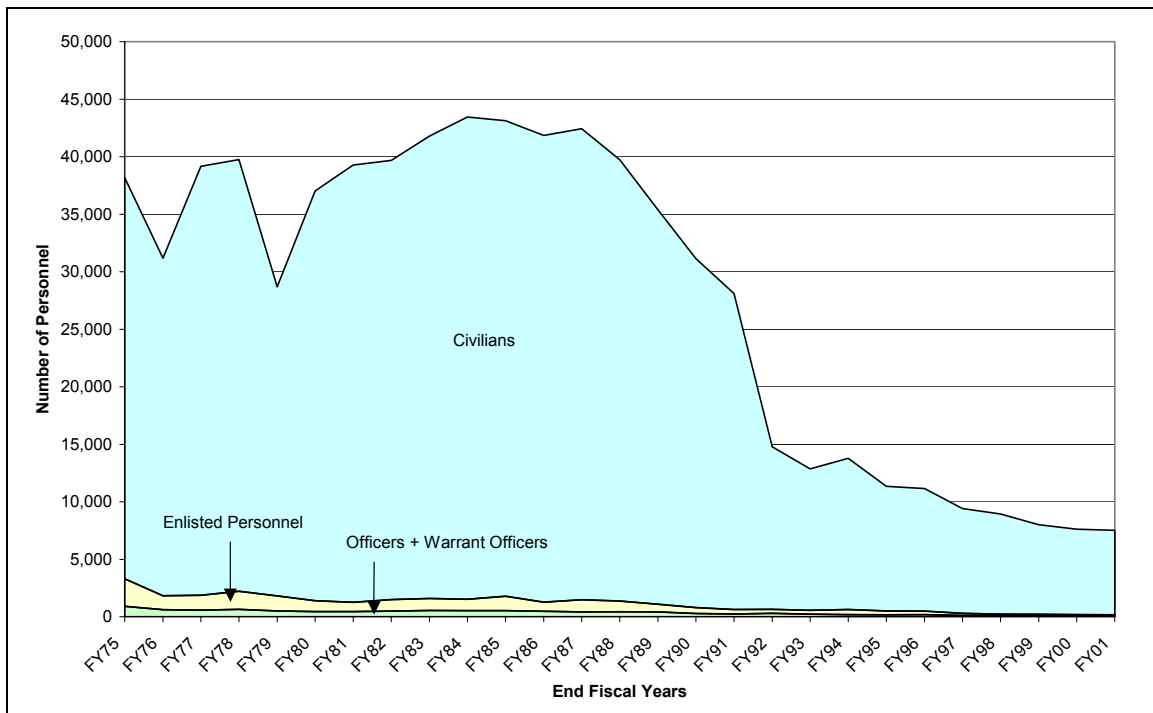A-10

Figure A-17. Unit Support Programs FY1975–FY2001
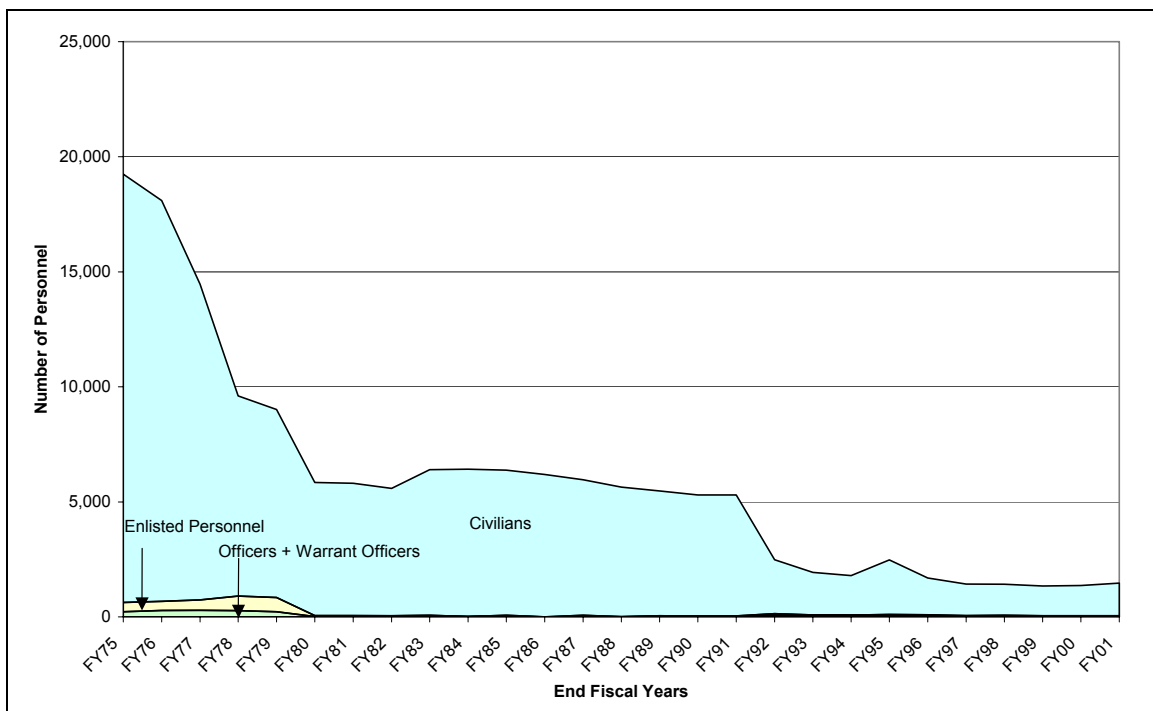

Figure A-18. Unit Support Programs Mix FY1975–FY2001

Figure A-19. Logistics Programs FY1975–FY2001

Figure A-20. Logistics Programs Mix FY1975–FY2001

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Figure A-21. Supply Programs FY1975–FY2001

Figure A-22. Ammunition Programs FY1975–FY2001

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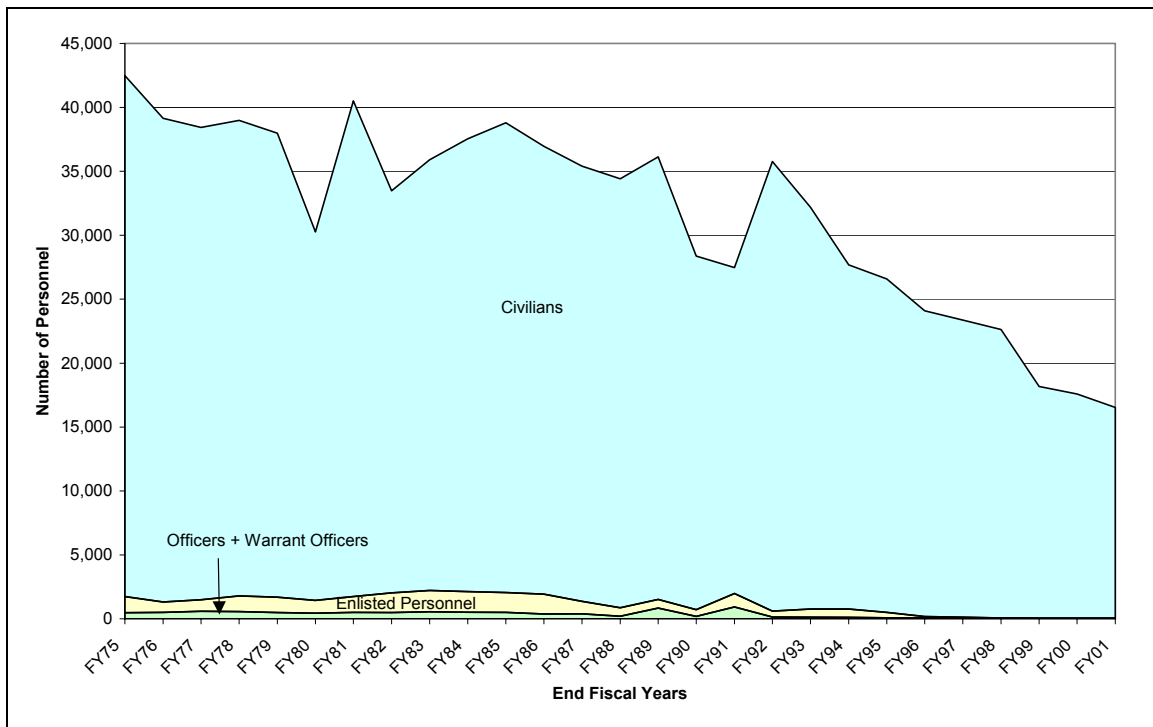
Figure A-23. Depot Maintenance Programs FY1975–FY2001
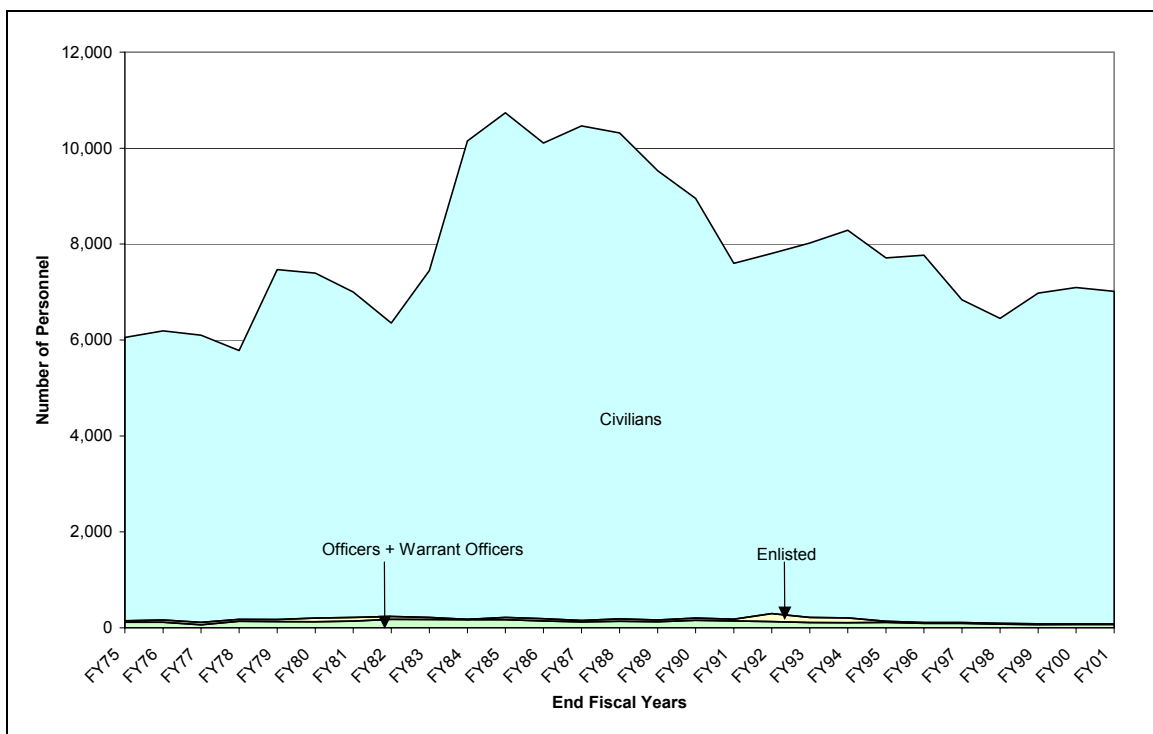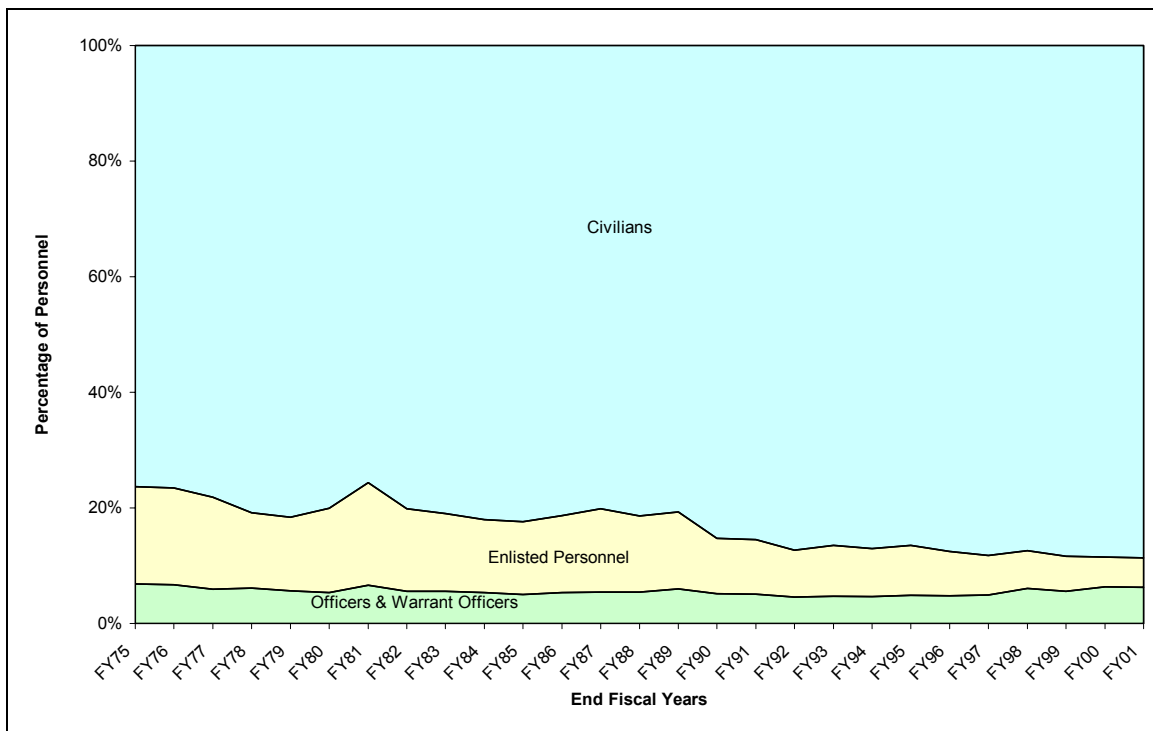

Figure A-24. Real Property Programs FY1975–FY2001

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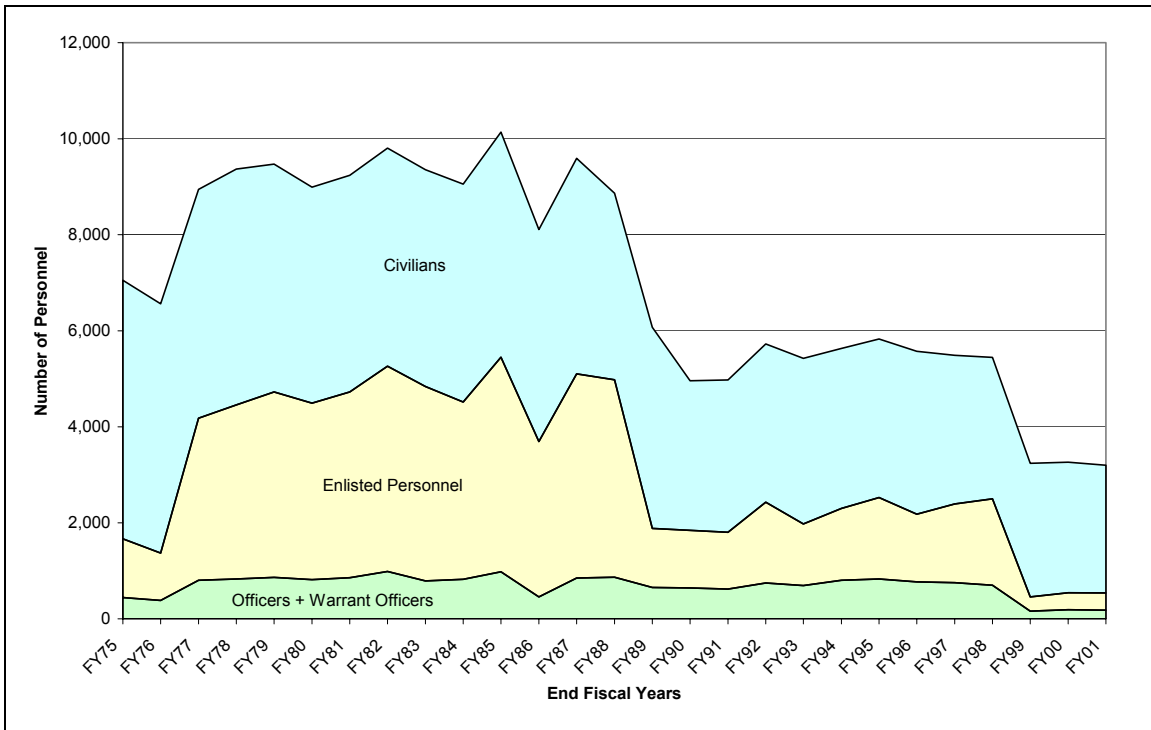
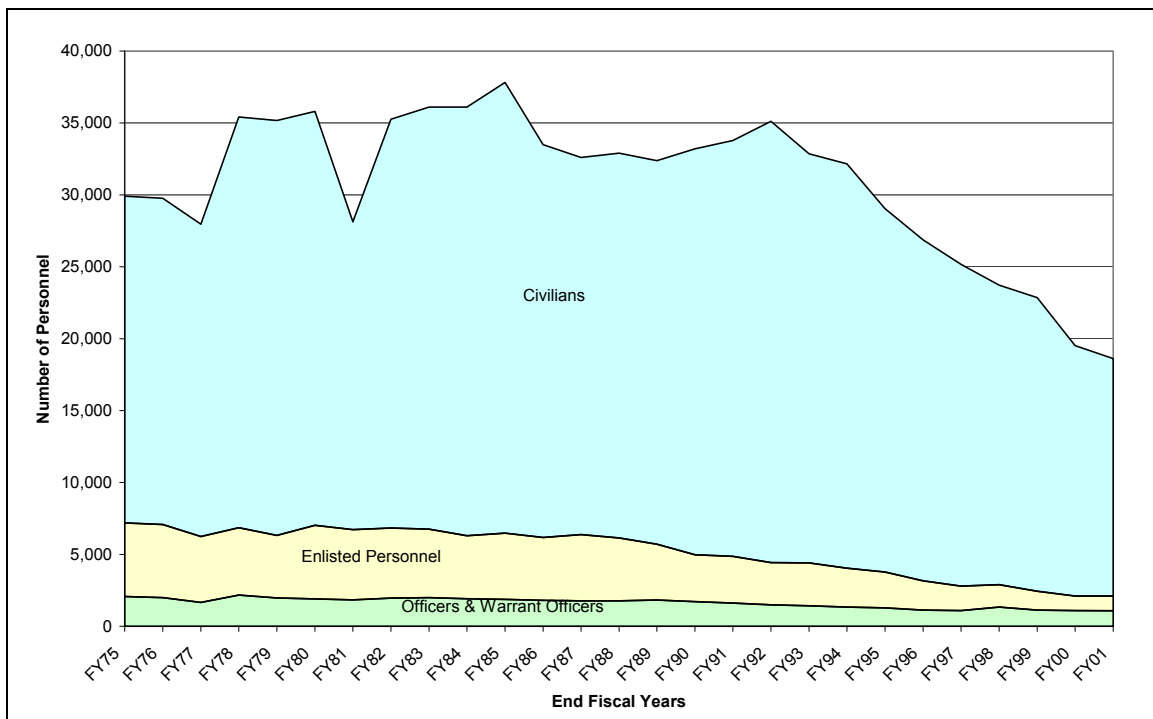**Figure A-25. Transportation Programs FY1975–FY2001**
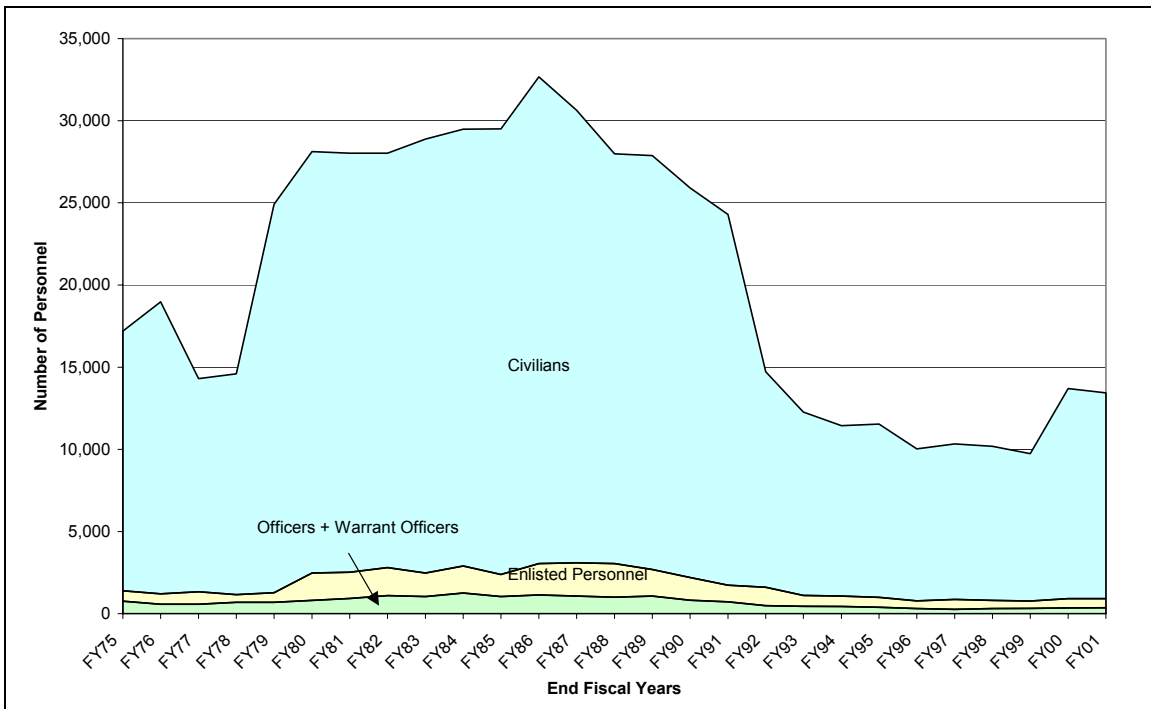
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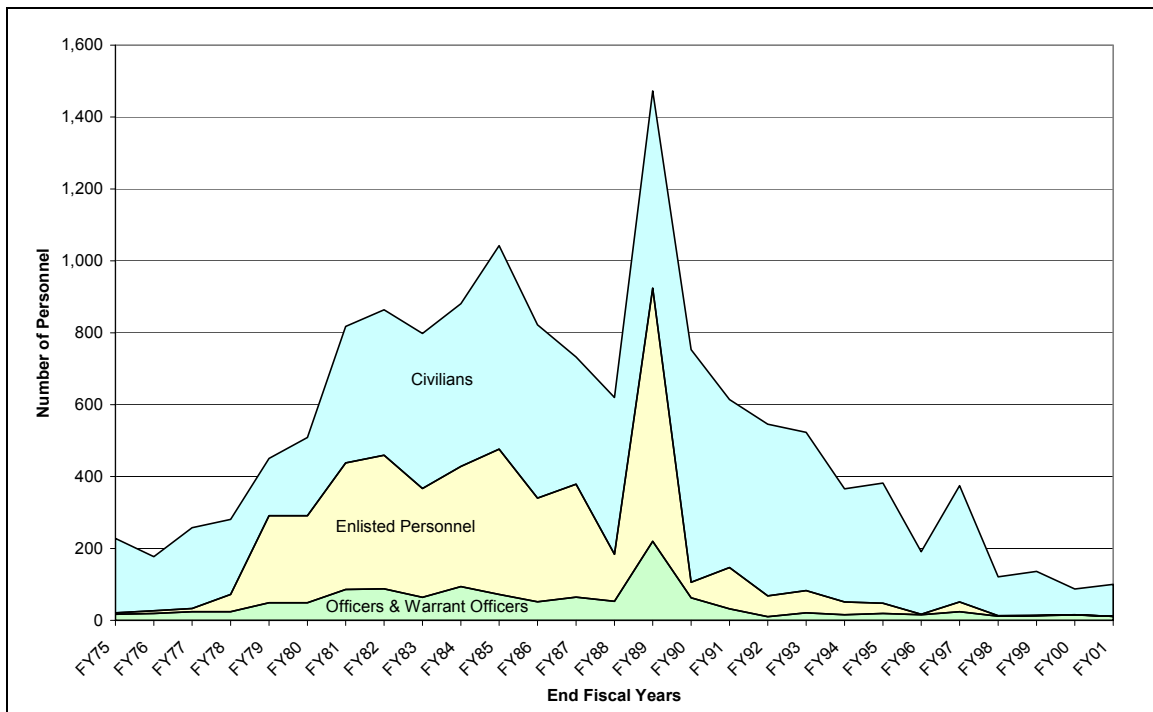
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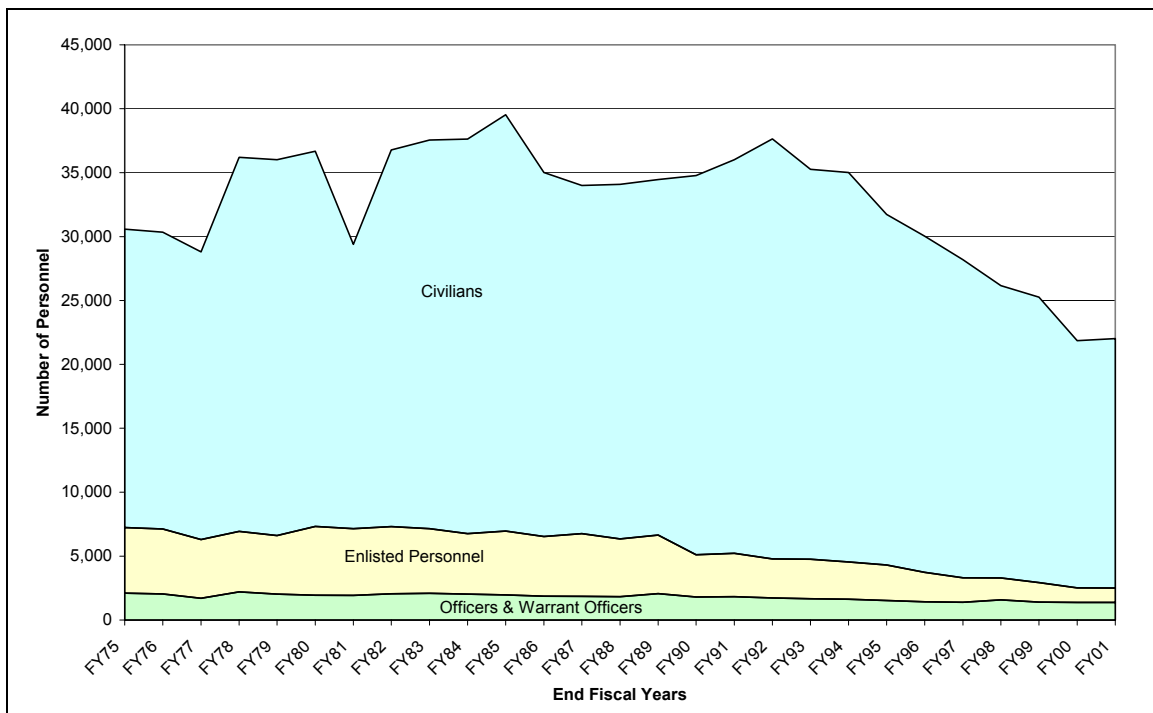
Figure A-27. Materiel Development and Acquisition FY1975–FY2001
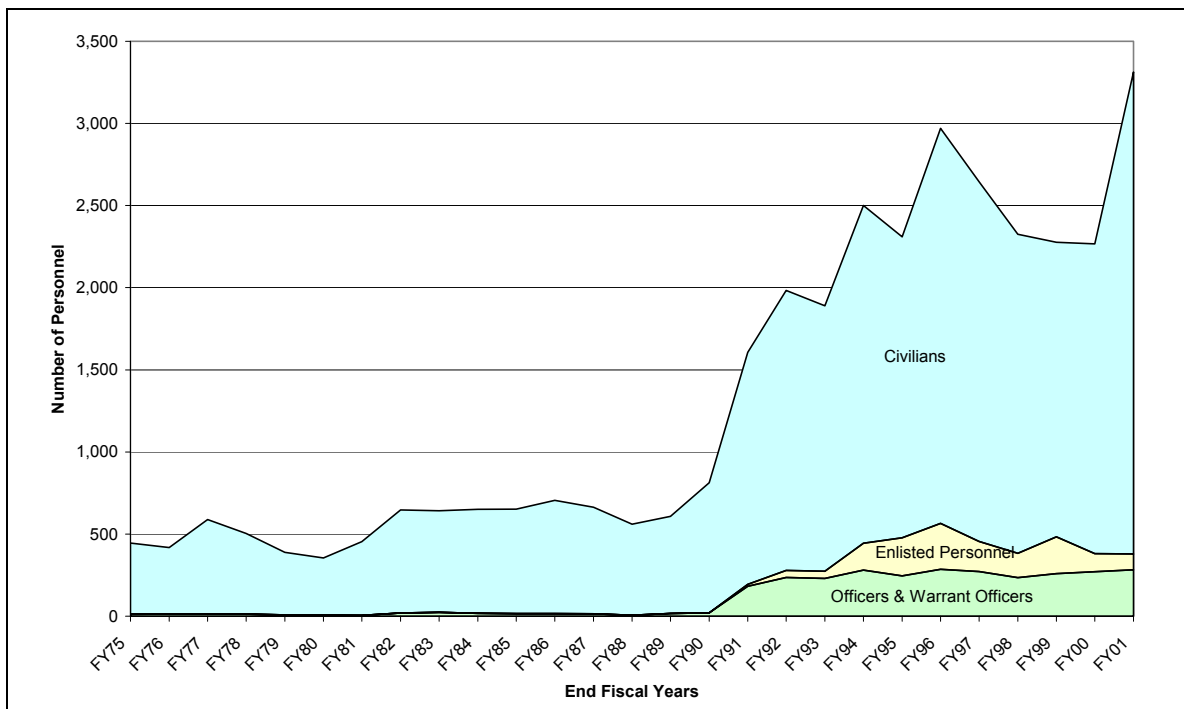

Figure A-28. Materiel Development and Acquisition Mix FY1975–FY2001
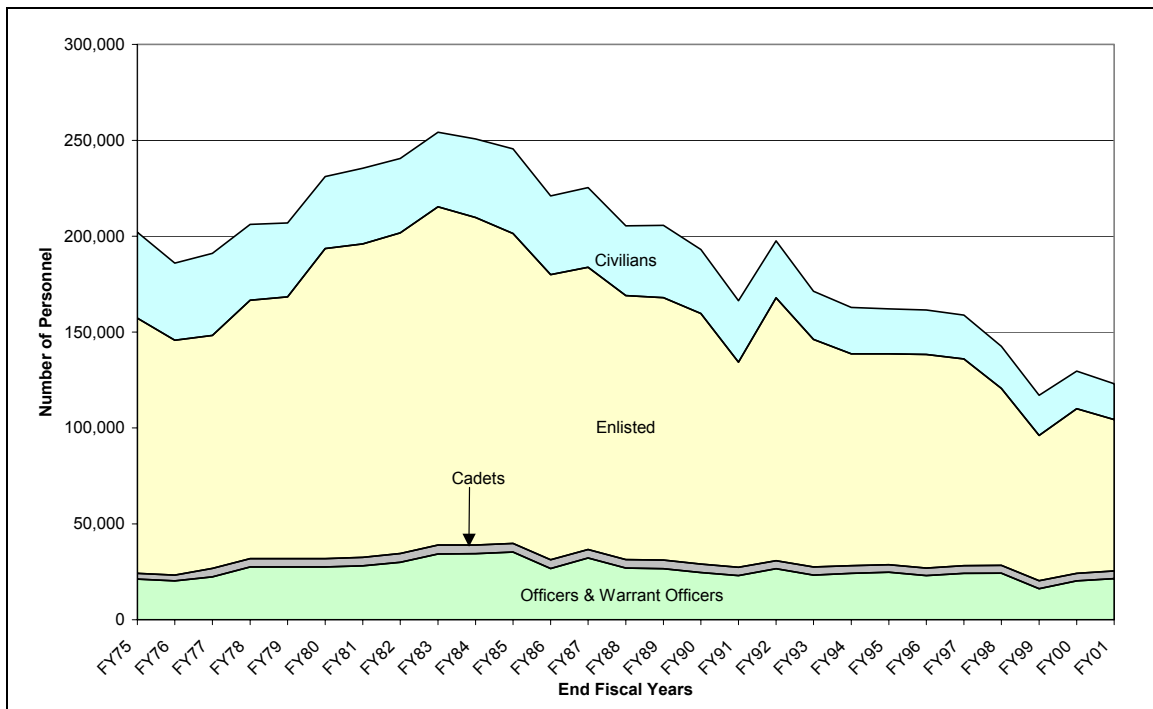
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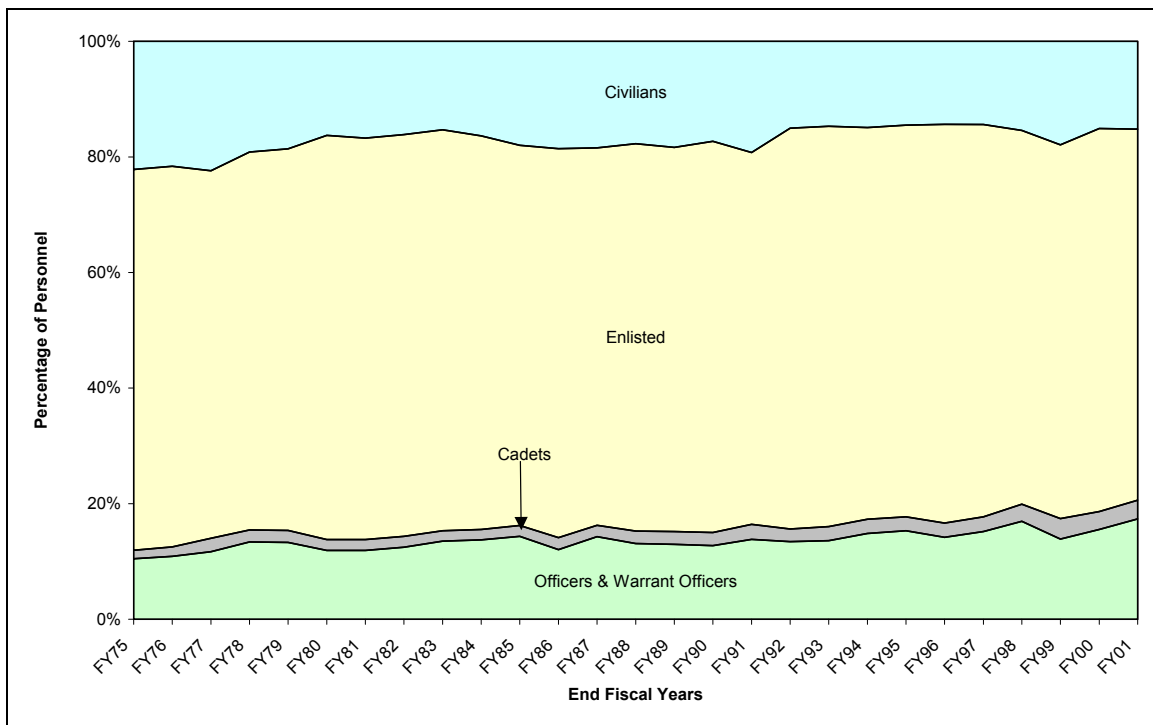

Figure A-30. Field Research and Development FY1975–FY2001
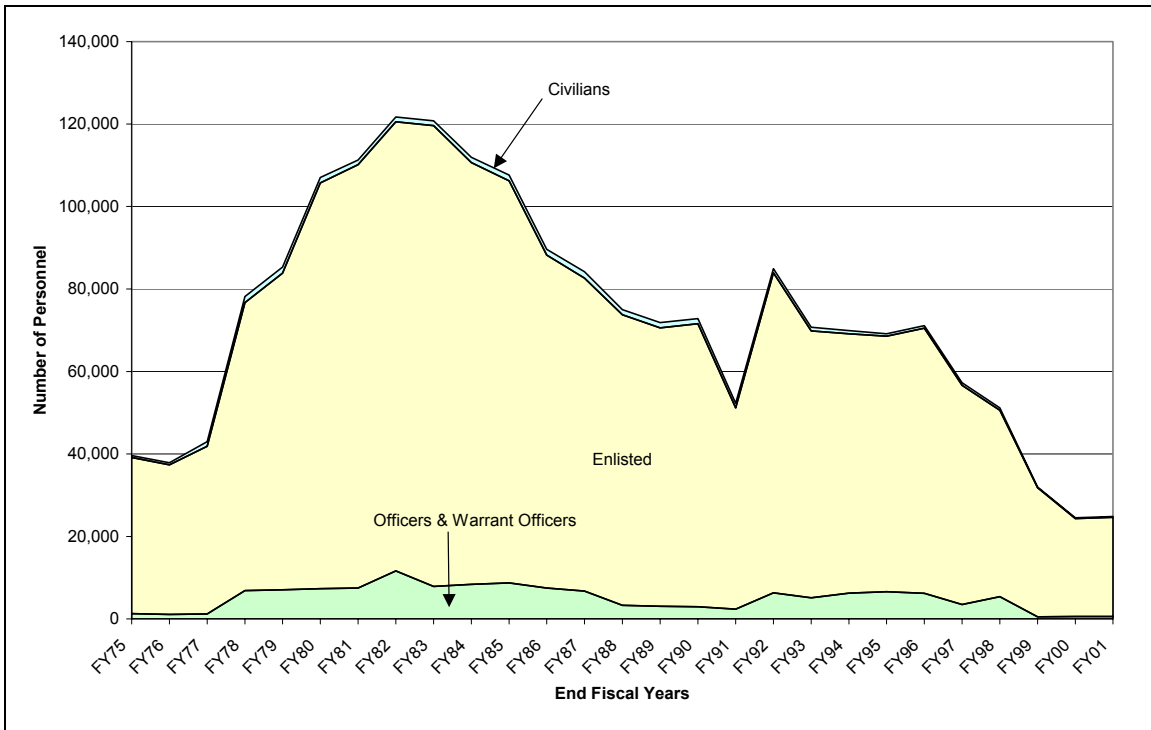
Figure A-31. Acquisition Programs FY1975–FY2001
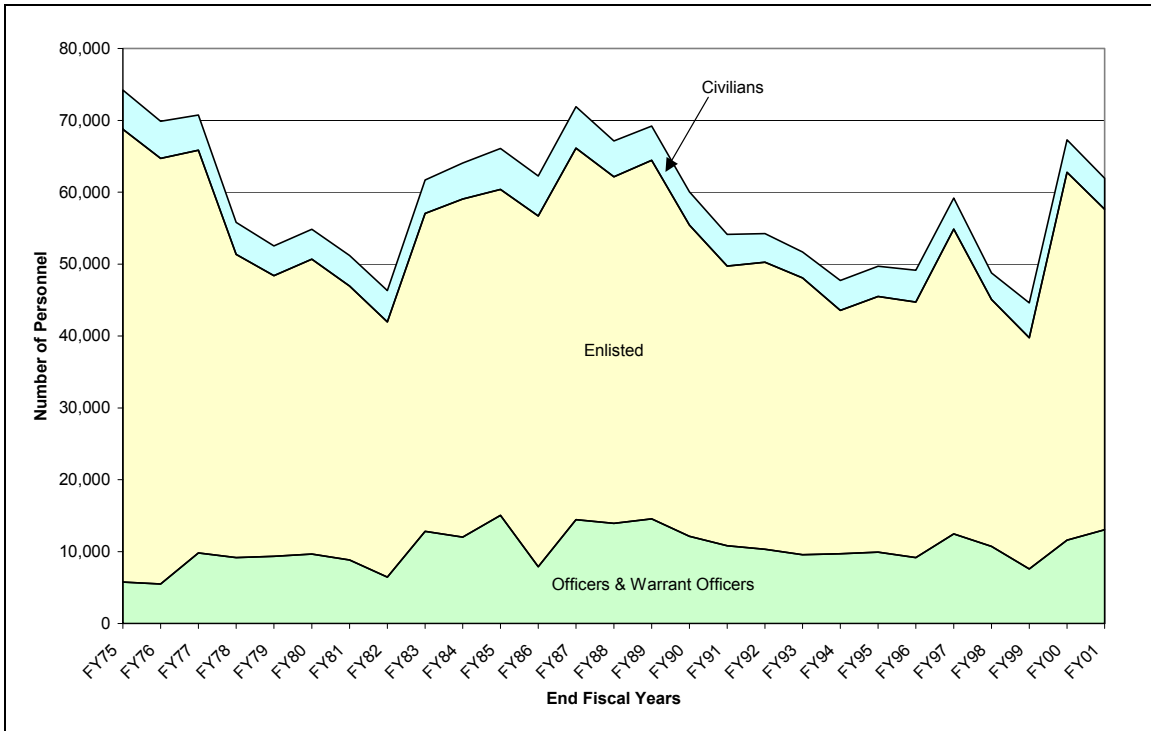
Figure A-32. Individual Training and Education FY1975–FY2001

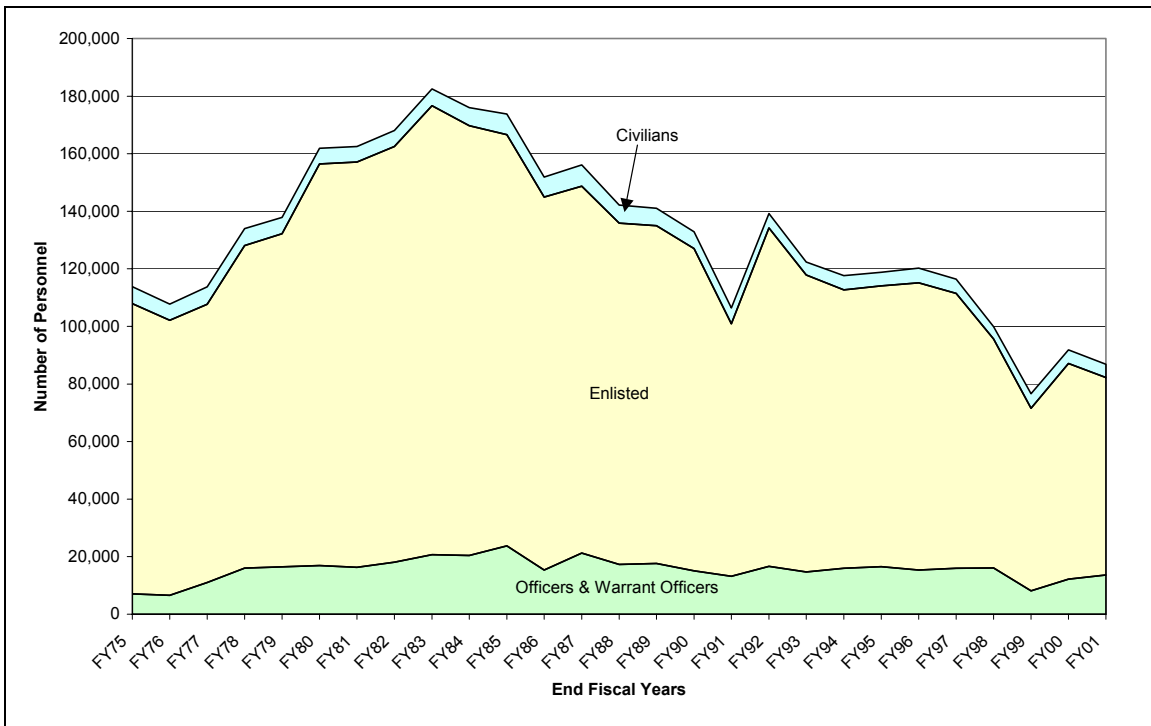**Figure A-33. Individual Training and Education Mix FY1975–FY2001**

Figure A-34. Initial Entry Training FY1975–FY2001

Figure A-35. General Skill Training FY1975–FY2001

Figure A-36. Initial and Skill Training FY1975–FY2001
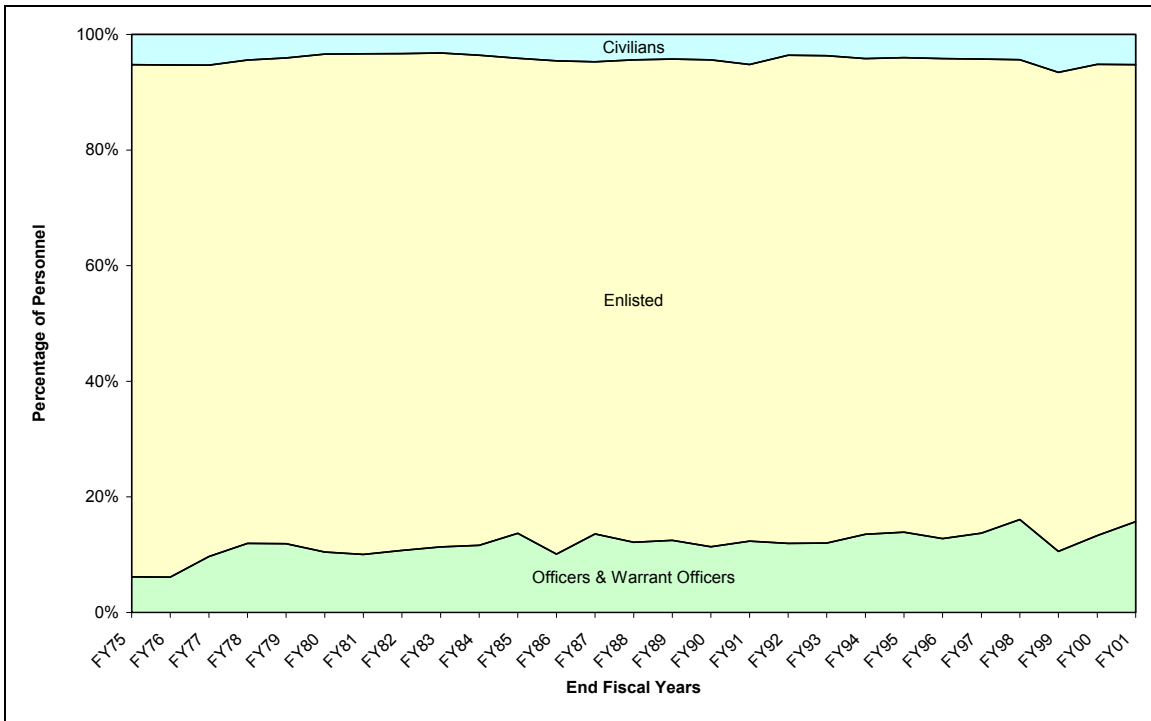
Figure A-37. Initial and Skill Training Mix FY1975–FY2001

A-21
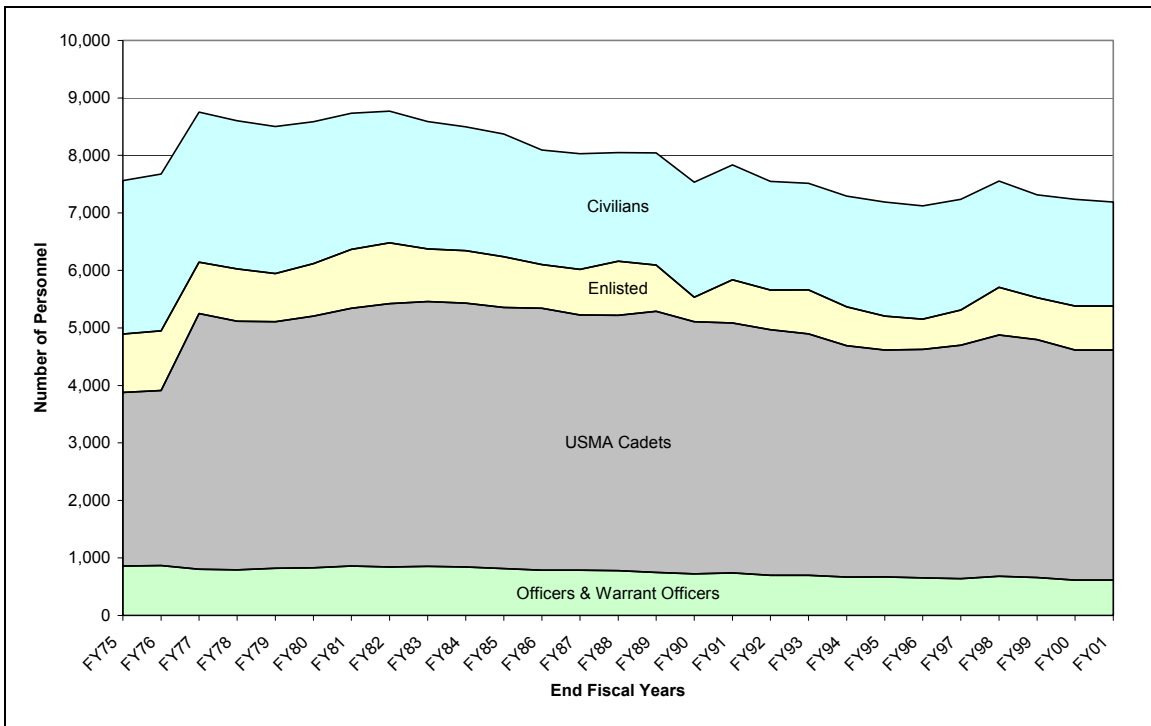
Figure A-38. US Military Academy FY1975–FY2001
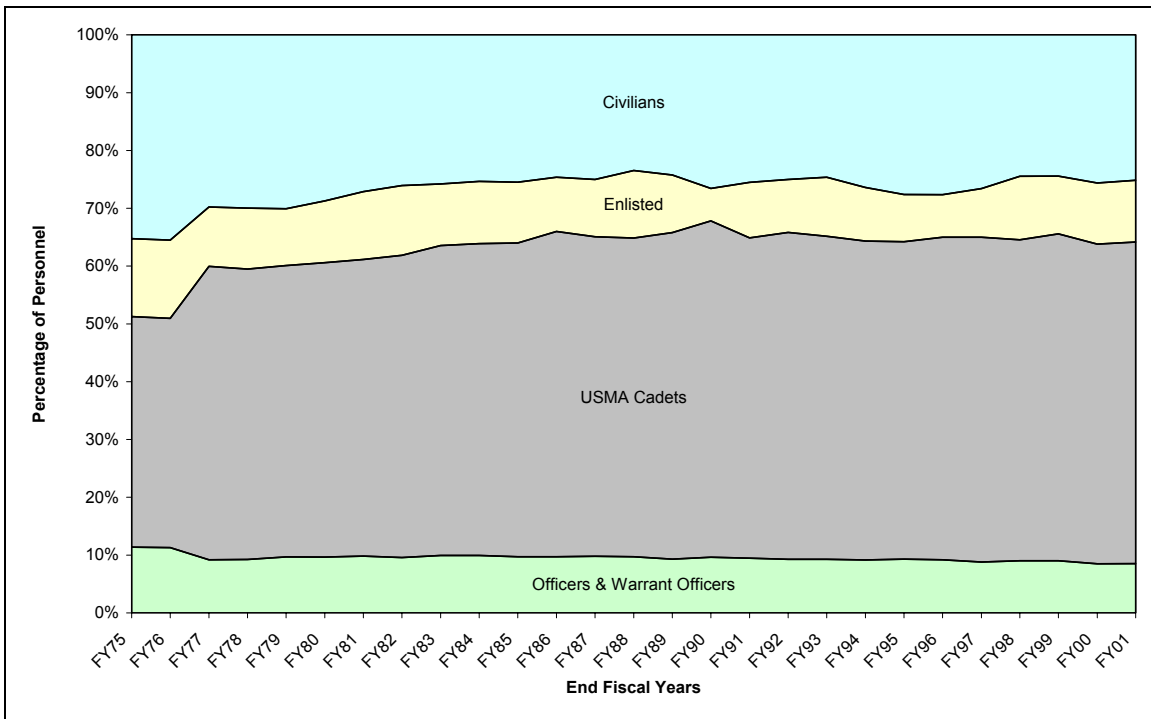
Figure A-39. US Military Academy Mix FY1975–FY2001
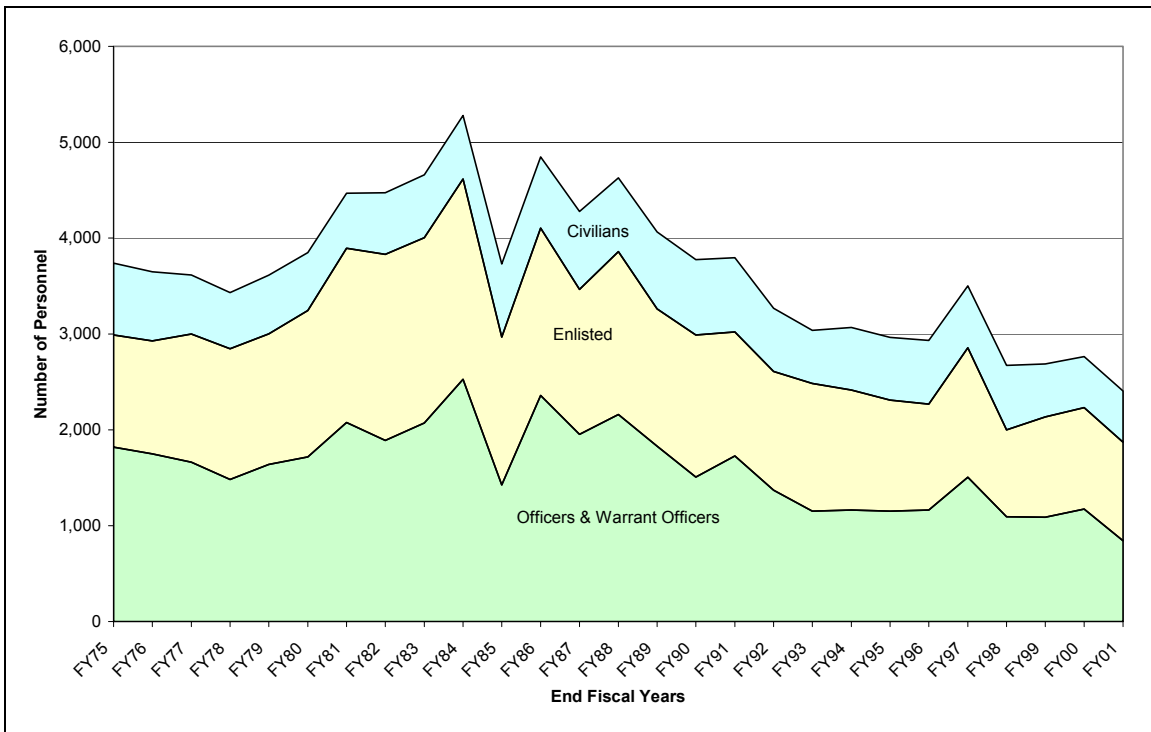
Figure A-40. ROTC and OCS FY1975–FY2001
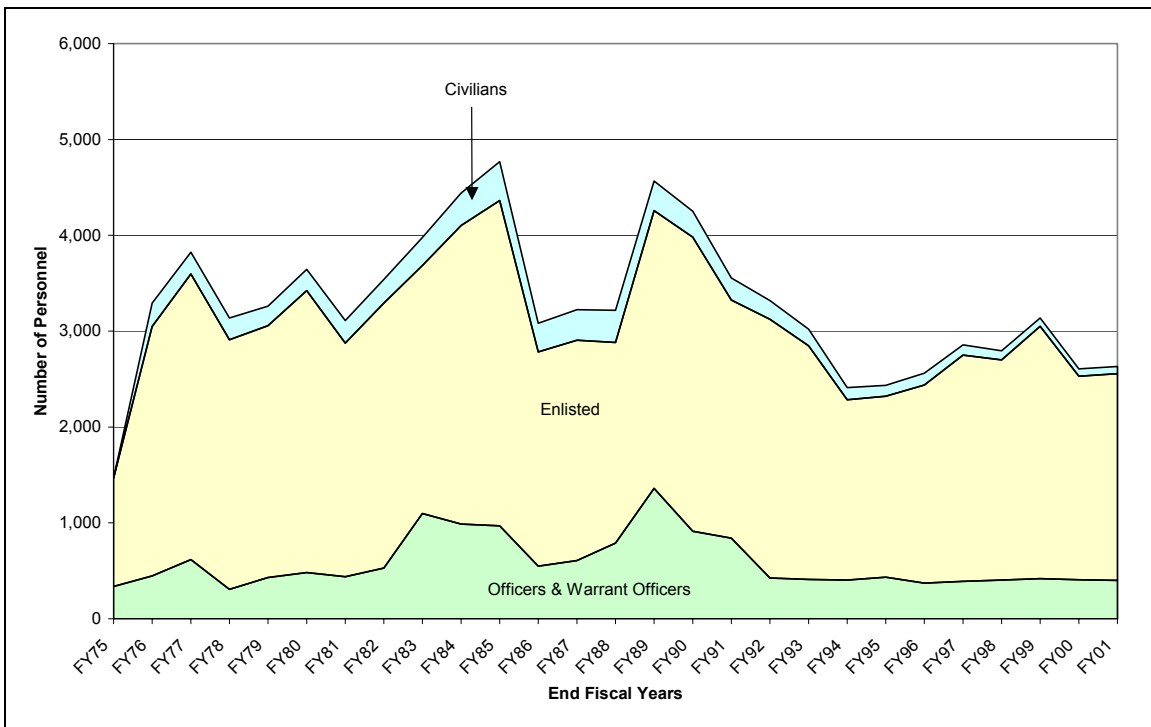
Figure A-41. Intelligence Training FY1975–FY2001

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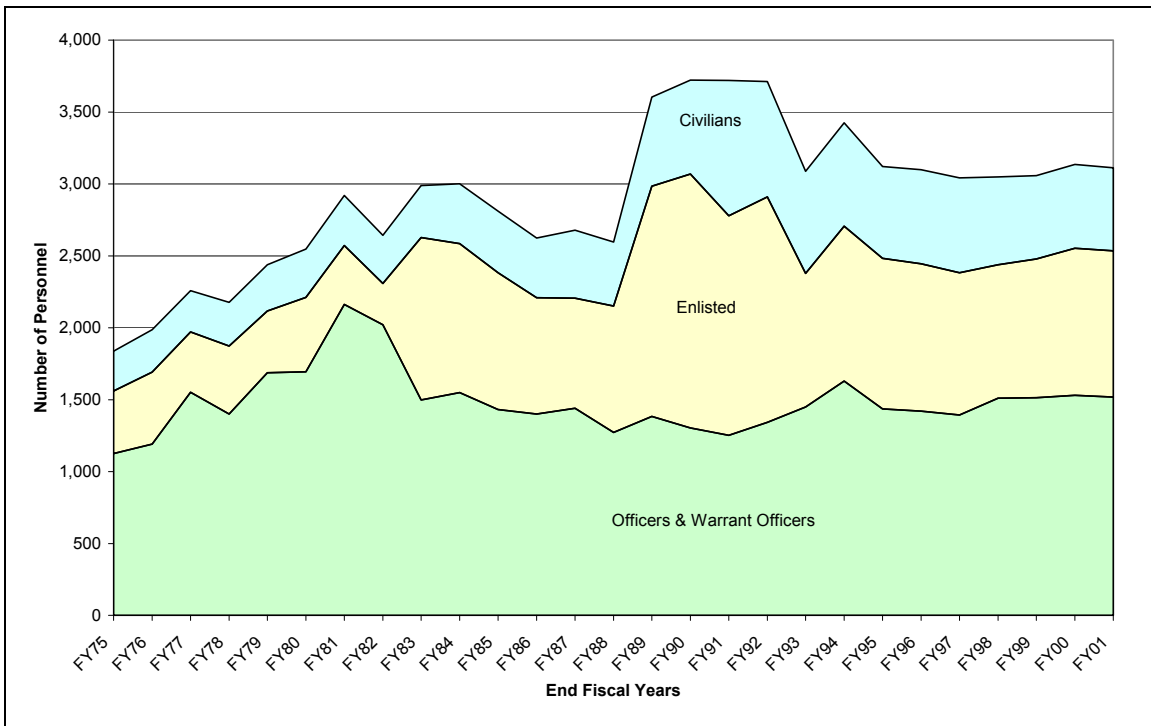
Figure A-42. Aviation Training FY1975–FY2001
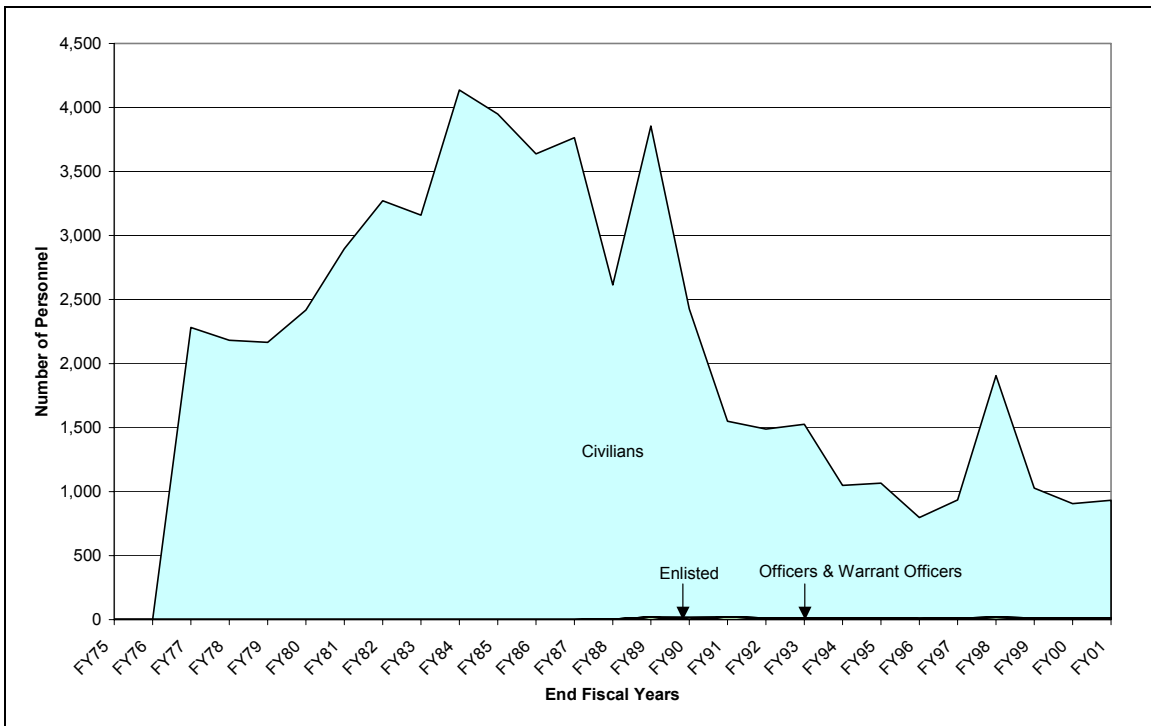
Figure A-43. Civilian Training and Education FY1975–FY2001
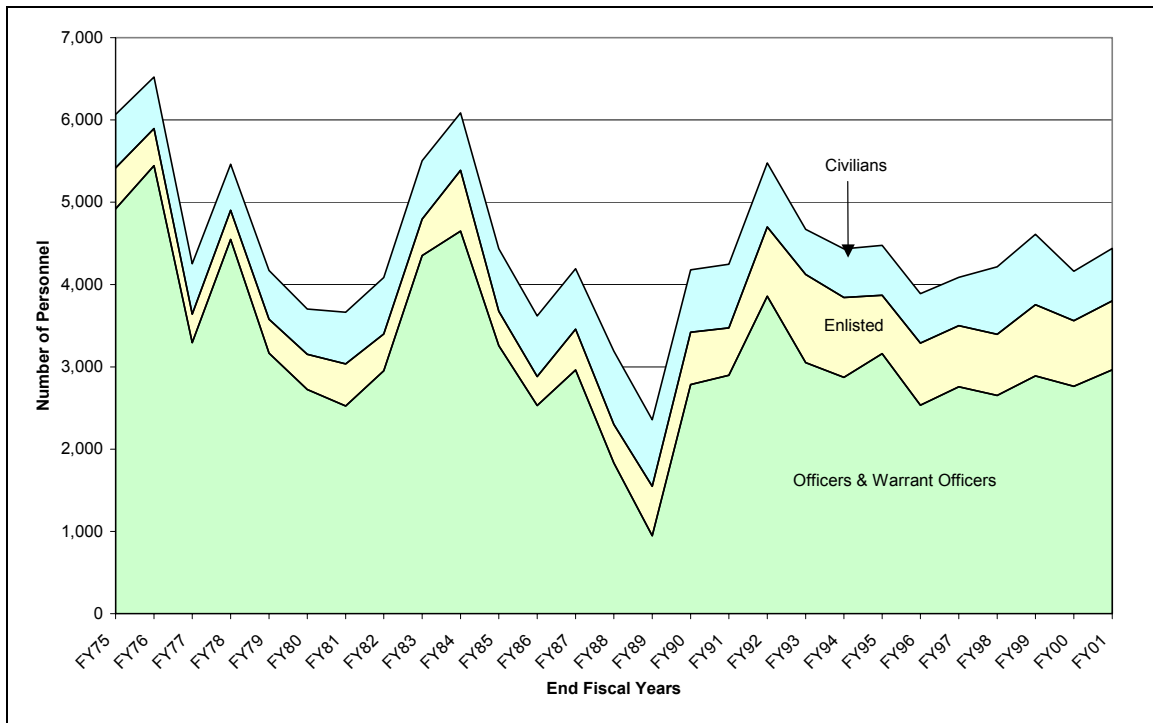
Figure A-44. Professional Military Education FY1975–FY2001
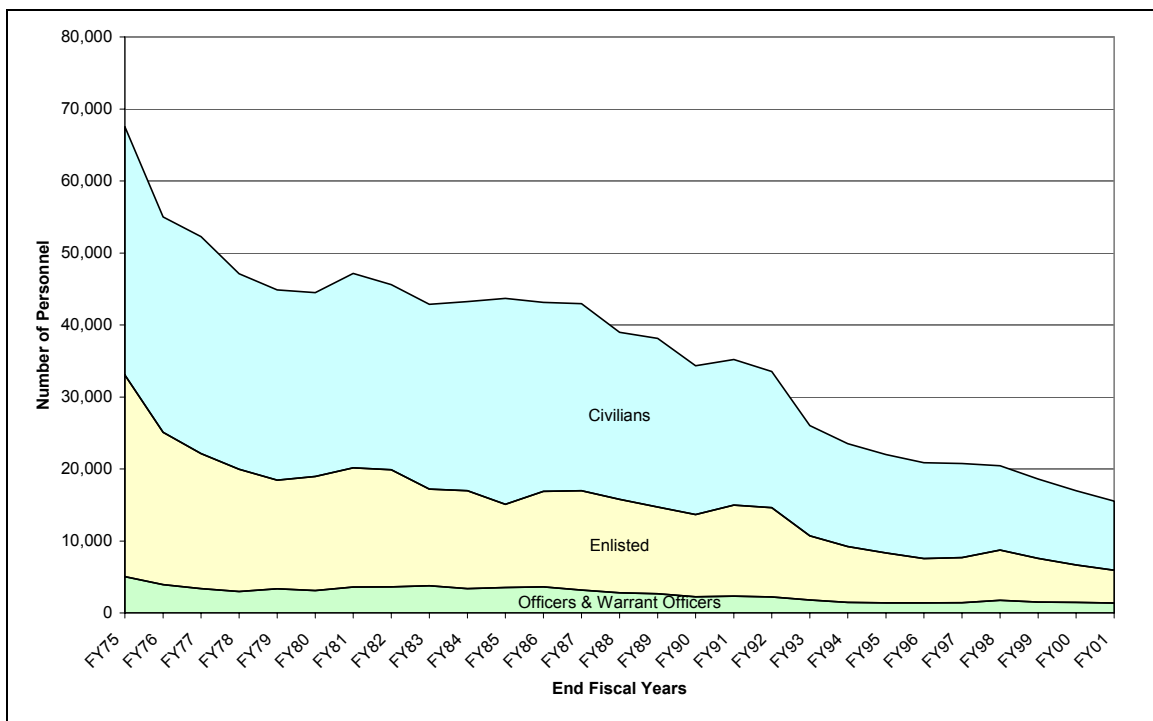
Figure A-45. Training Support FY1975–FY2001

A-25
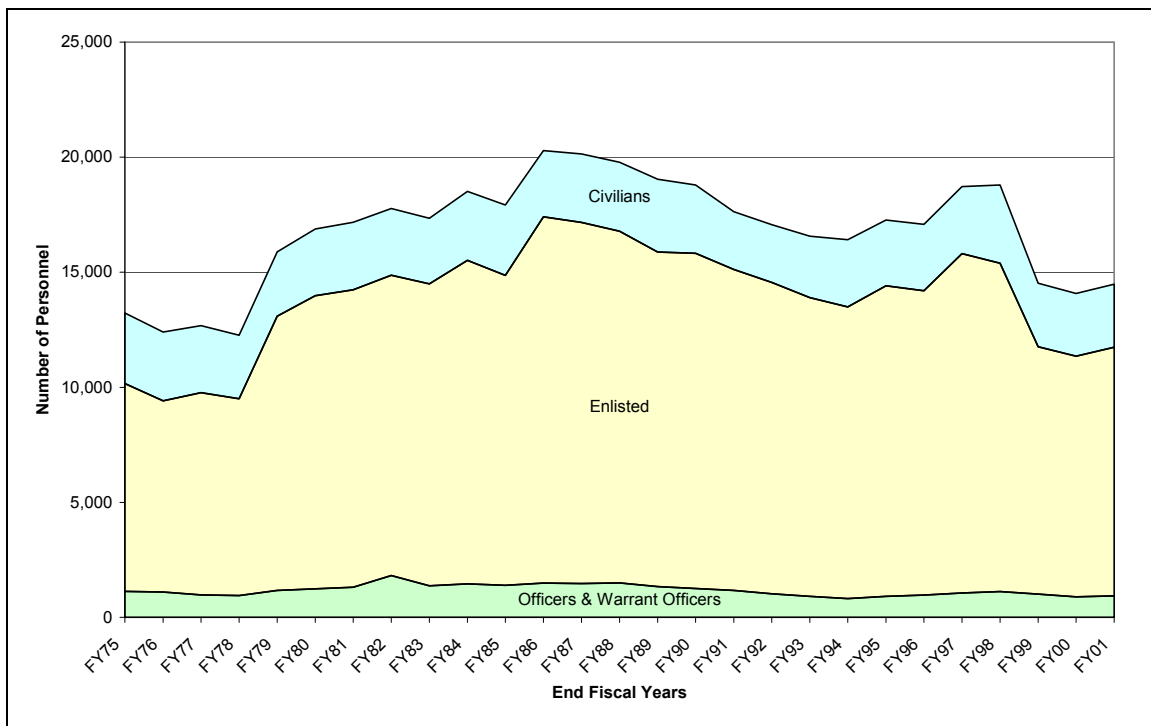
Figure A-46. Recruiting and Processing Program FY1975–FY2001
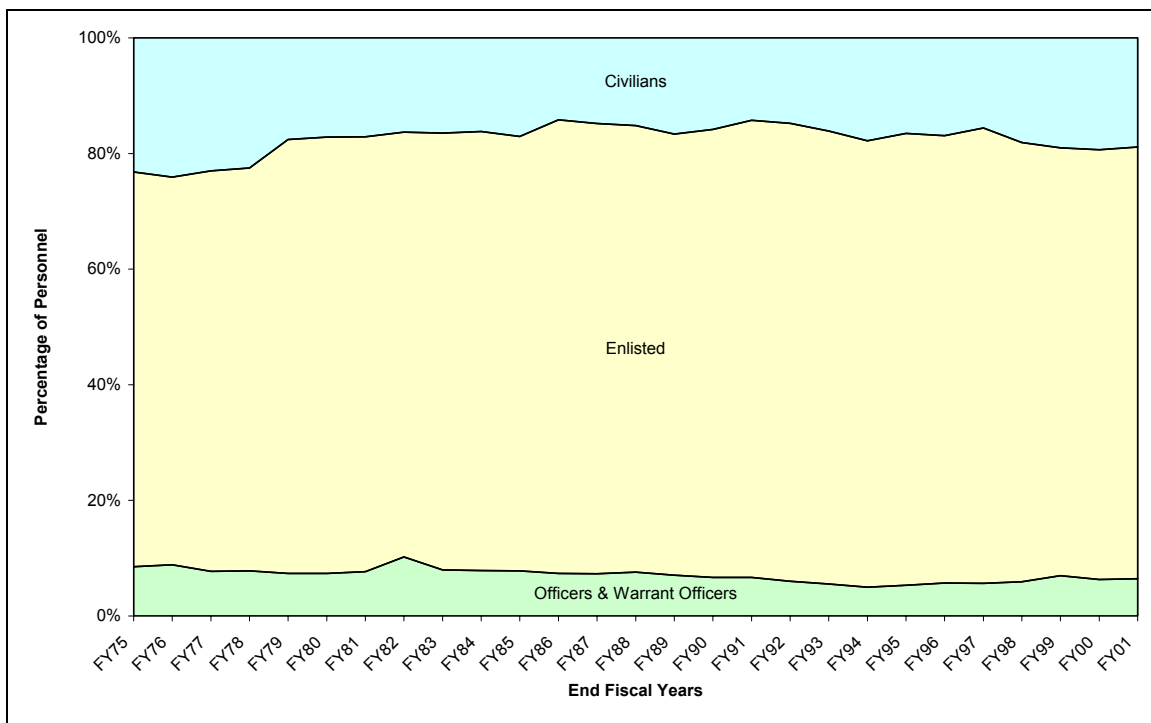
Figure A-47. Recruiting and Processing Personnel Mix FY1975–FY2001
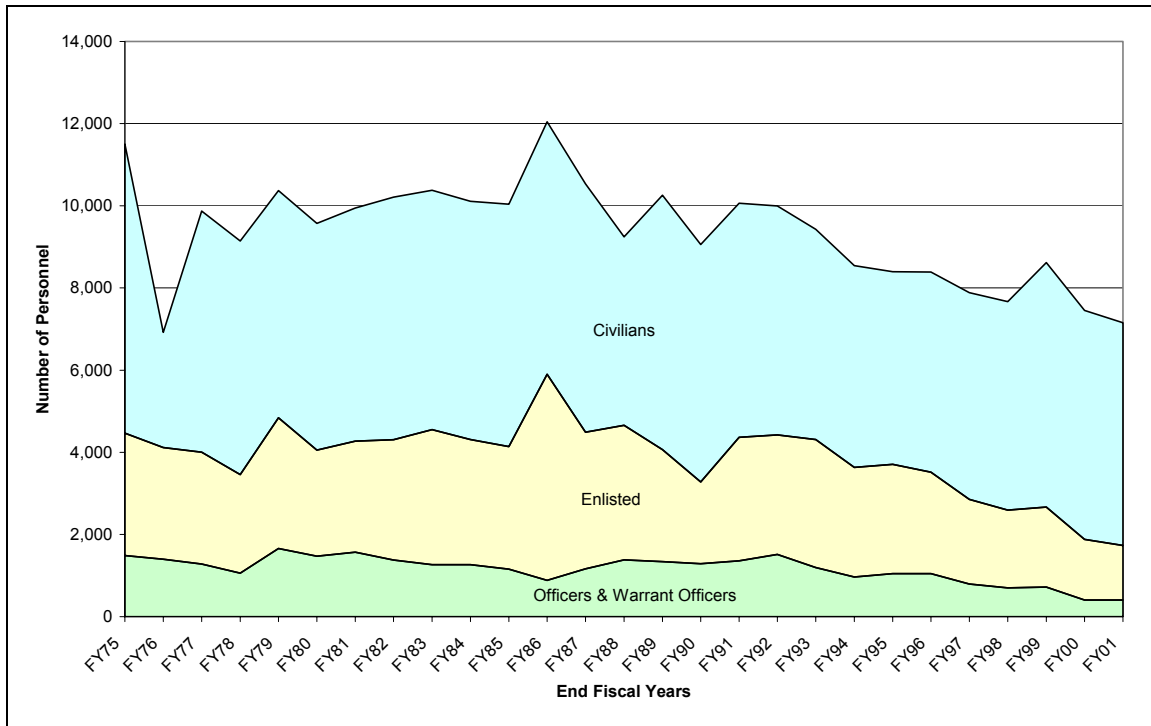
Figure A-48. Military Personnel Management FY1975–FY2001
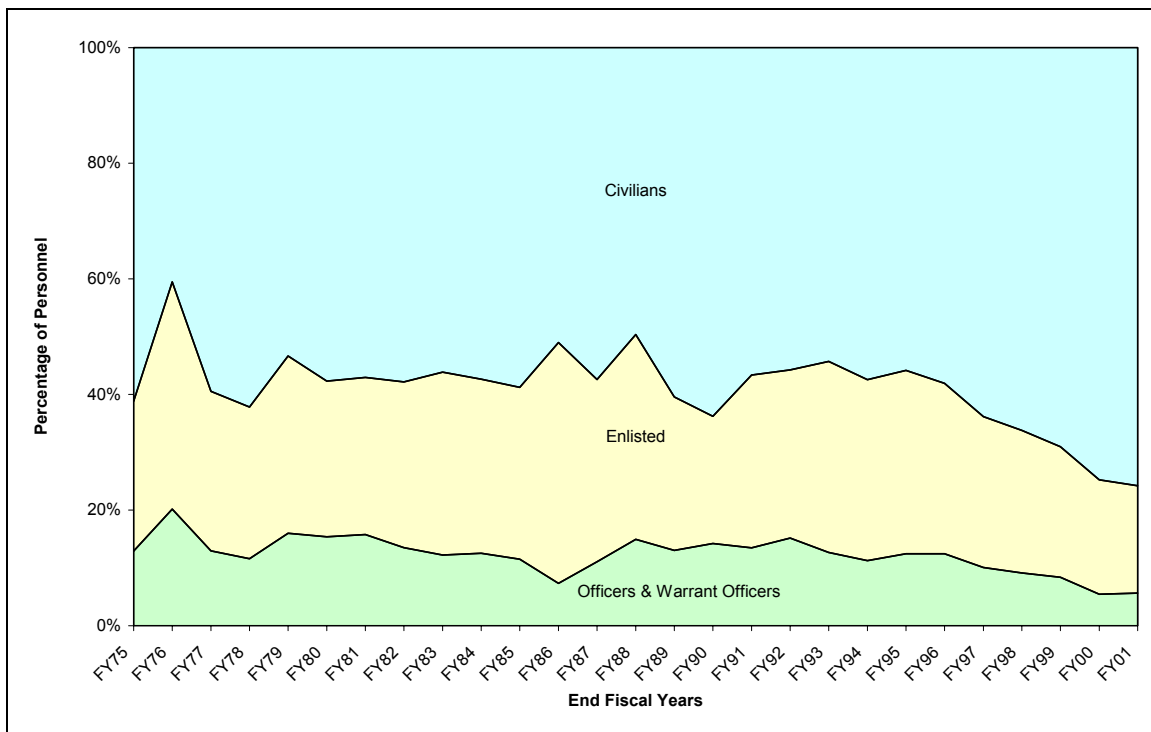
Figure A-49. Military Personnel Management Mix FY1975–FY2001
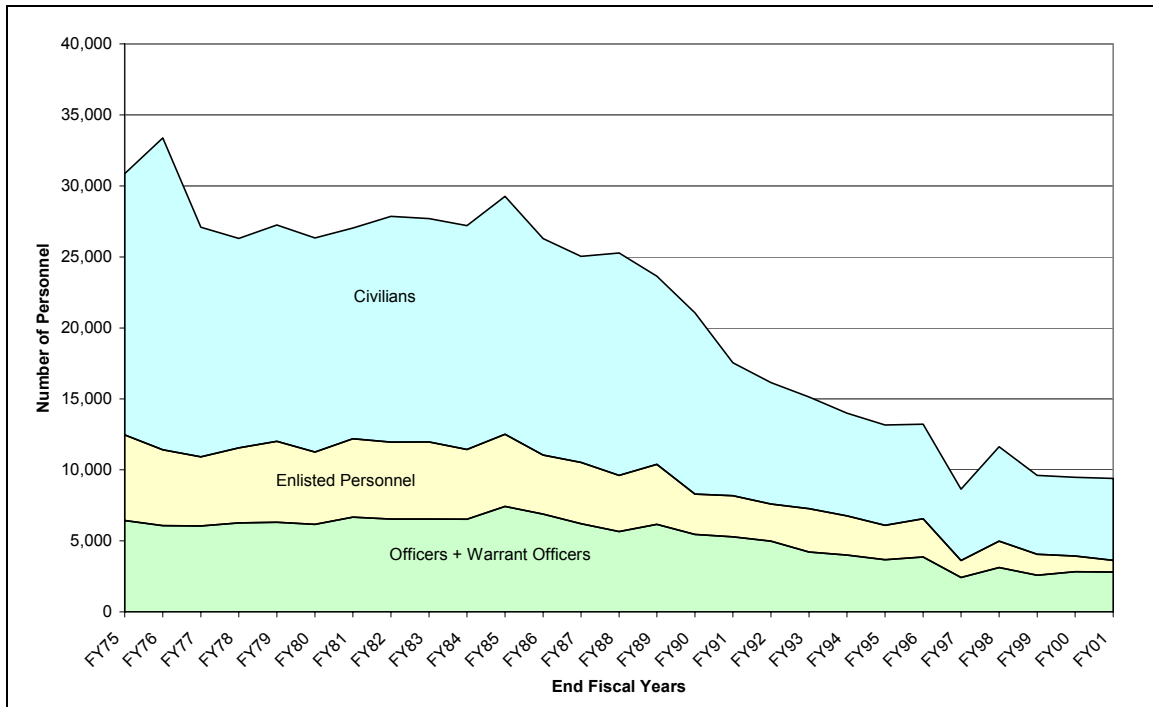
Figure A-50. Army Administration Category FY1975–FY2001
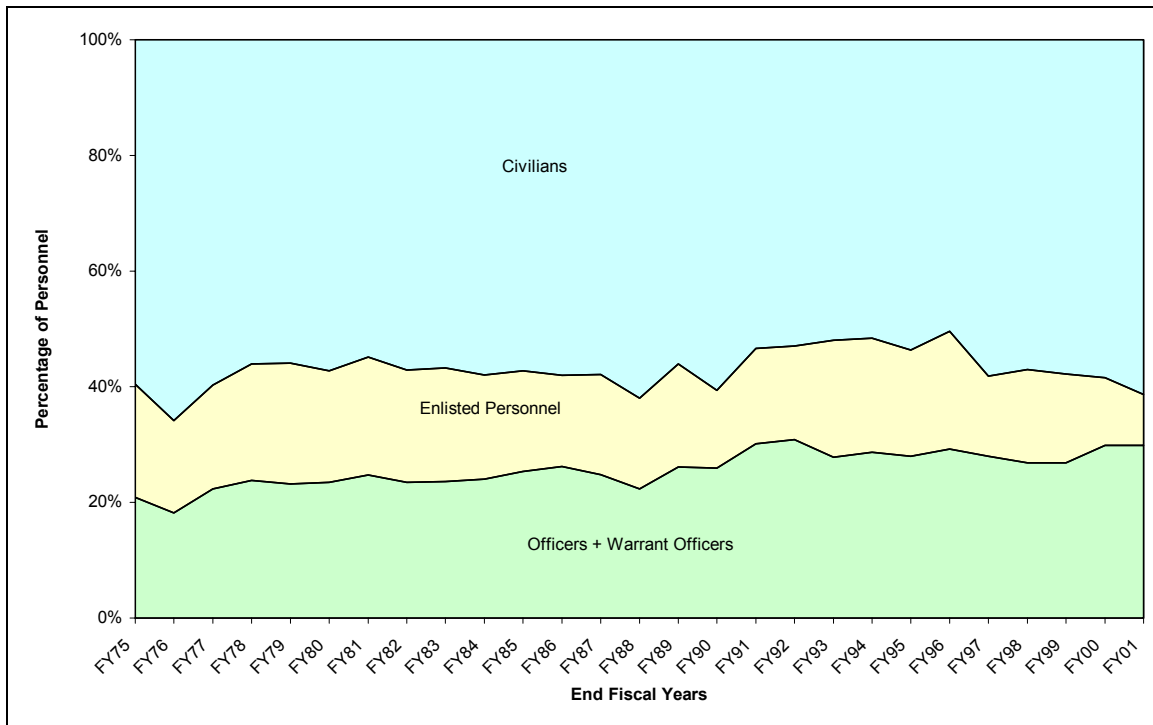
Figure A-51. Army Administration Category Mix FY1975–FY2001

Appendix B
MILITARY AND CIVILIAN GRADE EQUIVALENCY

TABLES

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Appendix B
MILITARY AND CIVILIAN GRADE EQUIVALENCY

Grade and rank equivalency between military personnel and civilian employees influences consideration of an appropriate grade structure in the Department of Defense. The Department of Defense has an integrated workforce in which military personnel and civilian employees work side by side. One of the consequences of this mixed workforce is the necessity to establish comparability between military and civilian grades. This is needed in order to determine who shall be in charge of a team, branch, division, or directorate in which military and civilian personnel are assigned. Military grades are determined by law and the hierarchy is obvious. Civilian grades are also determined by law and the hierarchy is also obvious. It is not so obvious how military and civilian grades relate to each other.

There are two general ways to establish equivalency between the two personnel systems. One is by comparing pay, and the other is by protocol or order of precedence. The precedence matter is not merely a social matter for ceremonies, although protocol has that flavor, but is needed to determine how integrated organizations should be staffed. The question of whether a GS-13 is senior to a Lieutenant Colonel (O-5) becomes important when determining whether a position of branch chief in a headquarters or operating unit is to be coded for military or civilian fill.

The relative position of civilians and military personnel is also situational; it depends in some measure on the position of an organization in the hierarchy and the distance from Washington, D.C. In the Office of the Secretary of Defense at the Pentagon, the unstated presumption for integrated organizations is that civilian grade takes precedence over the military grade. In the field at the lowest levels of the hierarchy, the presumption is that the military person is in charge. This is not universally true, but it is a general tendency.

There apparently is no official DoD statement of military-civilian grade equivalence as such. DoD Instruction 1000.1, *Identity Cards Required by the Geneva Convention,* is the closest statement of such equivalency but is authoritative only for

purposes of treating prisoners of war. This document was issued originally on 30 January 1974 and was reissued administratively with a minor change on 5 June 1991.

The Office of Personnel Management (OPM) does not issue a Table of Precedence. However, it was possible to find informal statements of this relationship from the OSD Office of Protocol and, acting on guidance from OPM, from the Civilian Personnel Office of DoD. The next three tables show different versions of the same relationships. According to the Protocol Office of the Office of the Secretary of Defense, relationships between military personnel and civilian employees are as shown in Table B-1.[1]

Table B-1. Protocol Relationships between Military Ranks and Civilian Grades

Military Officer Ranks	Civilian Grades
Generals & Admirals	Senior Executives
Colonel/Captain	GS-15 GS-14
Lieutenant Colonel/Commander	GS-13
Major/Lieutenant Commander	GS-12 GS-11
Captain/Lieutenant	GS-10
First Lieutenant/ Lieutenant Junior Grade	GS-9 GS-8
Second Lieutenant/Ensign	GS-7

Table B-2 was obtained from the Civilian Personnel Policy Office, whose primary concern is civilian staffing policy rather than order of precedence at ceremonies.[2] The number of civilian officer equivalents extends beyond the General Schedule. All of the teachers in the Department of Defense Dependent School System are officer-equivalents. Some employees in the Federal Wage System, which is for blue-collar workers, are also officer equivalents. The Federal Wage System includes three categories: Wage Grade (WG) employees are non-supervisory, Wage Leader (WL) employees are foremen, and Wage Supervisory (WS) employees are superintendents.[3]

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[1] Jon Howard, OSD Protocol Office, 7 March 2002.

[2] Tables B-2 courtesy of Lee Kara, OUSD(P&R), Defense Field Advisory Services, 6 March 2002.

[3] Office of Personnel Management, "Introduction to the Federal Wage System, Job Grading System," Workforce Compensation and Performance Service, 1 August 2001. The WP wage service category WP, for printers, has apparently been discontinued, at least within DoD.

Table B-2. Military and Civilian Schedule of Equivalent Grades

Military Grade Group	General Schedule Civilians	Teachers	Wage System Civilians
O-7 & O-8	SES		
O-6	GS-15		WS-14 – WS-19
O-5	GS-13, GS-14		
O-4	GS-12	Class IV & V	
O-3	GS-10, GS-11	Class II & III	WG-12 – WG-15
		Class I, Steps 5 - 15	WP-17 – WP-18
O-2, W-3, W-4	GS-8, GS-10	Class I, Steps 3 & 4	WS-8 – WS-13
O-1, W-1, W-2	GS-7	Class I, Steps 1 & 2	WL-6 – WL-14
E-7, E-8, E-9	GS-6		WP-11 – WP-16
E-6, E-6	GS-5		WG-9 – WG-11
			WS-1 – WS-7
			WL-1 – WL-5
E-4	GS-5		WG-1 – WG-8
E-1, E-2, E-3	GS-1, GS-2, GS-3		WP-4 – WP-10

Table B-3 is based on Enclosure 3, Attachment 1, to DoD Directive 1000.0. It shows the relationships of military and civilian grades to regulate treatment of prisoners of war under the Geneva Convention.

Table B-3. Geneva Convention Categories for Treatment of Prisoners of War

Geneva Convention Category	Army Grades	General Schedule	Public Health Service
General Officers	O-7, O-8	GS-16 – GS-18	Surgeon General
Colonels,	O-6	GS-15	Medical Director
Lt. Colonels	O-5	GS-13, GS-14	Senior Surgeon
Majors	O-4	GS-12	Surgeon
Commissioned Officers below Major	O-3	GS-10, GS-11	Sr. Asst Surgeon.
Warrant Officers	O-2, W-3, W-4	GS-8, GS-9	Assistant Surgeon
	O-1, W-1, W-2	GS-7	Jr. Assistant Surgeon
Non-Commissioned Officers	E-7 E-8, E-9	GS-6	
	E-5, E-6	GS-5	
Prisoners ranking below Sergeants	E-4	GS-4	
	E-1, E-2, E-3	GS-1 – GS-3	

Table B-4 shows a comparison of compensation between military pay and civil service pay for 2002. Annual pay shown for the officer grades is regular military compensation, which is the sum of basic pay, basic allowance for subsistence, and basic allowance for housing.[4] Civil service pay is for the Washington, D.C., area and includes no benefits.[5] For both of the pay systems, the minimum (for those with zero service) and maximum pays are shown.

Table B-4. Annual Pay for Military Officers and General Schedule Civilians, 2002

Military Pay System			Civil Service Pay System		
Grade	Minimum ($)	Maximum ($)	Grade	Step 1 ($)	Step 10 ($)
O-6	95,308	122,279	GS-15	92,060	119,682
O-5	82,318	102,961	GS-14	78,265	101,742
			GS-13	66,229	86,095
O-4	57,730	87,810	GS-12	55,694	72,400
O-3	51,552	73,640	GS-11	46,469	60,405
			GS-10	42,294	54,986
O-2	44,200	55,944	GS-9	38,406	49,924
			GS-8	34,772	45,206
O-1	38,192	45,439	GS-7	31,397	40,818

The compensation-based comparison shows about the same relationships as the protocol-based comparisons. The linkage between a colonel (O-6) and a GS-15 is good. The linkage at the bottom of the table between a second lieutenant (O-1) and a GS-7 is not as good. The lieutenant has a substantial edge in starting pay. When due allowance is made for the distribution of both officers and civil servants for time in service (longevity), the grade equivalencies in the table are valid at the O-3 level and above. (The art of comparing military and civilian compensation is well beyond the scope of this analysis!)

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4 "2002 Paybook," *Army Times*, 14 January 2002.

5 Office of Personnel Management, Salary Table 2002-DCB, January 2002.

This brief account suggests two things:

First, the DoD needs to establish an official table of equivalency for military and civilian grades for unit design purposes and for establishing the grades of positions in units with mixed military and civilian workforces.

Second, when addressing the management class in DoD, it is permissible to consider all General Schedule employees of GS-7 and above as officer-equivalents. This understates the number of civilian officer-equivalents because it does not take into account those wage system employees that are also comparable to officer, nor does it include the teachers and other categories of employees that are considered, treated, and paid as officers.

The analysis in the body of the report counts all general schedule employees of grade 7 and above as officer-equivalents for the purpose of showing the division within the DoD workforce between "bosses" and "workers."

Appendix C
ACRONYMS

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ACRONYMS

AFMCs	Army Force Management Categories
DMDC	Defense Manpower Data Center
DoD	Department of Defense
E	Enlisted
FY	Fiscal Year
FYPD	Future Years Defense Program
GS	General Schedule
IDA	Institute for Defense Analyses
IMAs	Individual Mobilization Augmentees
NCOs	Noncommissioned Officers
O	Officer
OCS	Officer Candidate School
OPM	Office of Personnel Management
OPMS	Officer Personnel Management System
OSD	Office of the Secretary of Defense
OUSD (P&R)	Office of the Under Secretary of Defense for Personnel and Readiness
ROTC	Reserve Officer Training Corps
TDA	Table of Distribution and Allowance
TOE	Table of Organization and Equipment
US	United States
USMA	United States Military Academy
WG	Wage Grade
WL	Wage Leader
WP	Wage Supervisor

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14. ABSTRACT

This report examines the grade structure of the Army with particular attention to the number of officers, the composition of the officer corps, and the balance between officers, enlisted personnel, and civilian employees. The report is divided into three major parts. The first part examines the composition of the officer corps and the trends in numbers and relative proportions among warrant officers, specialist officers, and line officers. The second part examines civilian employees, and identifies civilian officer-equivalents based on military-civilian grade equivalencies established on the basis of protocol, pay, and staffing standards. The third part shows the officer, enlisted, and civilian content of Army programs as defined by the Army Force Management Categories. Two sources of data are used to establish trends in officer content and the enlisted-to-officer ratios from end FY1975 to end FY2001. Personnel strength data from the Defense Manpower Data Center made it possible to examine the composition of the officer corps and of the civilian workforce. Manpower authorization data from the FYDP database made it possible to identify the content of programs and program groups composed of aggregations of program elements.

15. SUBJECT TERMS

Army, grade structure, officers, military personnel, civilian personnel, Future Years Defense Program (FYDP), personnel management, force management

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