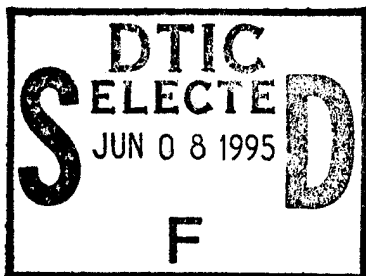


NAVAL POSTGRADUATE SCHOOL MONTEREY, CALIFORNIA



THESIS

TRENDS IN THE ENLISTED FORCE STRUCTURE OF THE U.S. NAVY: 1975-1994

by

Calvin J. Braley

March 1995

Thesis Advisor:

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Stephen L. Mehay

Julie Dougherty

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OF THE U.S. NAVY: 1975-1994**

by

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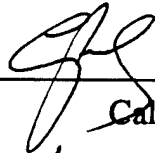
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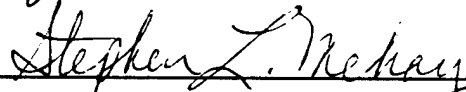
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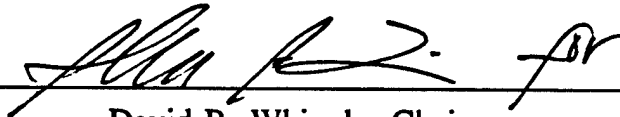
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ABSTRACT

This thesis examines the trends in the enlisted force structure utilizing the Years of Active Federal Service (YAFS) Report for fiscal years 1975 through 1994. The YAFS report, an annual matrix representing all nine enlisted paygrades by years of service, was used to determine characteristics of the "hollow force" of the 1970's, including continuation rates, aging of the force, and changes in the mix of career and non-career personnel. Entry cohorts were created for each fiscal year. These cohorts were tracked over time to portray trends in continuation, force mix and force aging. The results indicate that the YAFS report is an excellent tool to observe total force characteristics such as continuation behavior, aging of the force, and career mix issues however, more precise data are necessary to determine the specific characteristics of a hollow force.

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I. INTRODUCTION

A. BACKGROUND

The advent of the All-Volunteer Force (AVF) on July 1, 1973 initiated a new era for the United States Military. No longer did enlisted managers, those personnel responsible for maintaining the manpower force structure, have the ability to choose personnel from a pool of individuals comprised of the entire population of young men in the United States. After 1973, they had to compete with the civilian job market for the top quality recruits needed for a modern military force.

The start up of the All-Volunteer Force in 1973 created much controversy. Many believed that a military force procured in this manner would not be able to meet the challenges of an immediate buildup in a time of crisis. Just six years prior to the AVF, the National Advisory Commission on Selective Service had concluded that if the draft were ever abolished, "the sudden need for greater numbers of men would find the nation without the machinery to meet it." [Ref. 1, p. 12] In 1969, President Nixon commissioned a study chaired by Secretary of Defense Thomas S. Gates to look further into the feasibility of an AVF. Commonly referred to as the Gates Commission Report, the *Report of the President's Commission on the All-Volunteer Force* concluded that it would be possible to end the draft and support a strong military with a volunteer force. [Ref. 2]

The AVF went through a difficult period from January 1, 1976 through October 1, 1980 and the force recruited during this period has come to be referred to as the "Hollow Force." This was not only the result of recruiting shortfalls, but also of the inadvertent recruitment of lower mental quality individuals. During these years the Armed Services Vocational Aptitude Battery (ASVAB) was misnormed. ASVAB scores are used to qualify applicants for enlistment. Based on sections of

the ASVAB, applicants are placed into one of five Armed Forces Qualification Test (AFQT) categories which determine eligibility for enlistment. Each change in the ASVAB test form requires a process referred to as normalization. This is a procedure that converts the raw scores into percentile scores of a standard reference population. [Ref. 3, p. 1] The ASVAB placed into service on January 1, 1976 was not scaled properly, that is, it was "misnormed." This misnorming allowed many Armed Forces Qualification Test (AFQT) category IV personnel into the armed services. Originally only 5 percent of new enlistees were allowed to be in Category IV, but, once the test battery was properly scaled, it was determined that up to 30 percent of the force recruited from January 1986 to October 1980 was in mental category IV. This indicated that possibly 25 percent of the force would not have been eligible for enlistment if the correct scale had been used. [Ref. 4, pg. 4]

There were many concerns that the military performance of this lower aptitude force would be very poor. Although there are no direct measures of this performance available, there are some indirect measures such as rates of attrition and promotion to the next higher paygrade which can be studied. The data in this thesis will be analyzed to determine if there are any differences between groups from this period, in these two indicators, which may identify the attributes of a "Hollow Force." The thesis will also look at more recent periods and determine if there are any trends that might indicate a reoccurrence of the 1970's hollow force in the drawdown of the military in the 1990's.

Other points that came out of the Gates Commission were the beliefs that: (1) career force manning would increase under a volunteer system because of an increase in first-term reenlistment rates; and, (2) a more career-intensive, and possibly smaller, volunteer force would be more productive

than a draft-induced force. [Ref. 5, p. 52] The data will be used to determine if the statement made in point one, that there would be an increase in the size of the career force, has occurred. The career force is defined as those personnel with greater than four years of active service.

B. OBJECTIVES

Management of the enlisted force structure is a difficult task. Obtaining the proper mix of first-term and career personnel with the proper levels of experience is a management challenge. There are many reports utilized as "tools" in an attempt to ensure this proper mix of personnel. One such report is the Years of Active Federal Service (YAFS) Report. Produced by the Bureau of Naval Personnel's Manpower Personnel Manning Information System (MAPMIS), this report lists the enlisted force structure divided by paygrade, E-1 through E-9, and years of service (YOS), one through thirty-one.

Utilizing the YAFS report for fiscal years 1975 through 1994, the thesis will analyze specific trends in the Navy's enlisted force structure. The thesis will focus on changes in manpower by paygrade and experience levels, the aging of the career force, and fluctuations in first term attrition and annual continuation rates. It will also analyze different entering cohorts. By comparing the results with those presented in the literature the thesis will determine the usefulness of the YAFS report in identifying manning problems, such as the hollow force.

C. THE RESEARCH QUESTION

The primary research questions will be, "What have been the trends in the Navy force structure during the All-Volunteer period, and did the Navy experience a "hollow force" in the late 1970's?" and "If so, what attributes of the force structure characterize a 'hollow force?'". Two additional

research questions are, "How has annual attrition and continuation behavior varied over this period?" and "Is the career force getting older?".

D. SCOPE AND LIMITATIONS

This thesis will focus on the data obtained from the YAFS reports. These reports are cross-sectional pictures of the size of the Navy's enlisted force at the end of each fiscal year. As such, they do not reflect the fluctuations in manpower that occur during a given fiscal year. The numbers of personnel accessed during the year are included in the numbers, not as a separate figure. Each line of the report, reflecting each of the different years of service, does not include personnel who accessed and attrited in that same year. As a result, the percentages derived using these numbers are approximations of the true numbers. They all are, however, sufficiently accurate to observe trends in the size of the force structure.

E. DEFINITIONS AND ABBREVIATIONS

To assist the reader of this report the following abbreviations and definitions will be used throughout:

- ASVAB - Armed Services Vocational Aptitude Battery. Used by the military services to select and classify enlisted personnel. [Ref. 6]
- AFQT - Armed Forces Qualification Test. Derived from subtests of the ASVAB, it is a scale divided into five categories for reporting quality of enlisted accessions. [Ref. 7] (see Table 1. for categories)
- AVF - All-Volunteer Force.
- Cohort - A group of individuals, used here to indicate all who entered the service during a specific fiscal year.

- LOS - Length of Service. Indicates the amount of time, measured in years, an individual has been in the military at the time of the report.
- YOS - Years of Service. Same as LOS.
- YAFS - Years of Active Federal Service. Same as LOS.
- Fiscal Year (FY) - Period from 1 October to 30 September of the following year. A fiscal year starts in October of the previous calendar year.

ARMED FORCES QUALIFICATION TEST (AFQT) CATEGORIES			
AFQT Category	Percentile score range	Percent of reference population	Description
I	93-100	8	Above average
II	65-92	28	Above average
III	31-64	35	Average
IV	10-30	21	Below average
V	1-9	9	Unqualified for service

Table 1. Armed Forces Qualification Test (AFQT) Categories [Ref. 8]

F. ORGANIZATION OF STUDY

Chapter II provides a review of the literature pertinent to the research questions of the thesis. Chapter III describes the data and methodology used in the study. Chapter IV contains the findings of the study, and Chapter V presents conclusions and recommendations drawn from the study.

II. LITERATURE REVIEW

The study of the literature pertaining to this research project is divided into two separate areas. The first reviews studies conducted on the misnorming of the ASVAB and the results of allowing lower mental category personnel into the service. In the second section, previous examinations of the trends of the enlisted force are presented. These previous studies provide the basis for comparison with the results obtained from the YAFS reports in this thesis.

A. MISNORMING OF THE ASVAB AND ITS POSSIBLE RESULTS

In 1983, Maier and Truss [Ref. 9] determined the accuracy of the ASVAB score scale utilizing forms 5, 6, and 7 of the ASVAB (ASVAB 5/6/7). When the test was first introduced in 1976, it was observed that the quality of upper mental category recruits immediately increased. It was determined that the scale used to normalize the test was inaccurate. The test was corrected in May 1976 for the upper range of personnel. It was not believed that there were problems with the lower categories of personnel at that time. By 1980 it was concluded that the scores of the low range were also high. As a result, enlisted accessions in mental category IV were possibly 25 percent higher than originally believed.

The authors found three possible explanations for the high scores in the original scale [Ref. 10]:

- The reference test used with the sample of Navy and Air Force recruits was most likely not scored correctly.
- The reference test scores for the Army examinees were inflated by coaching on the test.
- Many Army examinees tested at Armed Forces Examining and Entrance Stations appear to have been excluded from the calibration sample that was used to construct the score scale, on the basis of their reference test scores. Those who failed to qualify for enlistment

(AFQT scores 1 to 15) tended to be excluded from the calibration sample.

Maier and Truss concluded that the original ASVAB 5/6/7 score scale was inflated throughout the score range. After correction, the traditional meaning of the ASVAB score scale was restored. [Ref. 11]

Heisey, Means, and Laurence [Ref. 12] conducted a study in 1985 that also examined the results of the misnorming of the ASVAB. Sponsored by the Office of the Assistant Secretary of Defense (Manpower, Installations, and Logistics), this report is a summary of previous research on the military performance of low-aptitude personnel. This review was initiated because of the possibility that the services would need to lower aptitude standards to maintain manpower levels in the AVF due to decreases in the size of the projected manpower pool, and resulting increases in competition for available manpower from the private sector.

The authors started by providing background of aptitude testing and its use for determining eligibility for entrance into the armed services. They next looked at "Project 100,000", which was a program during the Vietnam War era that allowed previously unqualified personnel into the military through a relaxation of entry standards. This program was in effect from 1967 to 1971 and permitted approximately 360,000 previously unqualified personnel to enter the military.

After these low-aptitude individuals were accessed, the services had to determine how well they performed on the job. The authors used training performance, assignments, grade level achieved, supervisor evaluations, offenses, educational achievement, attrition, and reenlistment to indirectly measure job performance. They determined that, although there were some differences between mental category groups, most were not significant. The level of education, whether one was a high

school graduate or not, was a more important factor in explaining job performance in some instances.

The second half of their study considered those individuals who entered during the period when the ASVAB was misnormed. Called "Potentially Ineligibles" (PI) [Ref. 13], these individuals would not have qualified for enlistment if the correct scores had been utilized. Although these individuals entered due to an error, it provided an excellent opportunity to study the results of allowing lower mental category individuals into the services. Many of these individuals were still in the service at the time of this study which provided continuing opportunities to evaluate their performance. Job performance areas examined included training course attrition, skill qualification tests, promotion to E-4 or higher, completion of first term of service, eligibility to reenlist, and propensity to reenlist. The authors concluded that the results from studying the PIs were similar to the results from "Project 100,000." Lower-aptitude individuals' performance, as measured by these general measures, was somewhat lower than their higher-aptitude counterparts, but still acceptable if education level is controlled. [Ref. 14]

A Naval Postgraduate School (NPS) master's thesis completed by Boyer in 1981 [Ref. 15] examined the performance of Navy personnel assessed as a result of the misnorming of the ASVAB. The purpose of Boyer's study was to determine if the Armed Forces Qualification Test (AFQT) is an appropriate measure in determining eligibility for enlistment into the armed services.

Boyer's sample of personnel assessed as a result of misnorming of the ASVAB was obtained from those individuals who began their enlistment in the last quarter of fiscal year 1977. A comparison was made between those who would have been ineligible with the eligible individuals contained within the

sample. Boyer also compared the performance among the four mental category groups. The performance indicators used were promotion patterns, involvement in occupational skill training, and service survival.

Boyer concluded that the AFQT was a good predictor of recruit quality. Promotion rates were lower, attrition was greater, and smaller numbers of individuals completed A-school in the lower mental categories. He also compared educational background and determined that high school graduates had better results in all three performance areas than non-high school graduates.

B. TRENDS IN THE FORCE STRUCTURE

In 1988, Good completed an NPS master's thesis on the trends of the enlisted force for all services from 1974 to 1987. [Ref. 16] The author set out to determine if changes in the national economic environment and changes in military pay and benefit policies had an effect on career decisions of military personnel. She used the Enlisted Transition Matrix that classified personnel by their length of service. Good separated the years of service (YOS) into six comparison groups: 1-4 YOS, 5-10 YOS, 11-15 YOS, 16-19 YOS, 20-30 YOS, and an aggregate category of 5-30 YOS for each fiscal year from 1974 through 1987.

Graphing the results from year to year by the above divisions, the author compared continuation rates, retention rates, and experience distributions for each of the four services. She determined that members tended to continue on active duty once past the second reenlistment. Also, a high employment rate in the civilian sector tended to affect reenlistment rates for the 1-4 YOS group. This fluctuation in the employment rate was also reflected in the graphs for the retention rate, which otherwise held constant. The experience distribution improved in the later years of the study after an

initial decrease in the early years. The research did not indicate that a strong economy had an effect on the experience distribution.

Roll and Warner [Ref. 17] examined enlisted career manpower for all services and, specifically, some of the trends revealed in the first ten years of the AVF. They first divided the force into four terms of service and looked at retention rates for each term. Personnel with one to six YOS were contained in the first-term, seven to ten YOS in the second-term, eleven to fourteen YOS in the third-term, and fifteen to nineteen YOS in the fourth-term. First-term retention rates generally increased each year of the study (FY1975-1982) which the authors attributed to many different factors. Second and third-term retention rates were found to have a greater variance. These rates dropped in FY1975-1979, creating a belief that a career force would not be maintained with an AVF. These rates did recover, however, and were higher in 1982 than in 1975.

The authors next examined the percentage of the force consisting of career personnel. These were individuals with more than four years of service. They found that the size of the career force increased significantly over the period of the study. The Navy, in particular, noticed a slight drop initially, but then experienced a rapid increase after FY1978. They also found that the distribution of careerists changed. The percentage of personnel with 5-10 years of service increased, while those with greater than ten YOS, decreased. This increase in personnel with 5-10 years of service was attributed by the authors to an increase in first-term retention.

III. METHODOLOGY

The data utilized for this report was obtained from copies of the Enlisted Personnel by Years of Active Federal Service Spreading Paygrade section of the Manpower Personnel Manning Information System (MAPMIS) Report 5314-4106 for fiscal years 1975 through 1982 and Report 531N-4106 for fiscal years 1983 through 1994. Each report is a series of matrices consisting of the nine enlisted paygrades and the total force by length of service for each fiscal year. These total force numbers were verified with equivalent data provided by the Defense Manpower Data Center. The matrices were incorporated into spreadsheets using Excel 5.0 and the resulting spreadsheets are displayed in Appendix A to the thesis.

Separate cohorts were developed for each fiscal year. The numbers for the first year of service (YOS) were used to identify the beginning cohort for a particular fiscal year. The one year of service cells for fiscal year 1975 would represent the numbers of entrants in the 1975 cohort, for example. The second year of service for the next fiscal year, FY 1976, would identify the second YOS for the 1975 cohort; YOS 3 from FY 1977 would represent the third YOS of the 1975 cohort, etc. This approach was used to develop separate cohorts for each fiscal year. Each cohort was followed through fiscal year 1994. The matrix developed for each cohort consists of the number of personnel in each enlisted paygrade by year of service and fiscal year. The matrices for all the cohorts were also incorporated into Excel spreadsheets, which are located in Appendix B to this thesis. Entry-level cohorts were not developed for fiscal years 1992, 1993, and 1994 as there is not enough years of service to generate trends from these accession groups.

Appendix C to the thesis contains tables derived from the data contained in the YAFS (Appendix A) and cohort (Appendix B) spreadsheets. The methodology used to generate these

tables, and the information contained within them, will be described in the following paragraphs.

The proportion of personnel continuing from one year to the next was derived for each cohort (Table C-1). The initial base year inventory in YOS 1 was used in computing the continuation rates. The continuation rate for YOS 1 is thus 100 percent. Each successive year thereafter represents the number of personnel remaining on active duty in that year as a percentage of the initial entry group. For example, to obtain the percentage for the 1975 cohort YOS 2, 86.8 percent, the number of personnel in the cell indicating the total personnel with 2 years of service in Table B-1, 77,970, was divided by the total number of personnel in YOS 1 of Table B-1, 89,834.

Table C-2 contains the number of personnel in paygrades E-3 and below as a percentage of all E-5 and below personnel. Tables C-3 and C-4 contain the same information for paygrades E-4 and E-5 respectively. The number of personnel in these paygrades, E-1 through E-5, were totaled for YOS 1-8, by cohort. These numbers were divided into the total numbers of E-1 to E-3, E-4, and E-5 personnel for each corresponding YOS and cohort. The resulting percentages should indicate the speed of advancement. Greater percentages of E-4 and E-5 personnel in lower YOS cells would indicate faster advancement to these paygrades. Lower percentages would indicate slower advancement. For example, in Table C-4 the percentage of paygrade E-5 personnel with five years of service in the 1985 cohort is 47.63 percent. This percentage is much greater than the 30.18 percent of E-5 personnel with five years of service in the 1990 cohort. This would indicate that advancement was faster for those in the earlier cohort.

The distribution of personnel by paygrade was computed for each fiscal year (Table C-5). From this information, the percentage that each paygrade comprises of the total force by

fiscal year, was computed (Table C-6). These percentages should indicate if there has been any shifts in the composition of the force. Changes in the percentage that a paygrade comprises of the total force may signal problems with advancement. For example, an increasing percentage of paygrade E-5 each fiscal year may indicate difficulty in obtaining paygrade E-6.

The average length of service for each paygrade (Table C-7) was computed by first multiplying the number of personnel in each cell of the YAFS Reports by its corresponding YOS. The results were totaled for each paygrade, yielding the aggregate years of service for each paygrade. When divided by the total personnel in that paygrade this yielded the average length of service. Changes in the average length of service by paygrade may indicate if the force is becoming more junior or more senior.

Personnel with four years and less YOS are considered non-career, while those with greater than four YOS are considered career personnel. The total force was separated into these two classifications and the percentages determined (Tables C-8 and C-9). Career personnel were further separated into three categories: 5-10 YOS, 11-20 YOS, and 21-31 YOS (Table C-10). This was done to determine the distribution of career personnel across the higher paygrades. Next, divisions were made by term of service using the same groupings as Roll and Warner [Ref. 4.] (Table C-11). First-term is defined as, 1-6 YOS; second-term as 7-10 YOS; third-term as 11-14 YOS; and fourth-term as 15-19 YOS. Also, personnel in YOS 20 were looked at separately as this is the first point that individuals are eligible to leave with retirement benefits.

Excel has the capability of linearly projecting trends in data. This was applied to the average length of service numbers to observe the trends in the data. The average length of service was projected to the year 2000 using the averages

computed in Table C-7. Table C-12 displays the resulting trends when all 20 years, from 1975 to 1994, were used to estimate the trends. Table C-13 shows the trends when only the last ten years, 1985 to 1994, are used.

Once these tables were created, bar charts and line graphs were developed to better portray the trends that have unfolded since 1975. These charts and graphs are discussed in the next chapter.

IV. ANALYSIS OF DATA

This chapter will establish reference points by which to analyze the information developed in Chapter III. Graphs of the data will then be presented based on these reference points to determine and emphasize the trends of the enlisted force structure over the past 20 years.

A. REFERENCE POINTS

The following are historical landmarks that will be utilized to discuss and explain the trends in the enlisted force structure presented in this thesis.

The raw data used to generate these charts are found in Appendix D and graphical displays of this historical landmark data are provided in Figures 1-5:

- a. National unemployment rate (Figure 1):
 - continuation rates may be influenced by fluctuations in the national unemployment rate. High unemployment is associated with high retention, low unemployment with low retention;
- b. Military Base Pay (Figure 2):
 - represents the base pay for an E-1 with less than one year of service expressed in nominal values. Largest pay raises were in October of 1980 and 1981;
 - changes in military pay may influence continuation rates. Large increases will generally increase retention while small increases will decrease retention;
- c. Ships (Figure 3):
 - the number of combatant and non-combatant ships in active service;
 - the number of ships should dictate the size of the enlisted force;
- d. Accessions and Losses (Figure 4):
 - represents number of personnel gained from civilian life (accessions) and lost to civilian life;

UNEMPLOYMENT RATE

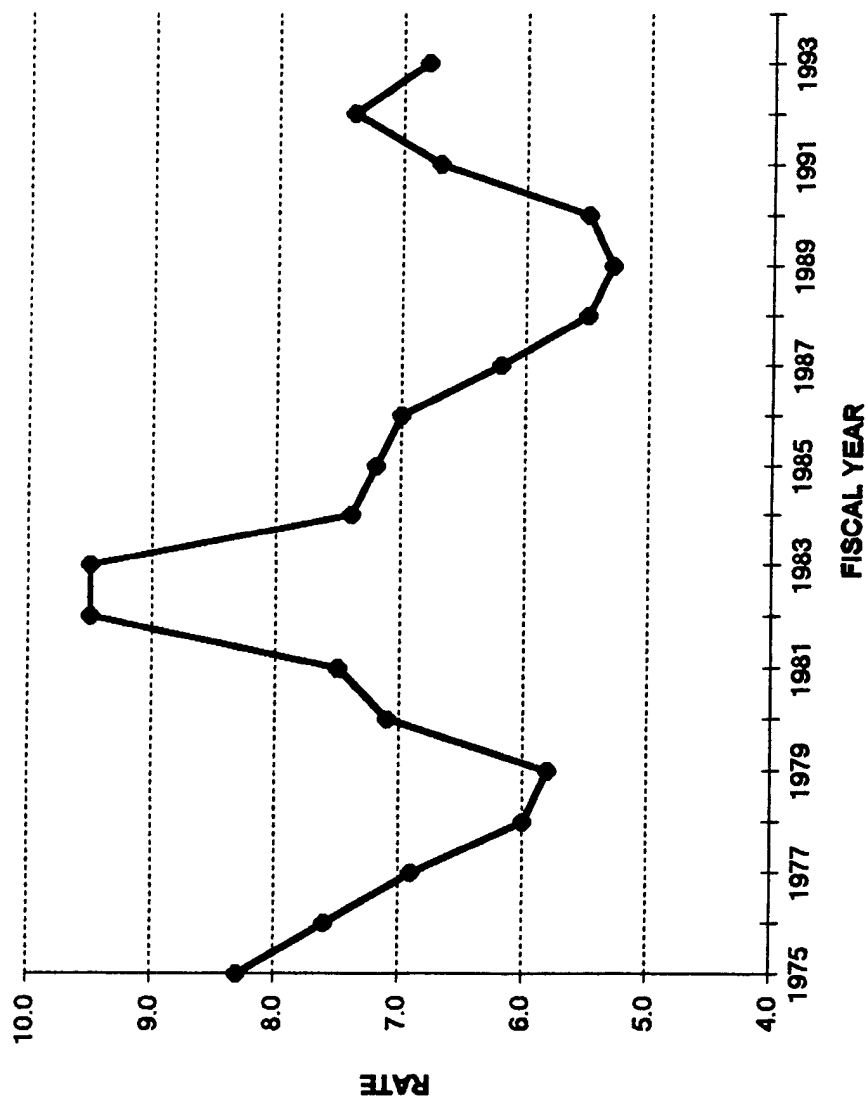


Figure 1. National Unemployment Rate.
 Source: Statistical Abstract of the United States, 1974-1994, Bureau of Census, U.S. Dept of Commerce.

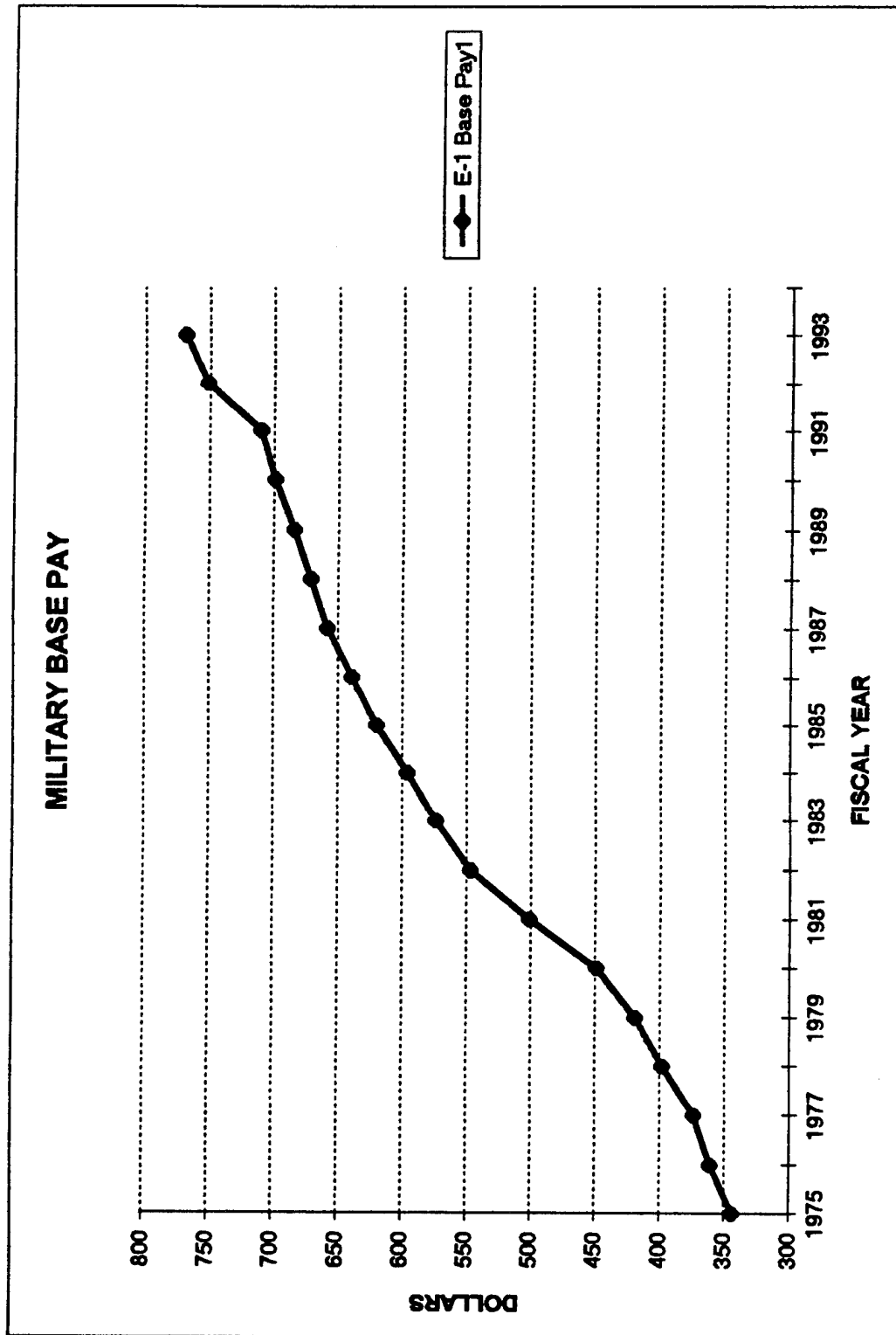


Figure 2. Military Base Pay (Monthly Rate for E-1).
Source: Statistical Abstract of the United States,
1975-1994, Bureau of Census, U.S. Dept. of Commerce.

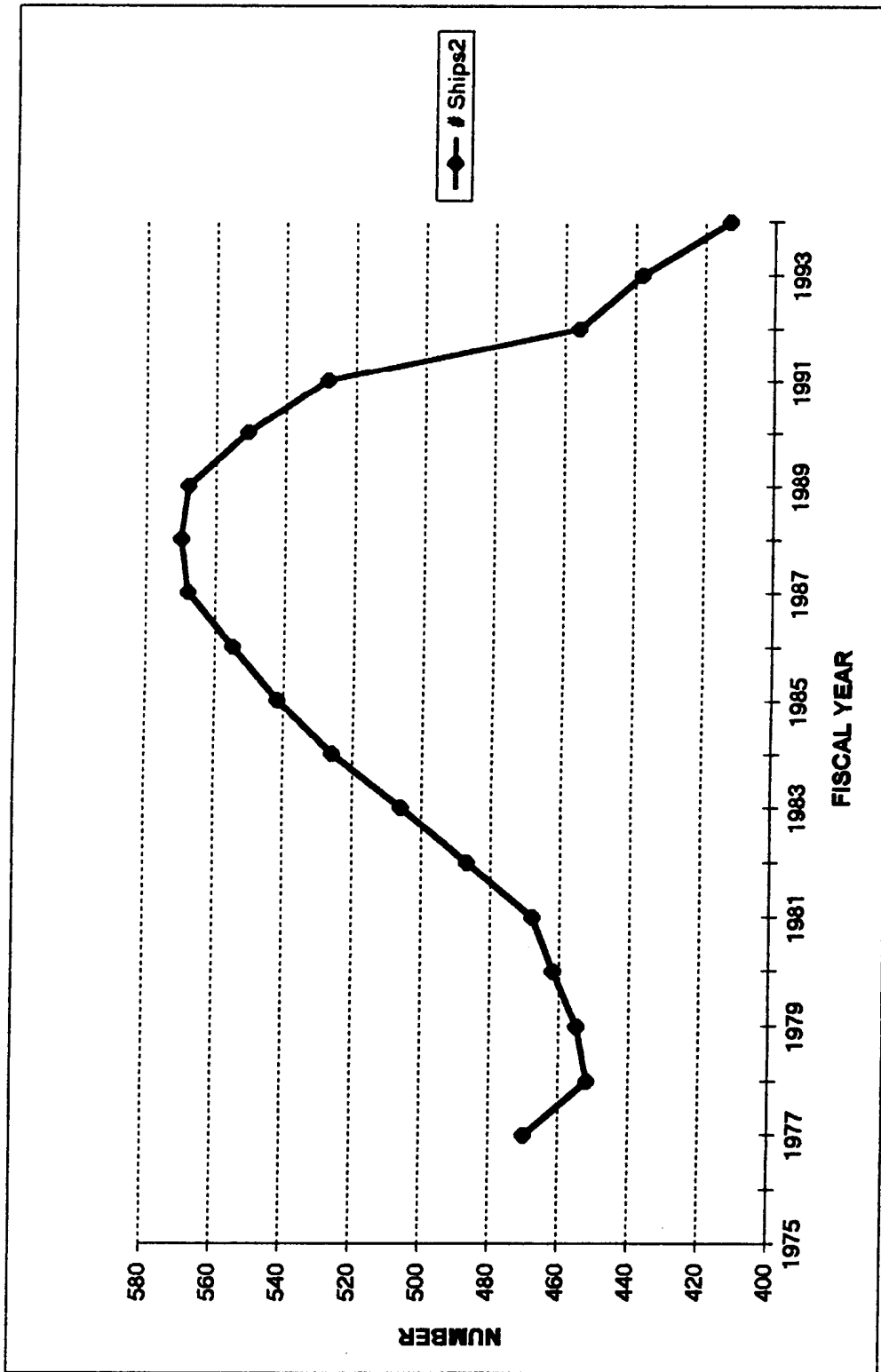


Figure 3. Active Battle Force (Number of Ships).
 Source: Manpower Requirements Report, 1975-1994, Office of the
 Assistant Secretary of Defense.

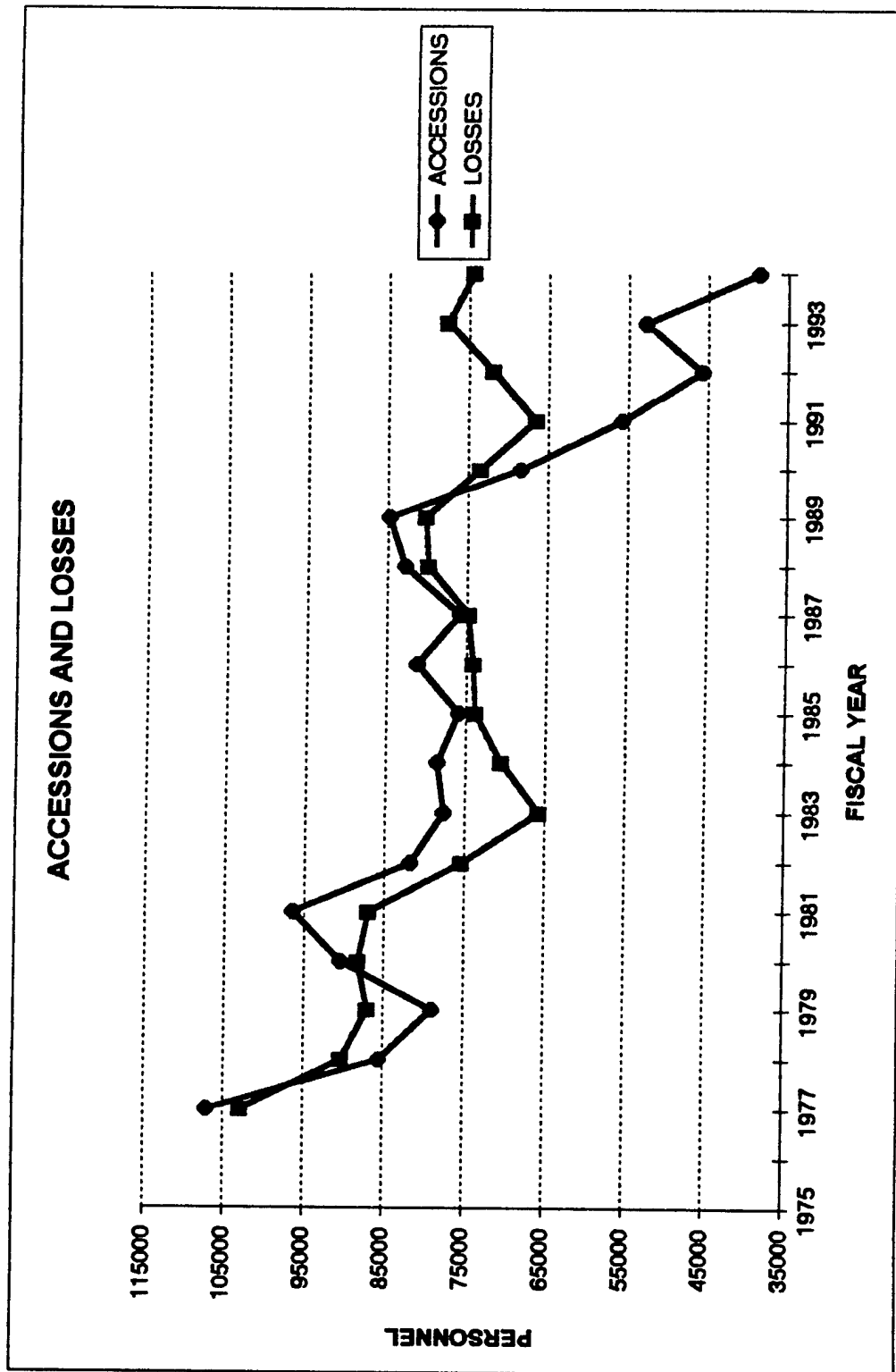


Figure 4. Accessions from Civil Life.
 Losses to Civil Life.
 Source: Bureau of Naval Personnel Statistics, Annual Report
 NAVPERS 15658 (A), FY1977-1994.

DIFFERENCE BETWEEN ACCESSIONS AND LOSSES

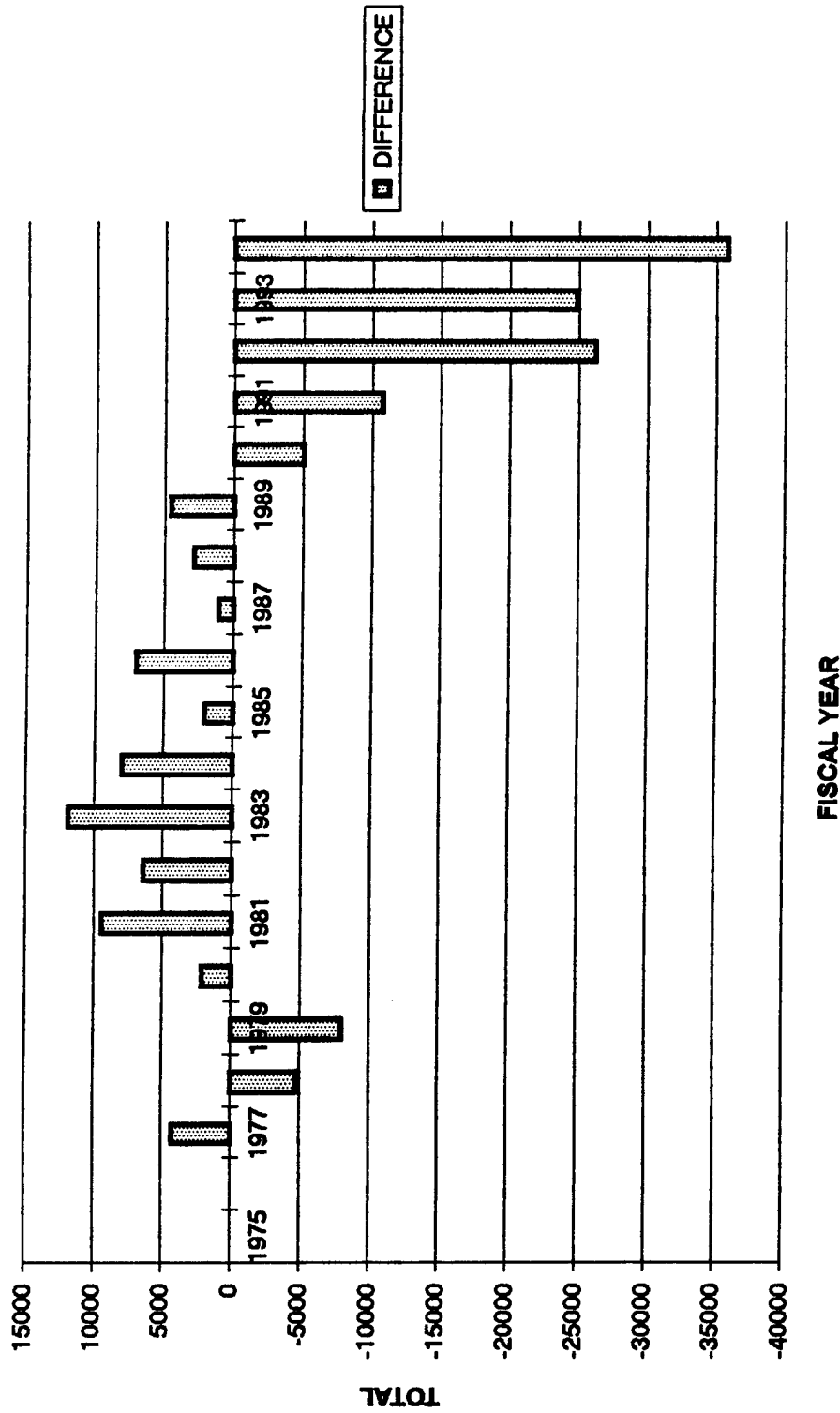


Figure 5. Difference between the number of Accessions from Civil Life and Losses to Civil Life.

e. Difference between Accessions and Losses
(Figure 5):

- a positive number indicates accessions are greater than attrition, a negative number, attrition is greater than accessions.

B. THE TRENDS

1. Continuation on Active Duty (Figures 6-12)

Figures 6 through 12 portray the data contained in Table C-1. They represent the percentage of personnel who continue on active duty by cohort for each year of service.

The first trend observed in Figures 6 through 12 is that the percentage of personnel remaining on active duty for each cohort from 1975 to 1982 for the first four years of service is increasing. This indicates a persistent rise in retention. The 1975 and 1976 cohorts lost a large number of personnel at the end of their enlistment. This was prior to the big pay raises that occurred in fiscal years 1981 and 1982. Unemployment was at its lowest point in four years in 1979 and may have attributed to the departure of the first two groups at the end of their first enlistments. The 1978 and 1979 cohorts present a much higher continuation rate. This may be a result of the large pay raises in 1981 and 1982, and an unemployment rate which was at its highest point for the entire 20 year period. The rising unemployment of the early 1980's could also explain the increasing percentage of personnel staying on active duty up to the 1982 cohort. Thereafter, the continuation rate declines, but not dramatically. This may be due to an increased number of programs that were introduced in the late 1980's that enabled commanding officers to administratively separate adverse personnel. After the fifth year of service there is minimal change seen among cohorts. Once a continuation pattern has been established, the variance between each cohort remains

PERCENTAGE OF PERSONNEL WHO CONTINUE ON ACTIVE DUTY BY
COHORT FOR YOS 2 & 3

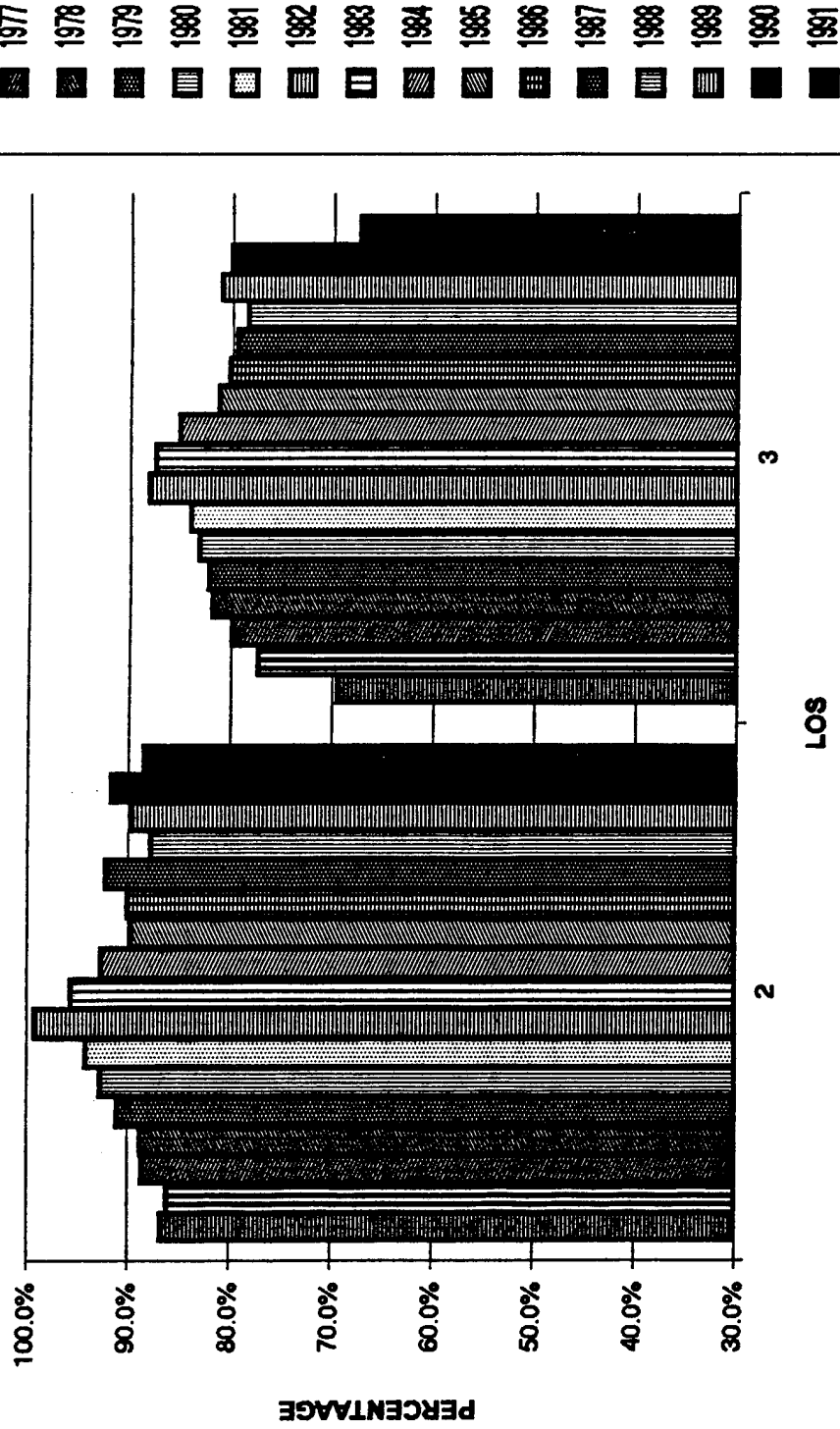


Figure 6. Percentage of Personnel who were still on Active Duty by Cohort, based on the number at YOS 1.

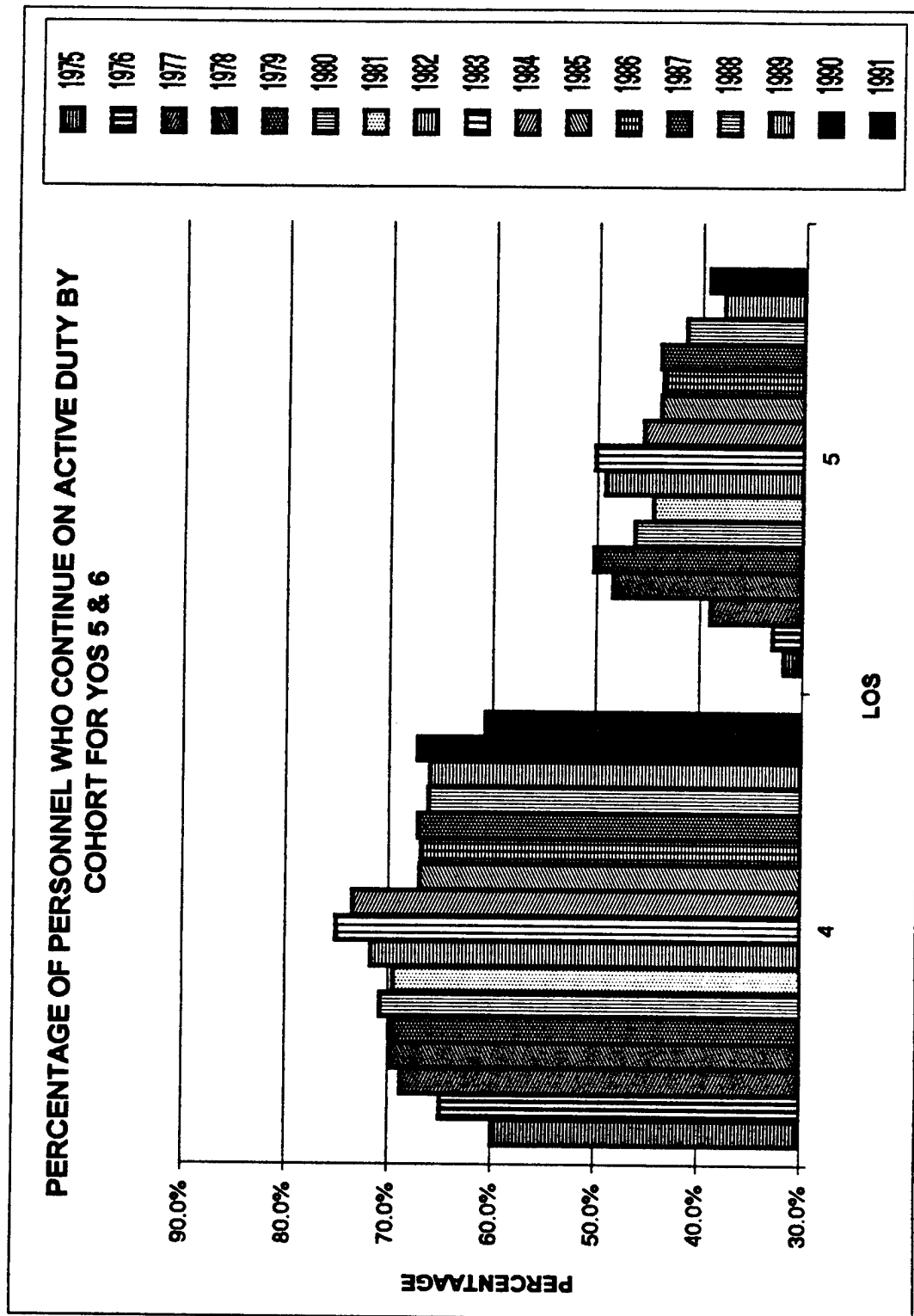


Figure 7. Percentage of Personnel who were still on Active Duty by Cohort, based on the number at YOS 1 (continued).

PERCENTAGE OF PERSONNEL WHO CONTINUE ON ACTIVE DUTY BY
COHORT FOR YOS 6 & 7

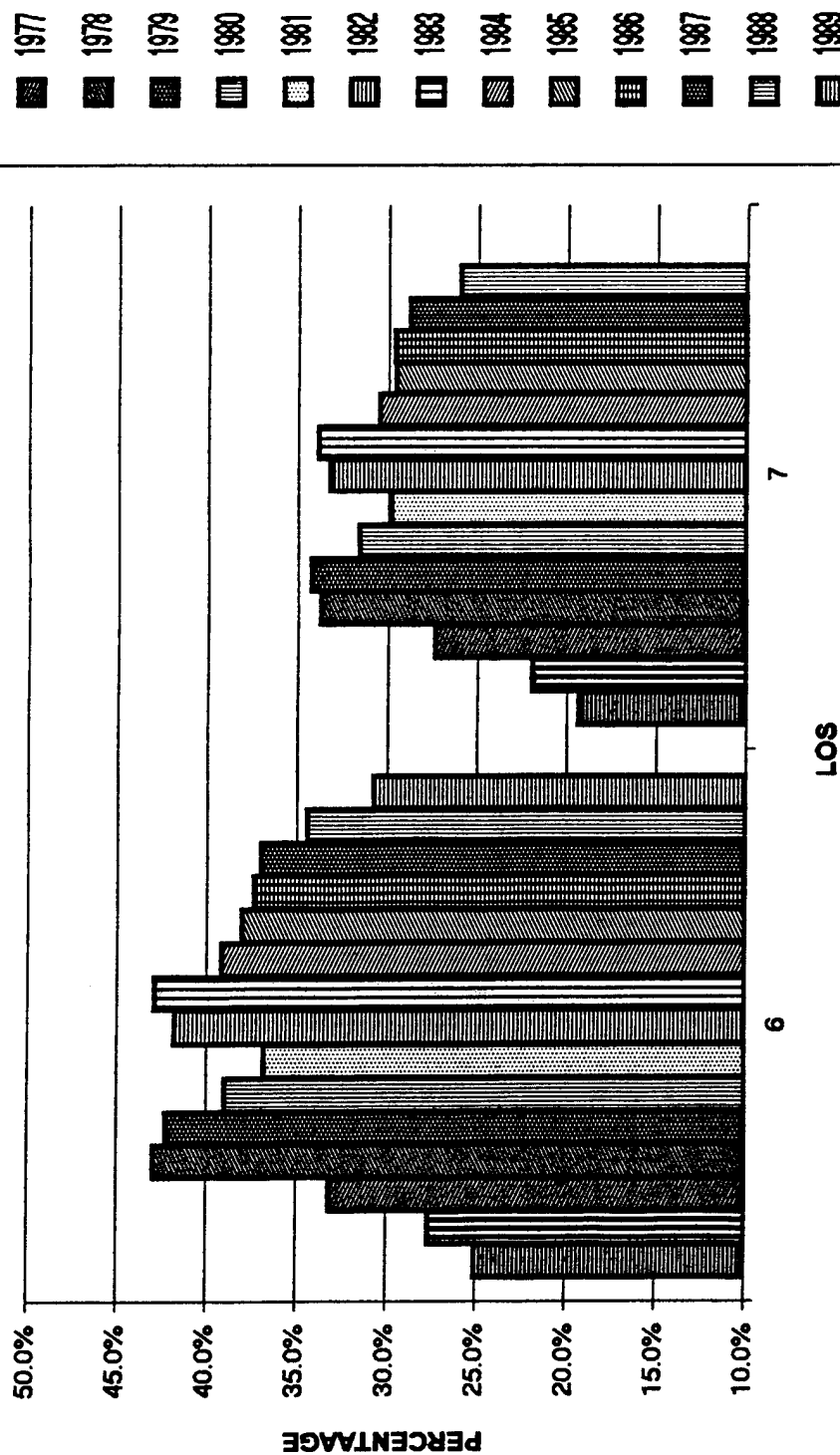


Figure 8. Percentage of Personnel who were still on Active Duty by Cohort, based on the number at YOS 1 (continued).

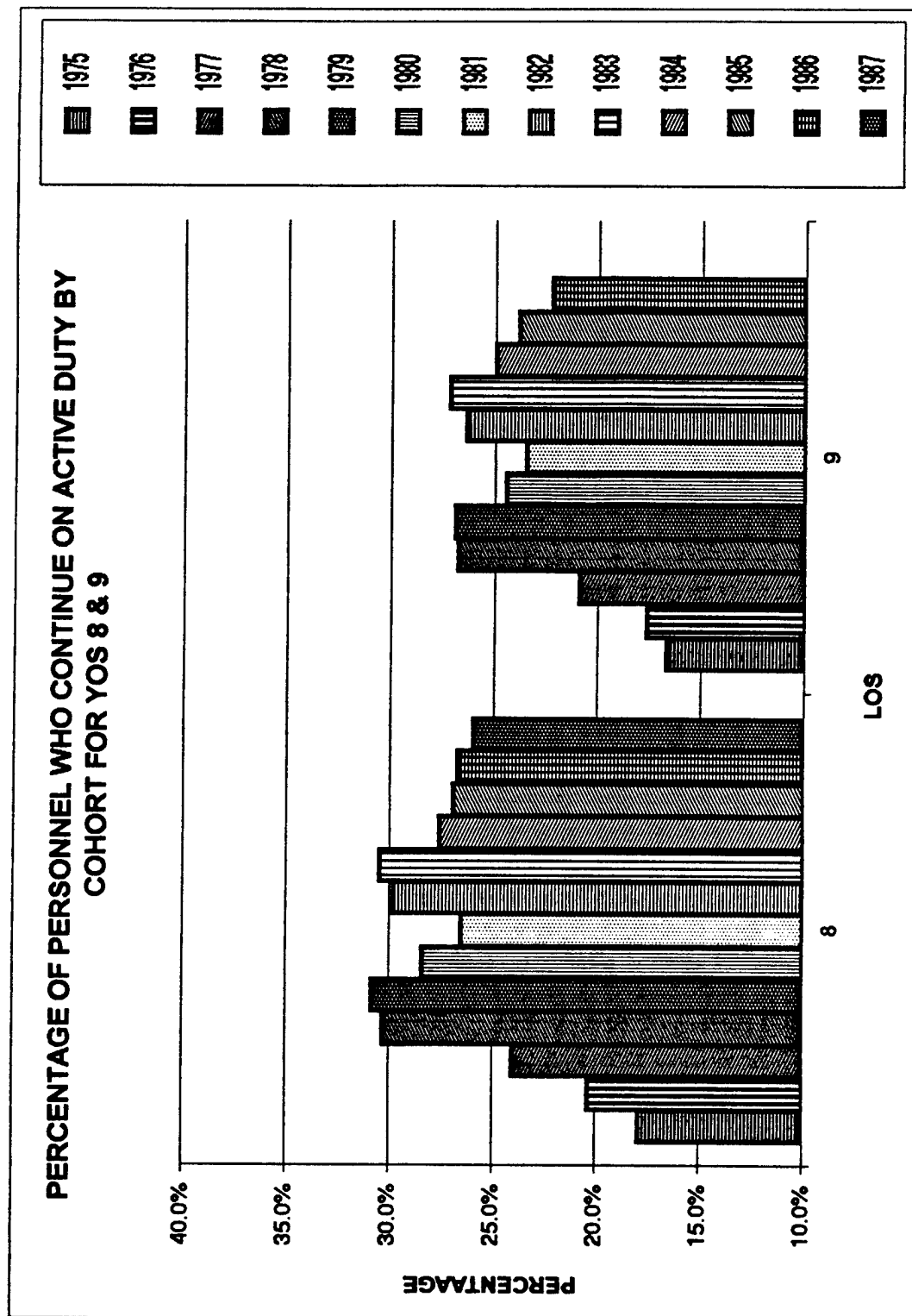


Figure 9. Percentage of Personnel who were still on Active Duty by Cohort, based on the number at YOS 1 (continued).

**PERCENTAGE OF PERSONNEL WHO CONTINUE ON ACTIVE DUTY BY
COHORT FOR YOS 10 & 11**

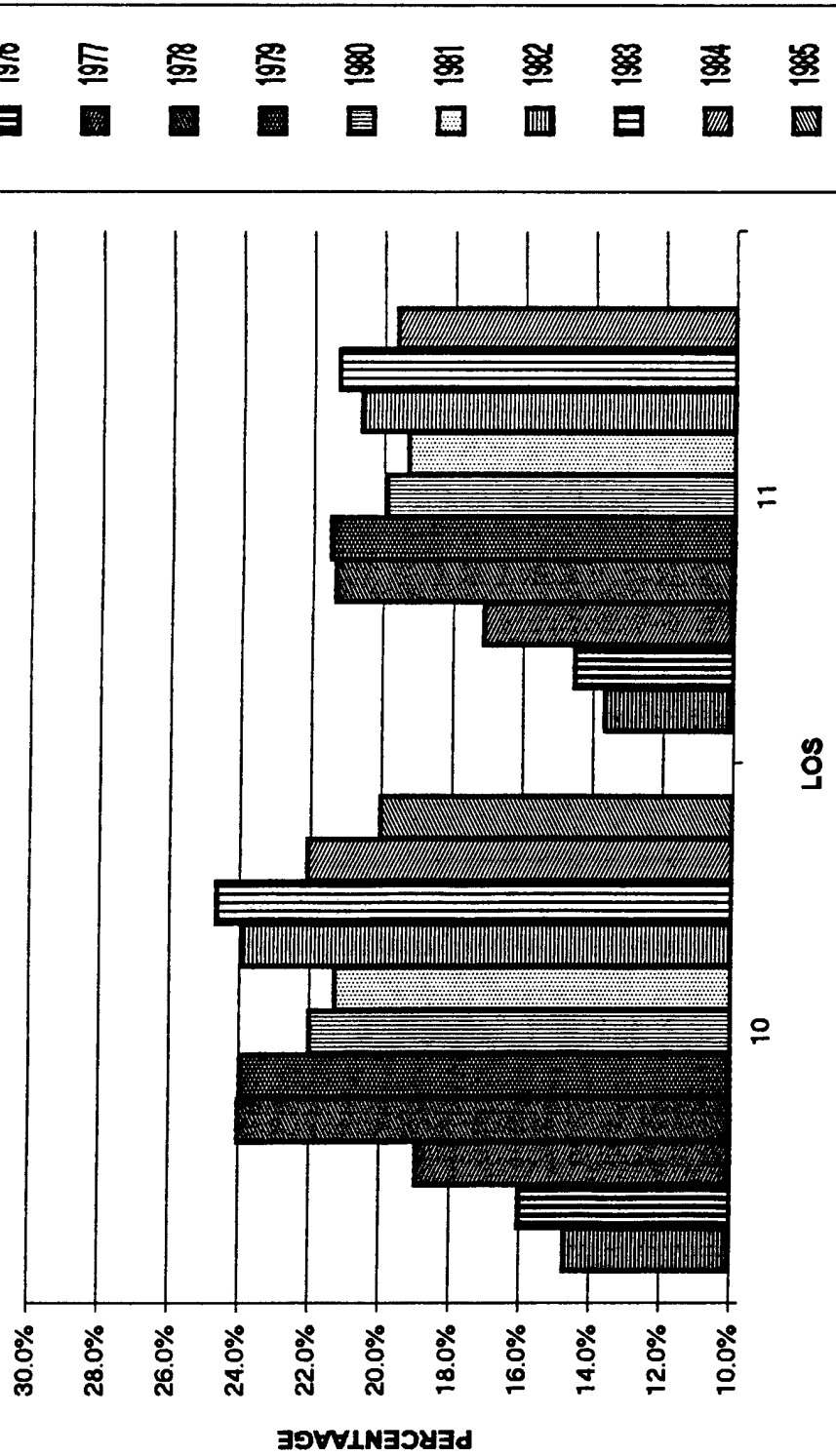


Figure 10. Percentage of Personnel who were still on Active Duty by Cohort, based on the number at YOS 1 (continued).

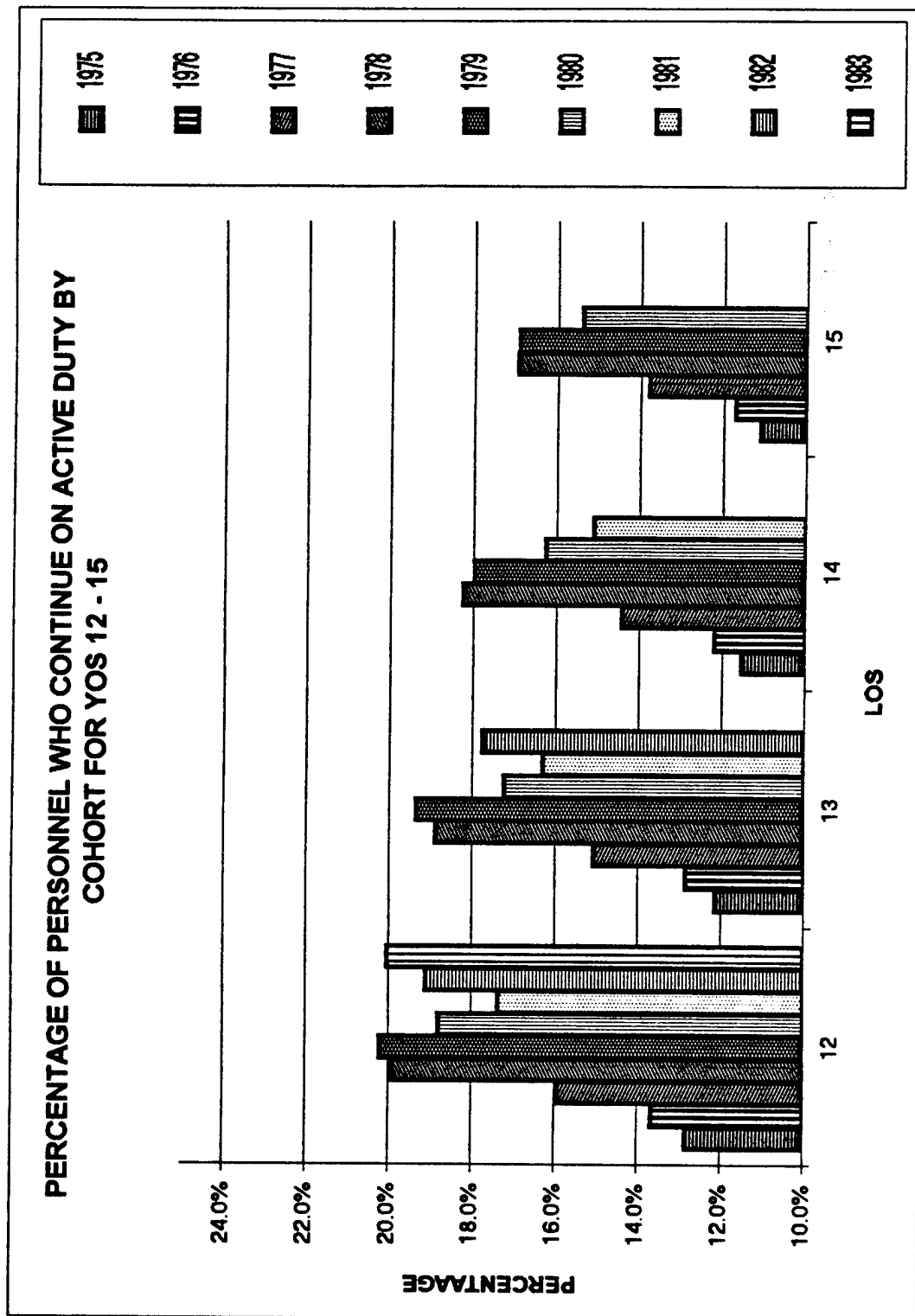


Figure 11. Percentage of Personnel who were still on Active Duty by Cohort, based on the number at YOS 1 (continued).

PERCENTAGE OF PERSONNEL WHO CONTINUE ON ACTIVE DUTY BY
COHORT FOR YOS 16 - 20

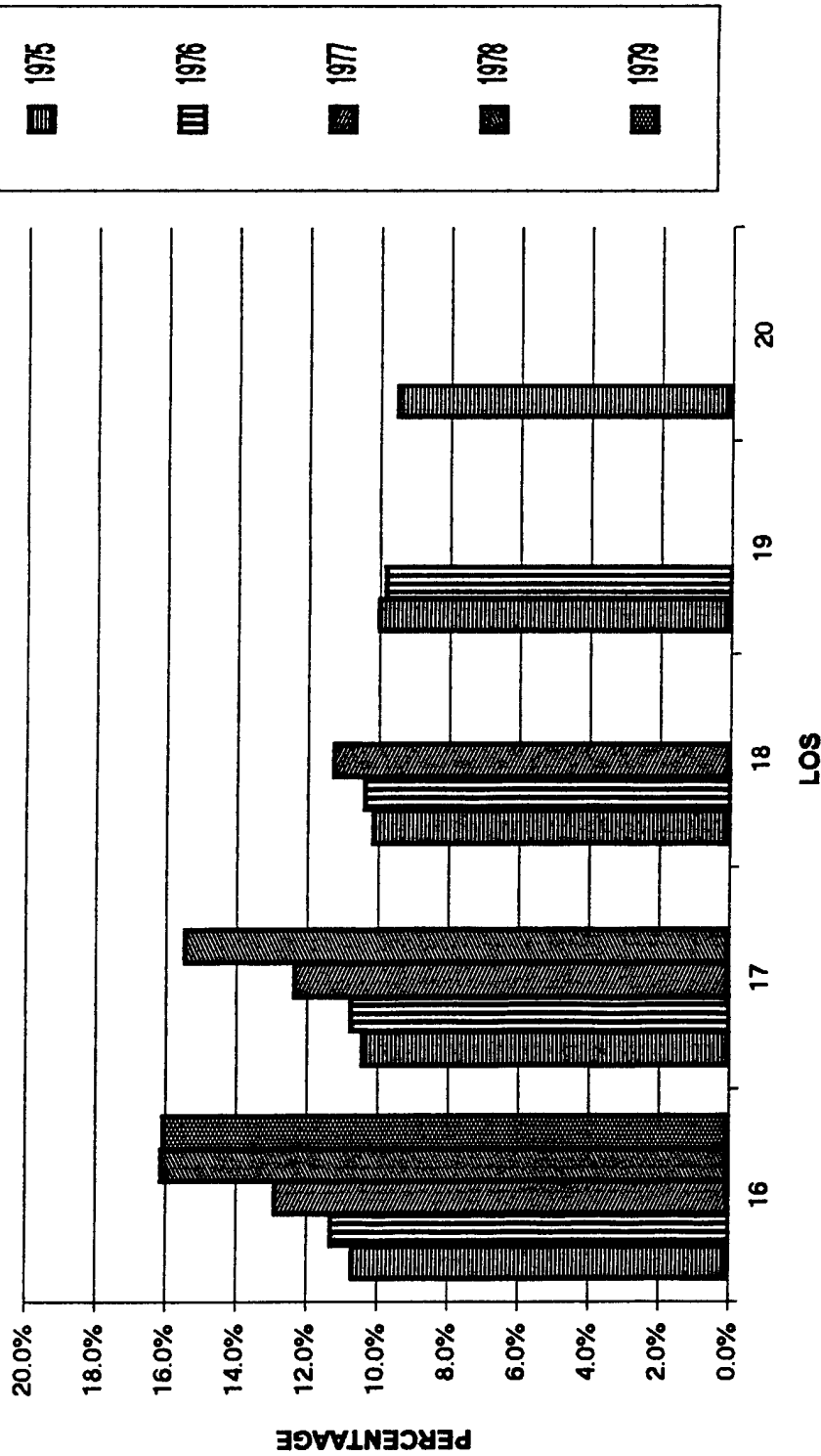


Figure 12. Percentage of Personnel who were still on Active Duty by Cohort, based on the number at YOS 1 (continued).

constant. This would indicate that career personnel continue on active duty at the same rate, regardless of which cohort they are in.

2. Percentage of Junior Enlisted within the E-1 to E-5 Community (Figures 13-18)

The next six figures represent the number of E-3 and below, E-4, and E-5 personnel as a proportion of the total number of personnel in paygrades E-1 through E-5. These figures are generated from the data in Tables C-2, C-3, and C-4. They compare the number of personnel in their first eight years of service in each entering cohort. These figures should help explain differences in advancement rates, the quality of individuals in each cohort or both. Higher percentages of E-3 personnel with more YOS would indicate slow advancement rates and/or lower quality personnel. The percentage of E-3 and below personnel has minimal variation over time with few exceptions. Cohorts 1978 and 1979 show a significant drop in the percentage of E-3 personnel with an accompanying increase in the percentage of E-4 personnel with the same length of service. This indicates that advancement opportunities may have been exceptionally high in 1980 and 1981. The large exodus of personnel from the two earlier cohorts noted in the previous section may also have created a need for more petty officers. This higher percentage of third-class petty officers (E-4) may also have contributed to the higher continuation rates represented in the previous section. Faster advancement opportunity is generally a good incentive to stay on active duty. There is a persistent increase in the percentage of personnel in paygrade E-4 with time in service of four through eight years. There is a corresponding decrease in the percentage of personnel in paygrade E-5 with the same length of service. This indicates difficulty in progressing from E-4 to E-5. This percentage should shift during these years with a decreasing number of

PERCENTAGE OF THOSE IN PAYGRADES E3 AND BELOW WITHIN PAYGRADES E5 AND BELOW

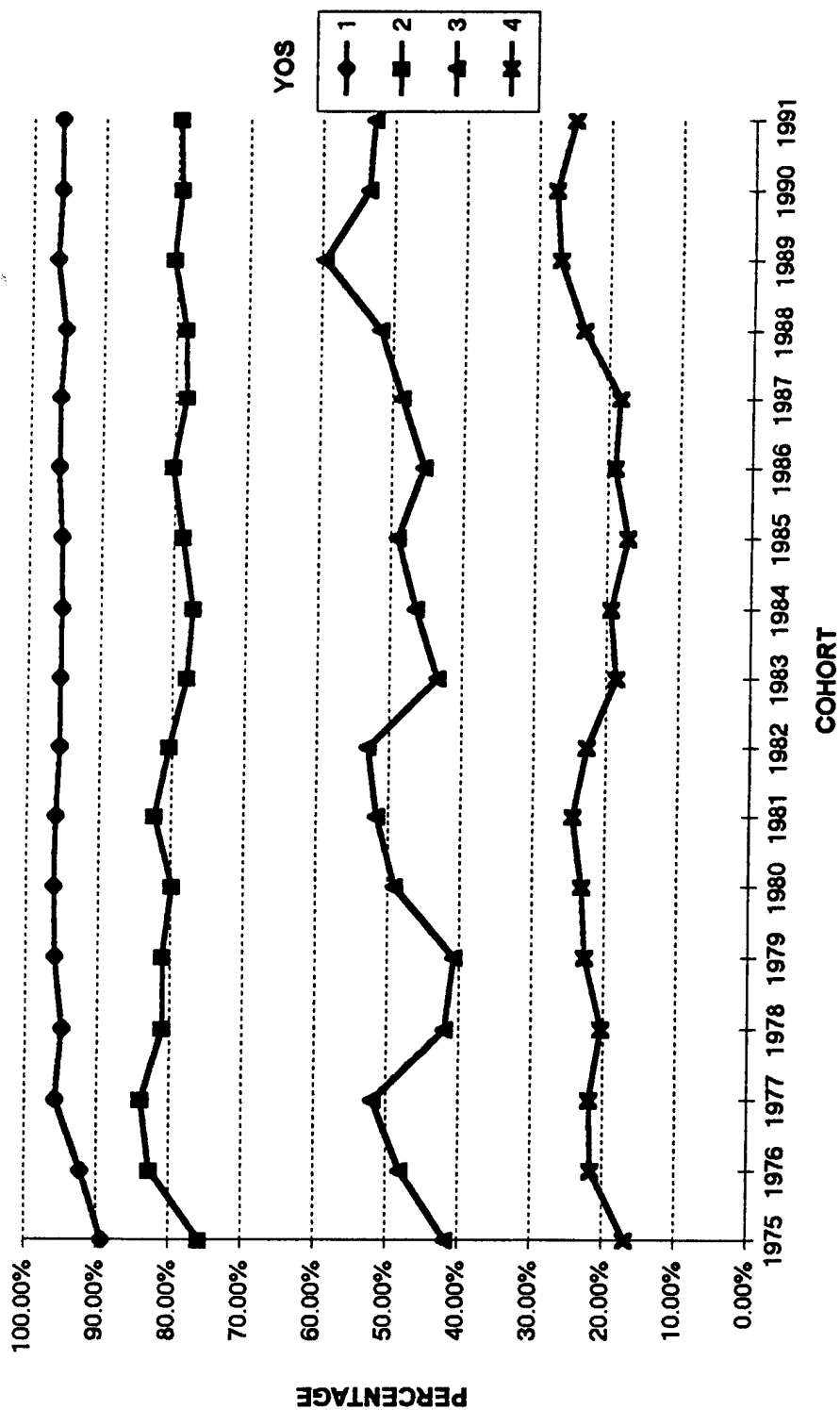


Figure 13. Percentage of those in Paygrades E-3 and below within Community of E-5 and below.

PERCENTAGE OF THOSE IN PAYGRADES E3 AND BELOW WITHIN PAYGRADES E5 AND BELOW

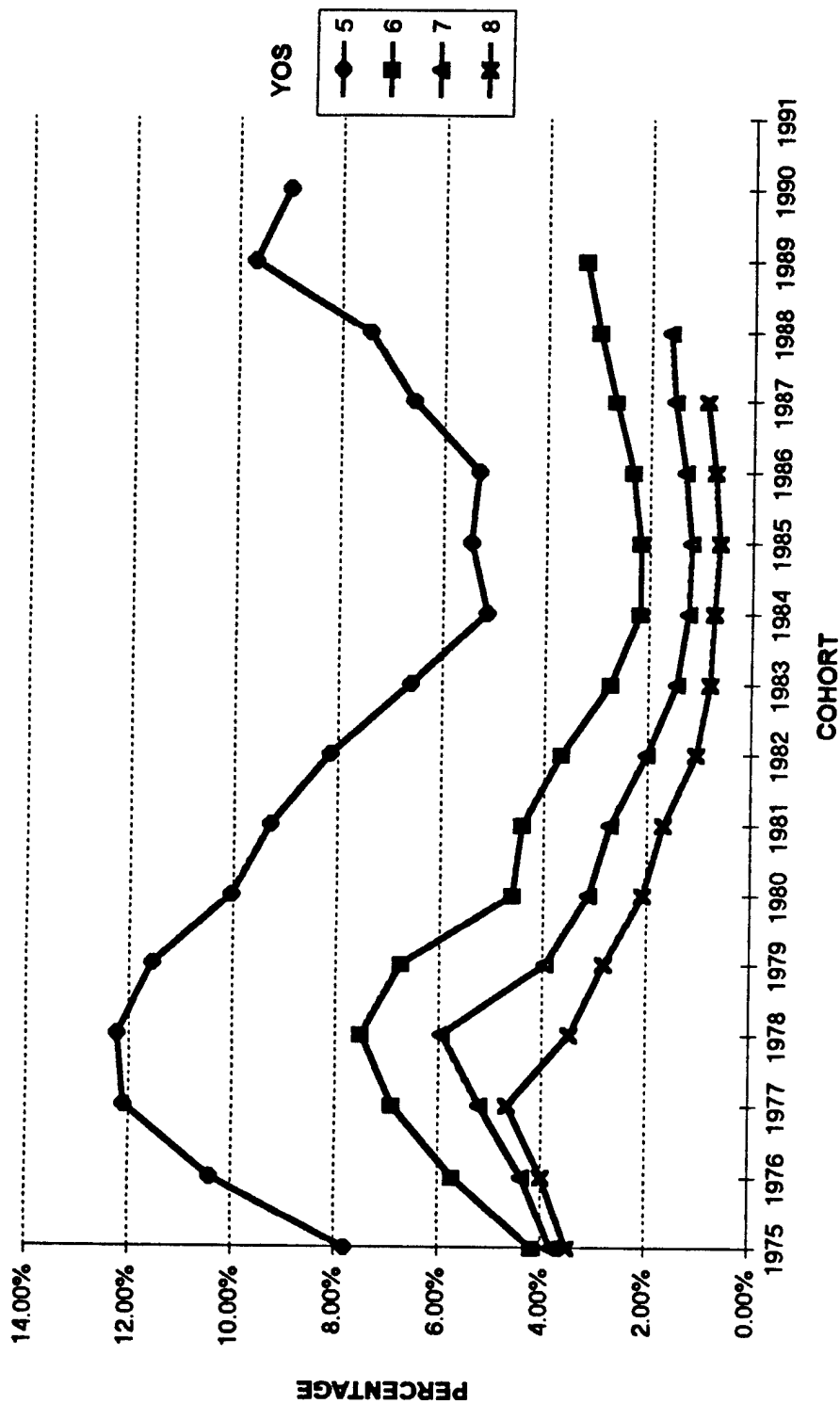


Figure 14. Percentage of those in Paygrades E-3 and below within Community of E-5 and below (continued).

PERCENTAGE OF THOSE IN PAYGRADE E-4 WITHIN PAYGRADES E-5 AND BELOW

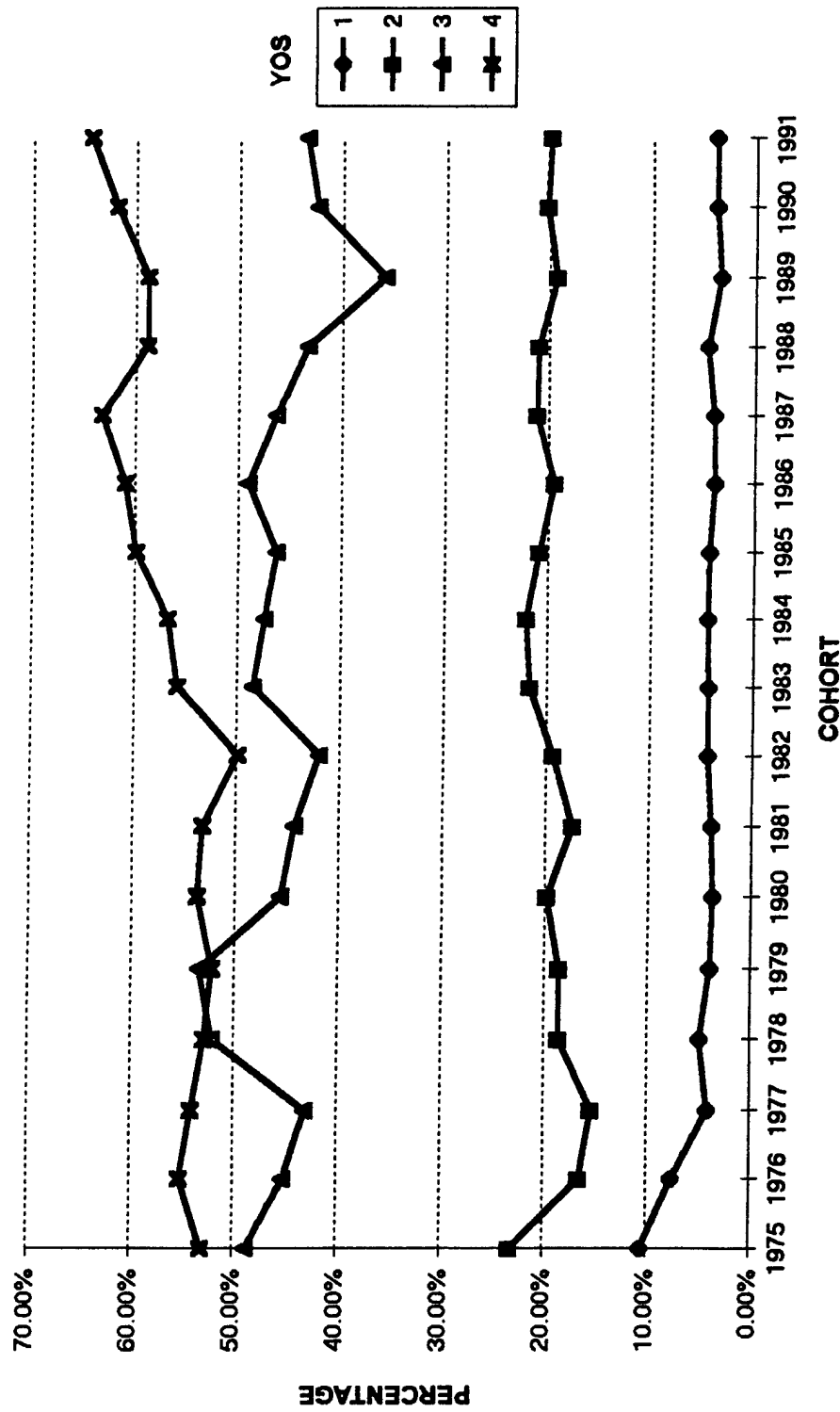


Figure 15. Percentage of those in Paygrade E-4 within Community of E-5 and below.

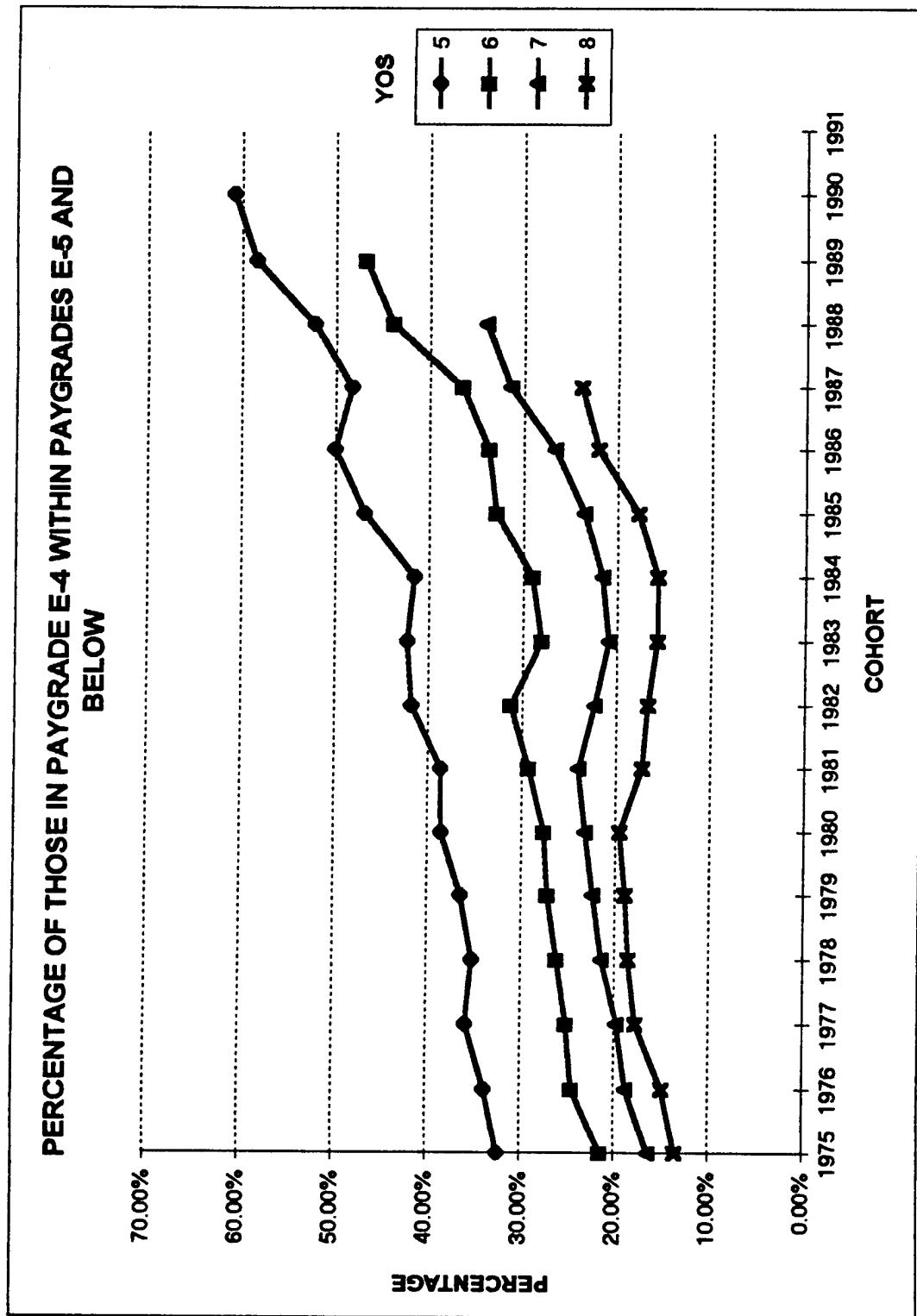


Figure 16. Percentage of those in Paygrade E-4 within Community of E-5 and below (continued).

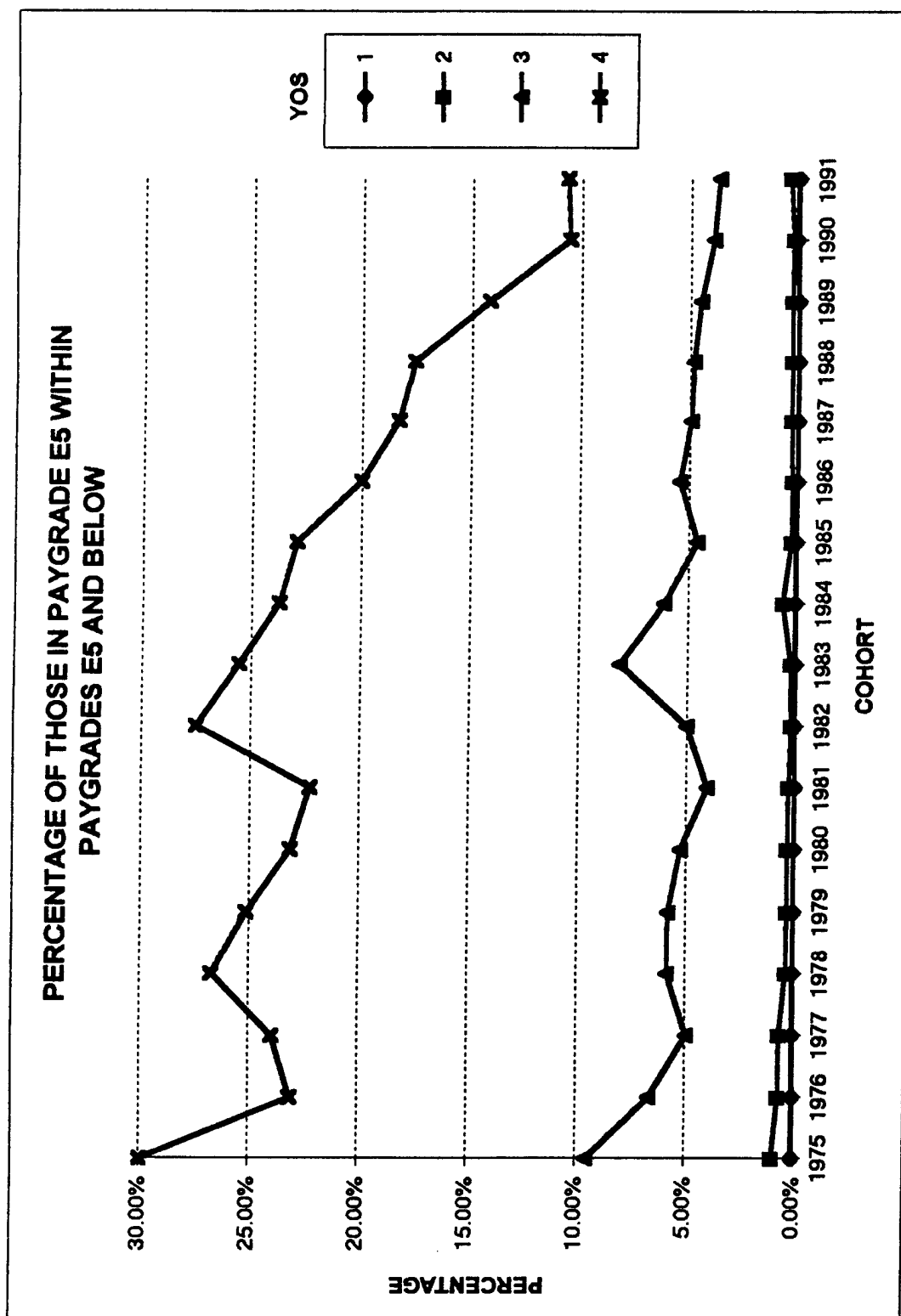


Figure 17. Percentage of those in Paygrade E-5 within Community of E-5 and below.

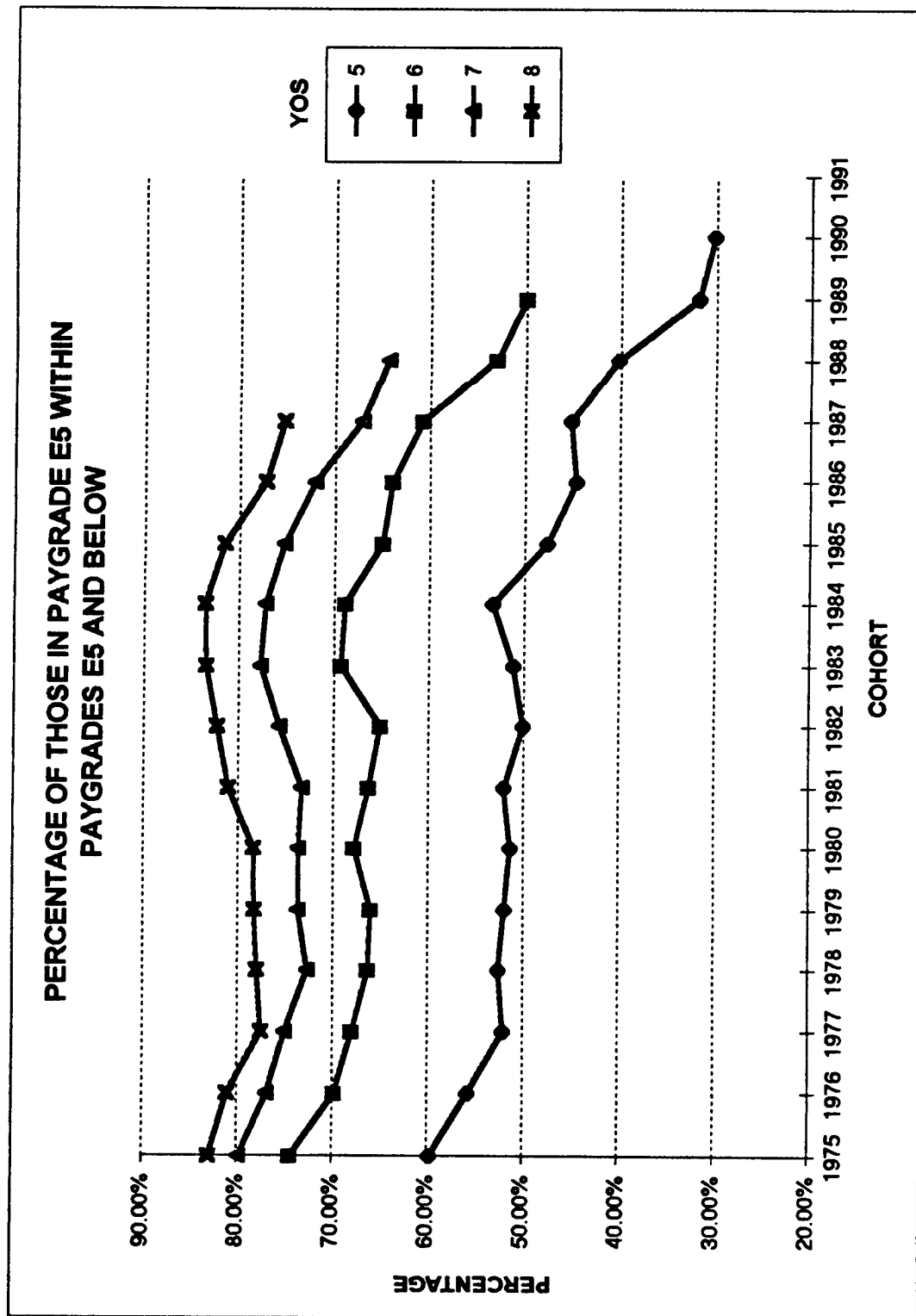


Figure 18. Percentage of those in Paygrade E-5 within Community of E-5 and below (continued).

E-4 and an increasing number of E-5 personnel. A possible reason for this is the difficulty of obtaining higher paygrades, which could be a result of more people staying in the Navy and making it a career. The number of ships peaked during the period from 1987 through 1989 (Figure 3). With decreasing manpower requirements since that time, advancement opportunities also decreased, possibly creating stagnation in the middle paygrades.

3. Size of the Force (Figures 19-22)

The size of the total enlisted force mirrors the number of active ships as shown by the similarities in the curves shown in Figures 3 and 19. The force structure appears to be determined by the size of the fleet. However, the makeup of the force, by paygrade, has changed dramatically over the twenty years of the AVF. The number of E-3 and below personnel, by individual paygrade, has fluctuated greatly (Figure 20), but when grouped together, indicate a steady decline in numbers, even during the years that the enlisted force was increasing in size (Figure 21). This decreasing number of personnel is also indicated as a decreasing percentage of the total force structure (Figure 22).

The numbers of E-4 through E-6 personnel have steadily increased until the beginning of the drawdown in 1989, at which time the number of personnel in all paygrades began decreasing. The increase of senior personnel during the 1980's was the primary reason for the increase in the total force. The percentage of the force comprised of E-5 and E-6 personnel has continued to rise, even during the drawdown. With losses greatly outnumbering accessions, it is apparent that the force is losing E-1 through E-4 (new accessions), and E-7 and above personnel (early retirement).

The numbers and percentage of E-7 and above have remained constant. This is due to the fact that, by law, each of these paygrades must be maintained at a particular percentage of the force.

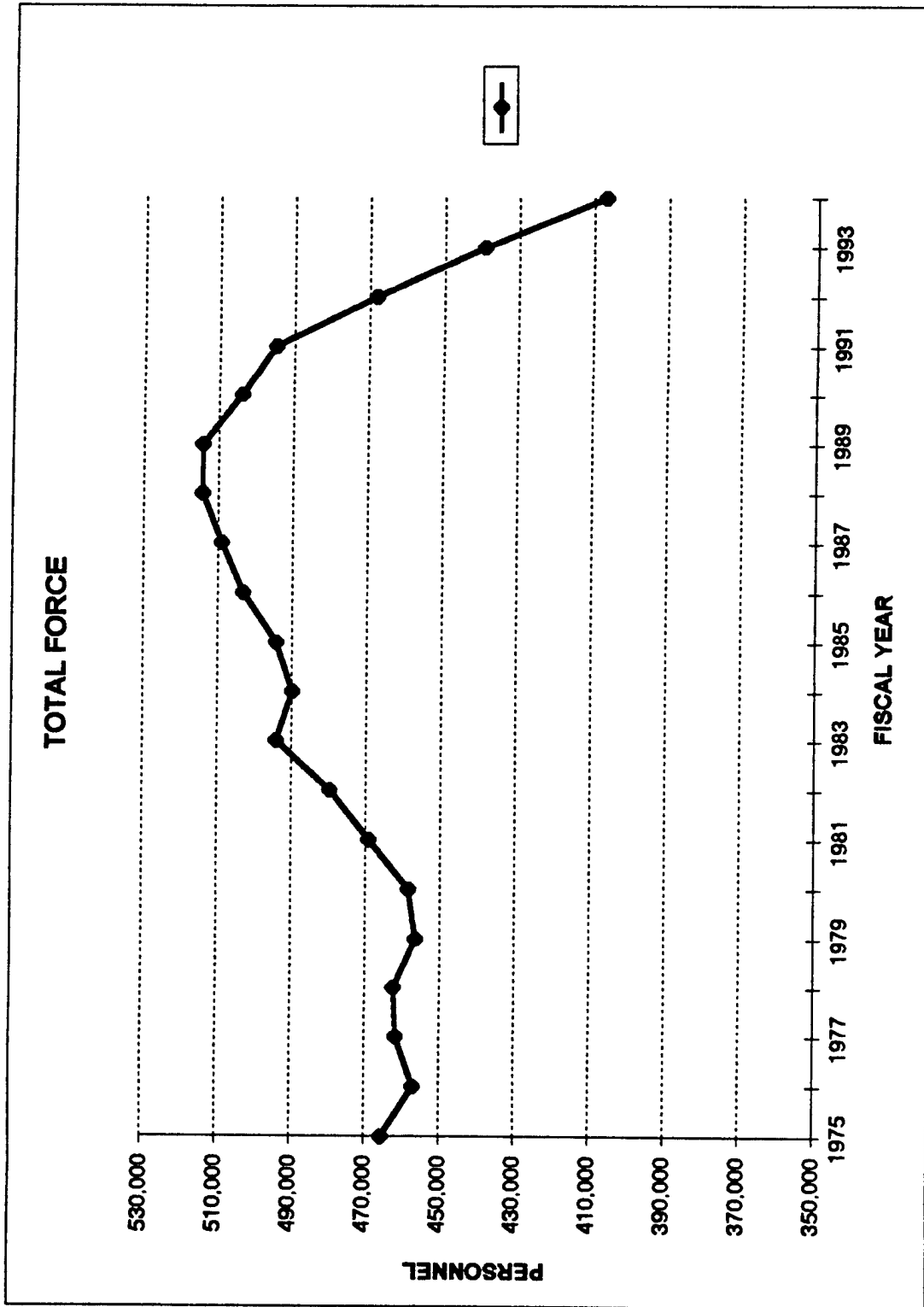


Figure 19. Total Enlisted Force at the end of each Fiscal Year.

TOTAL FORCE PAYGRADES E1 TO E3

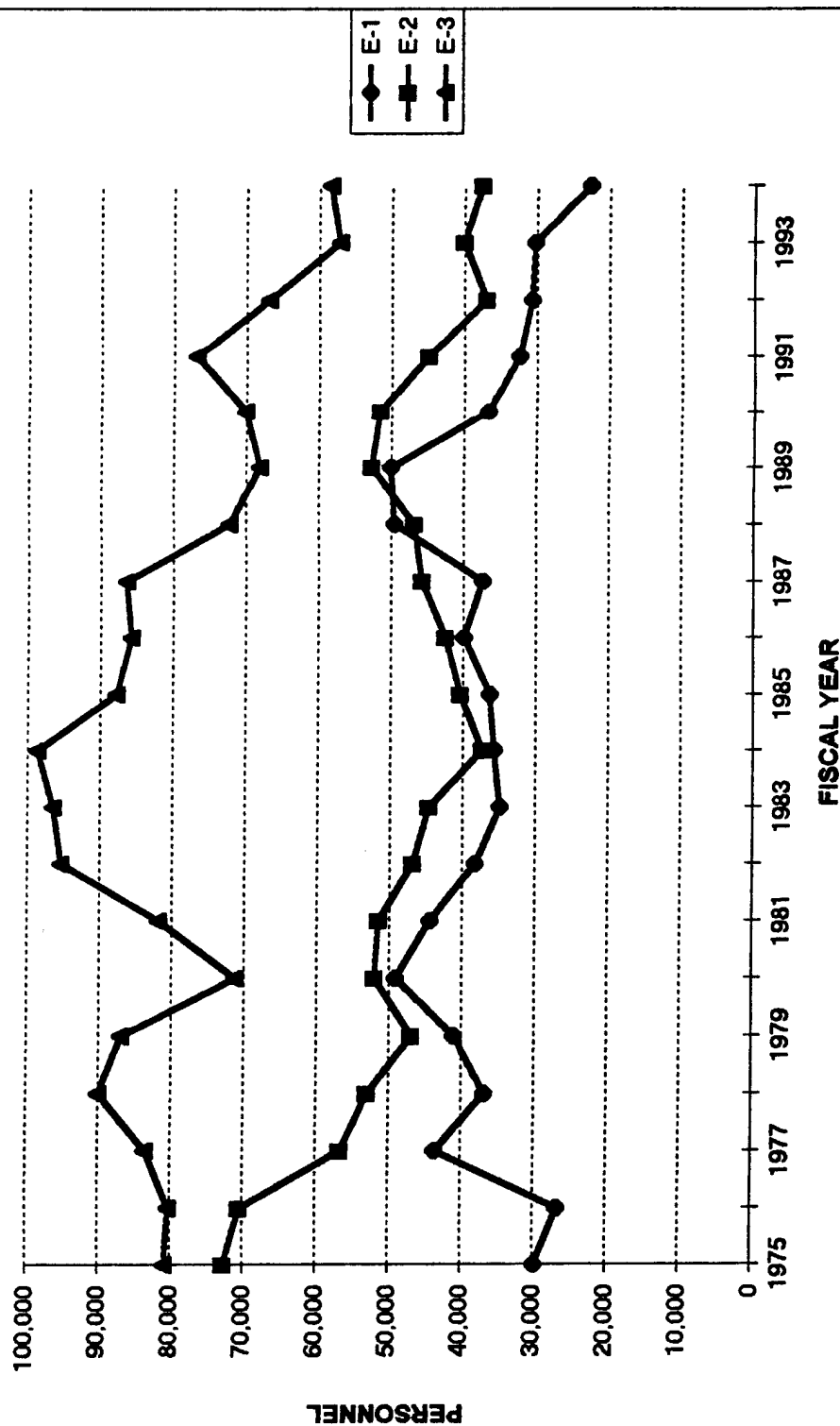


Figure 20. Paygrades E-1 to E-3, total onboard at the end of each Fiscal Year.

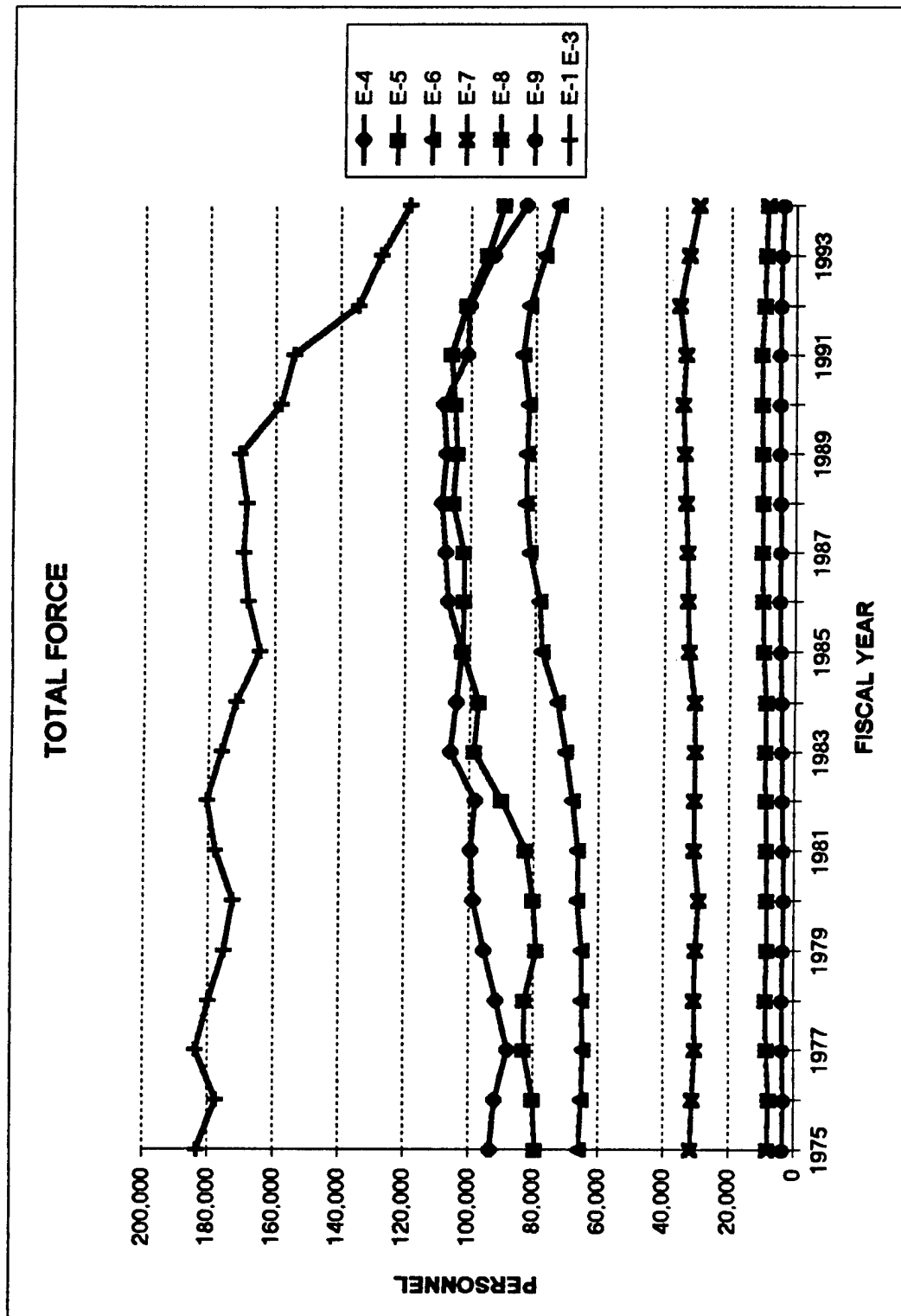


Figure 21. Total Enlisted Force onboard by Paygrade at the end of each Fiscal Year.

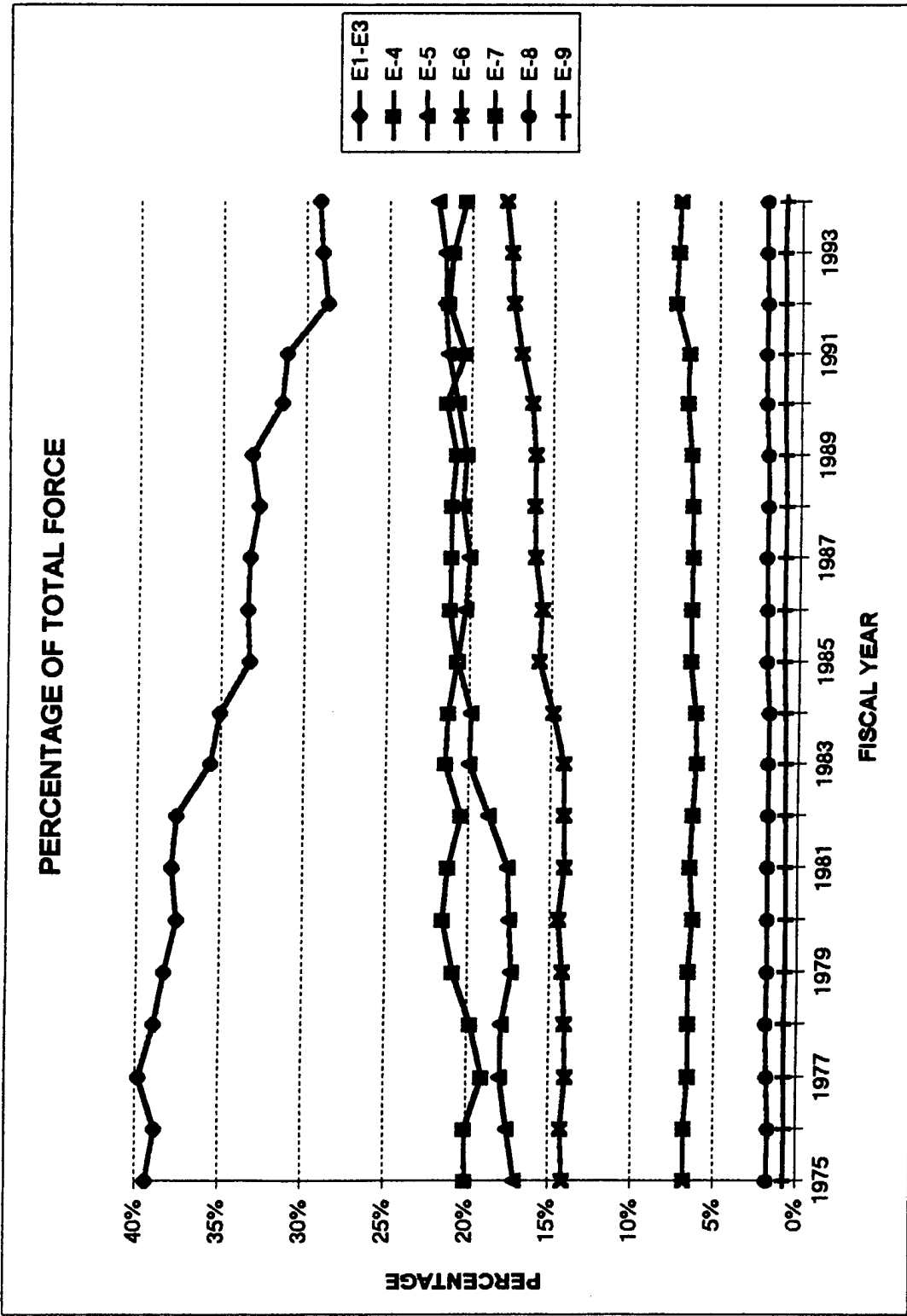


Figure 22. Representative Percentage of Total Force for each Paygrade.

4. Length of Service (see Figures 23 and 24)

The average length of service for junior enlisted, E-4 and below, has remained basically constant. There has, however, been a slight increase in length of service for E-4 personnel over the past four years. E-5 and E-6 personnel have seen the greatest increase in their length of service, starting in the mid 1980's. This would indicate increasing difficulty in obtaining paygrades E-7 through E-9. As mentioned previously, the E-7 to E-9 paygrades are required to be a certain percentage of the force and as such are driven by the size of the total force. With a decreasing total force there are fewer E-7 to E-9 personnel required, thus causing it to take longer to obtain these paygrades. Since both the length of service and the percentage of the force for the middle paygrades (E-5 to E-6) are increasing, the average length of service for the entire force has been driven up.

5. Career Force (see Figures 25-27)

The career force is comprised of individuals with five or more YOS. In 1975, the composition of the force was 41.2 percent career and 58.8 percent non-career. By 1994, these percentages were completely reversed. The period from 1985 through 1989 saw a 50-50 career mix. This was determined by Cooper to possibly be the "optimal" mix of personnel, at least at that time [Ref. 18]. The rapid change in career mix after 1989 is most likely a result of the drawdown. Accession of personnel has decreased dramatically while losses have increased. The shift to an increasingly career manned force started in the early 1980's with an increase in the percentage of 5-10 YOS personnel. This increase has shifted to the 11-20 YOS, as this group is currently increasing at the greatest rate. When the years of service are separated into reenlistment terms, a similar pattern is noticed. First-term personnel are decreasing as a percentage of the force.

AVERAGE LENGTH OF SERVICE BY PAYGRADE

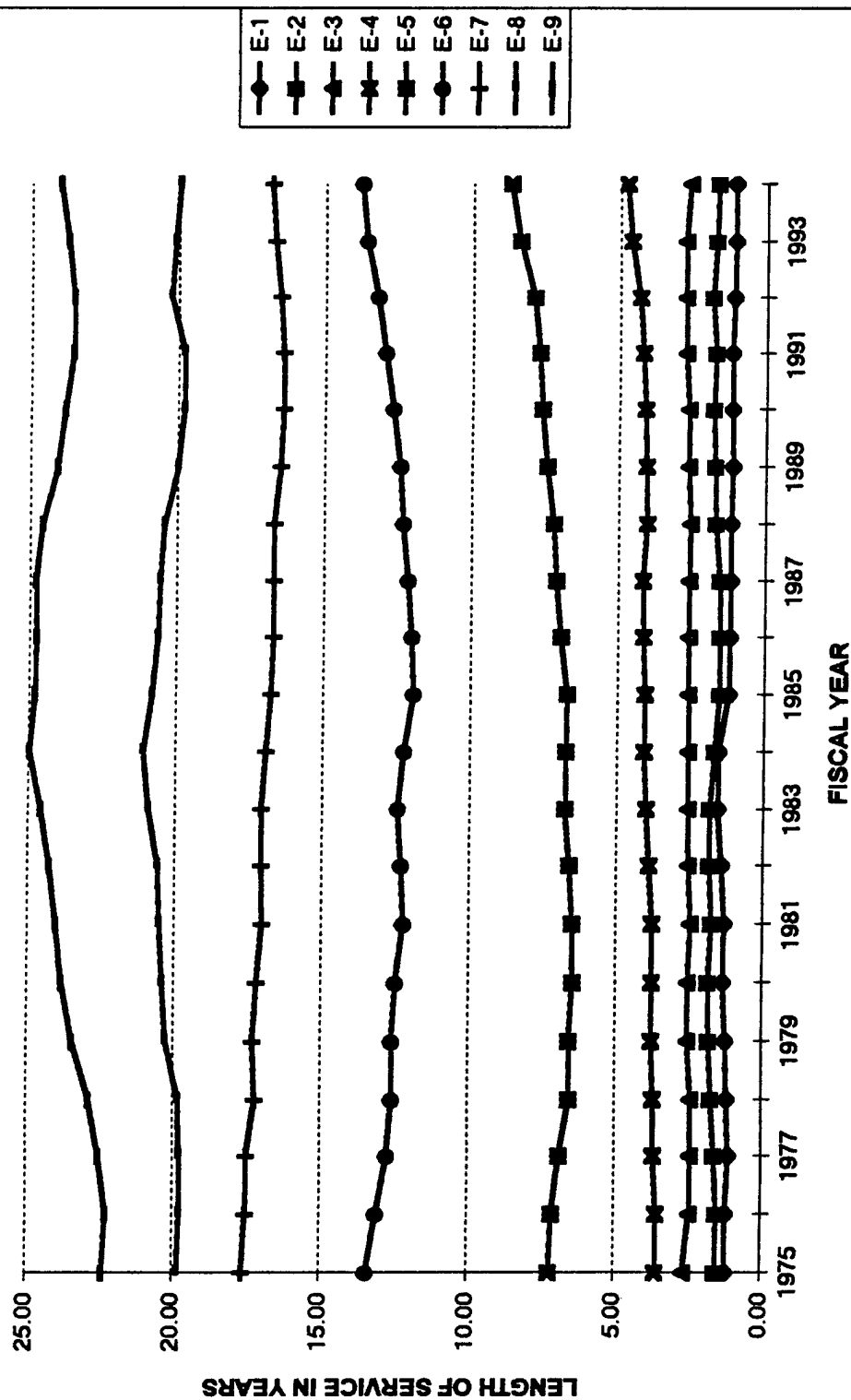


Figure 23. Average Length of Service for each Paygrade by Fiscal Year.

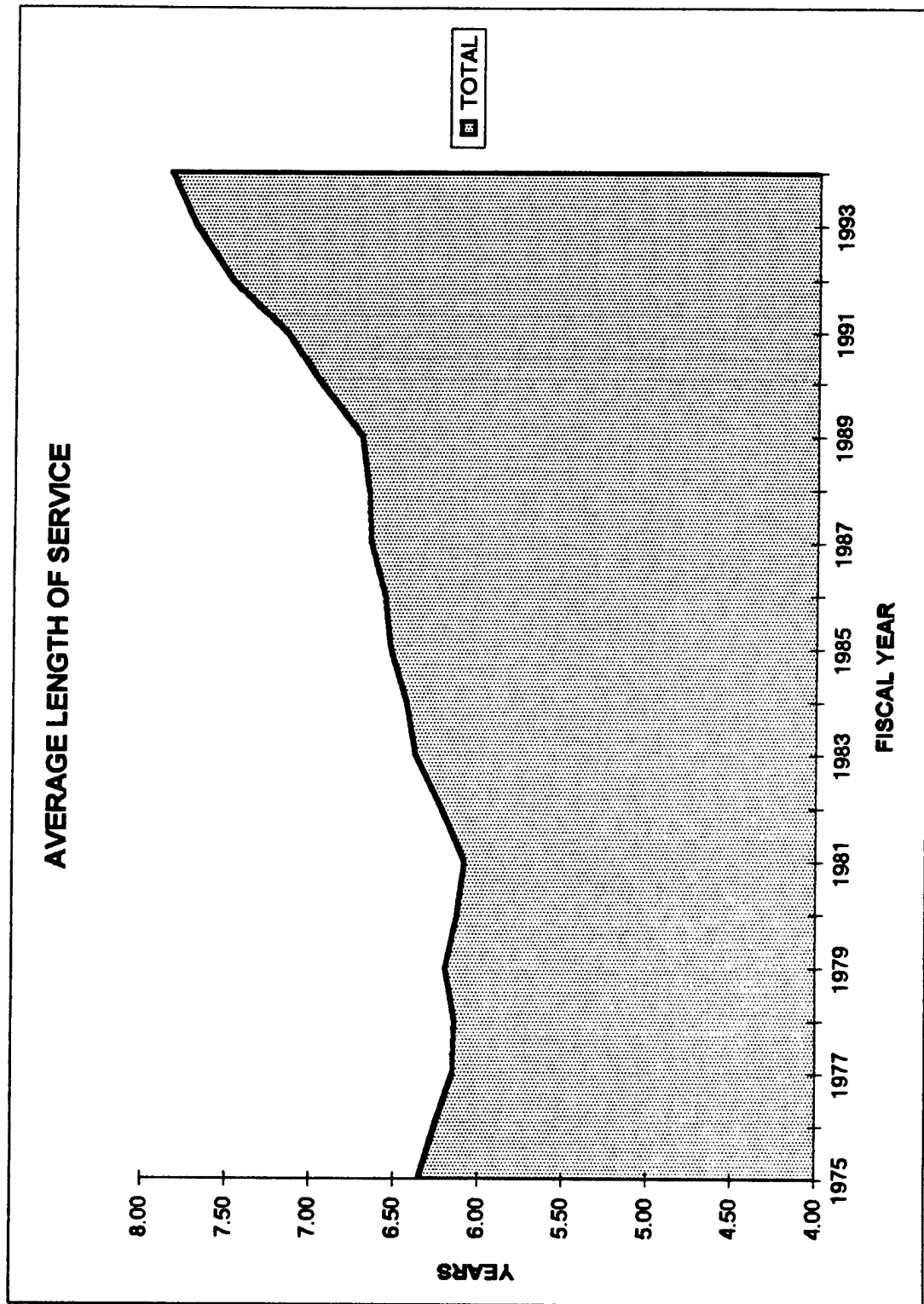


Figure 24. Average Length of Service of Total Enlisted Force.

PERCENTAGE OF CAREER FORCE VS. NON-CAREER FORCE

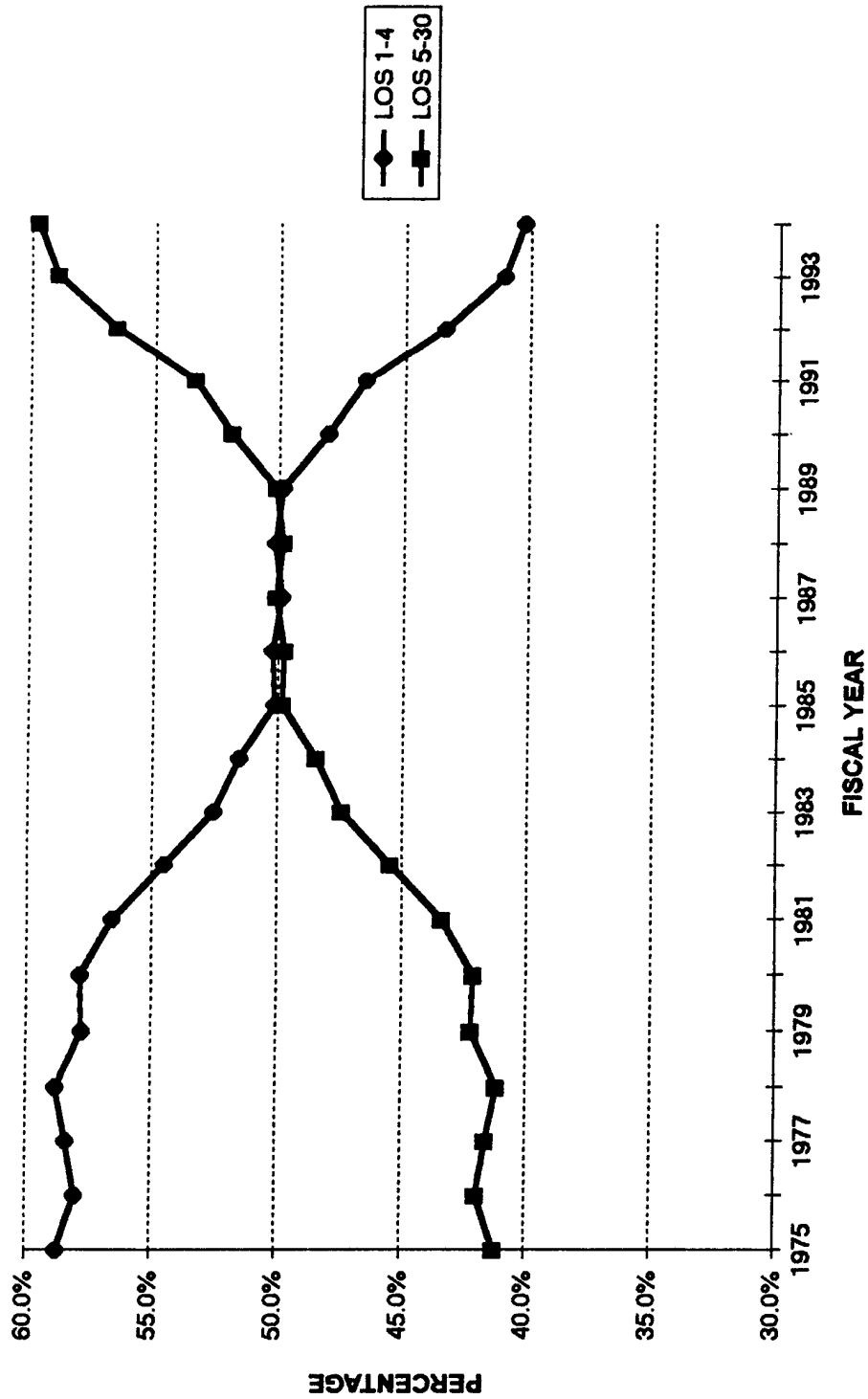


Figure 25. Change in Percentages of Career Force and Non-Career Force.

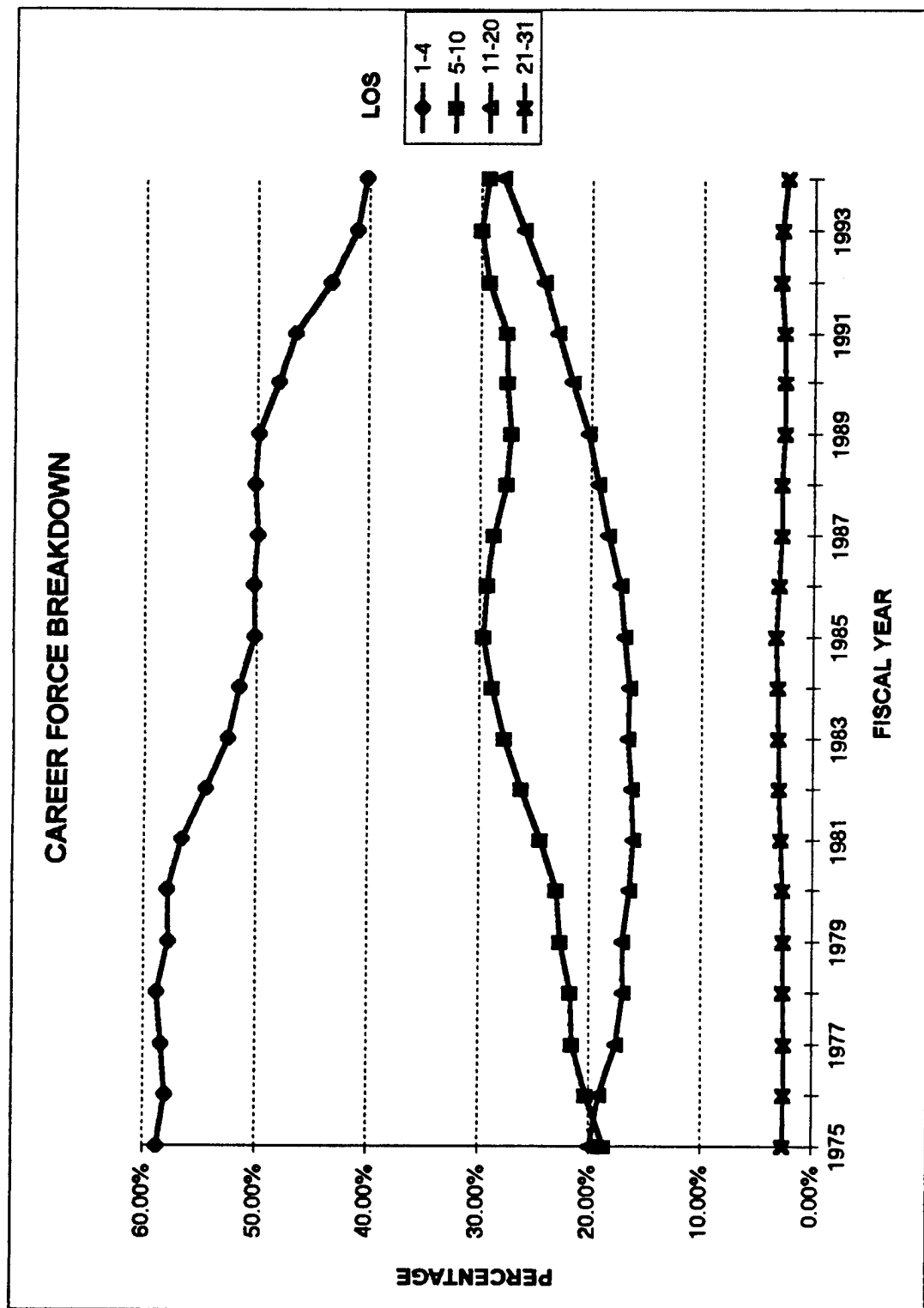


Figure 26. Percentage of Career Force by Enlistment Term.

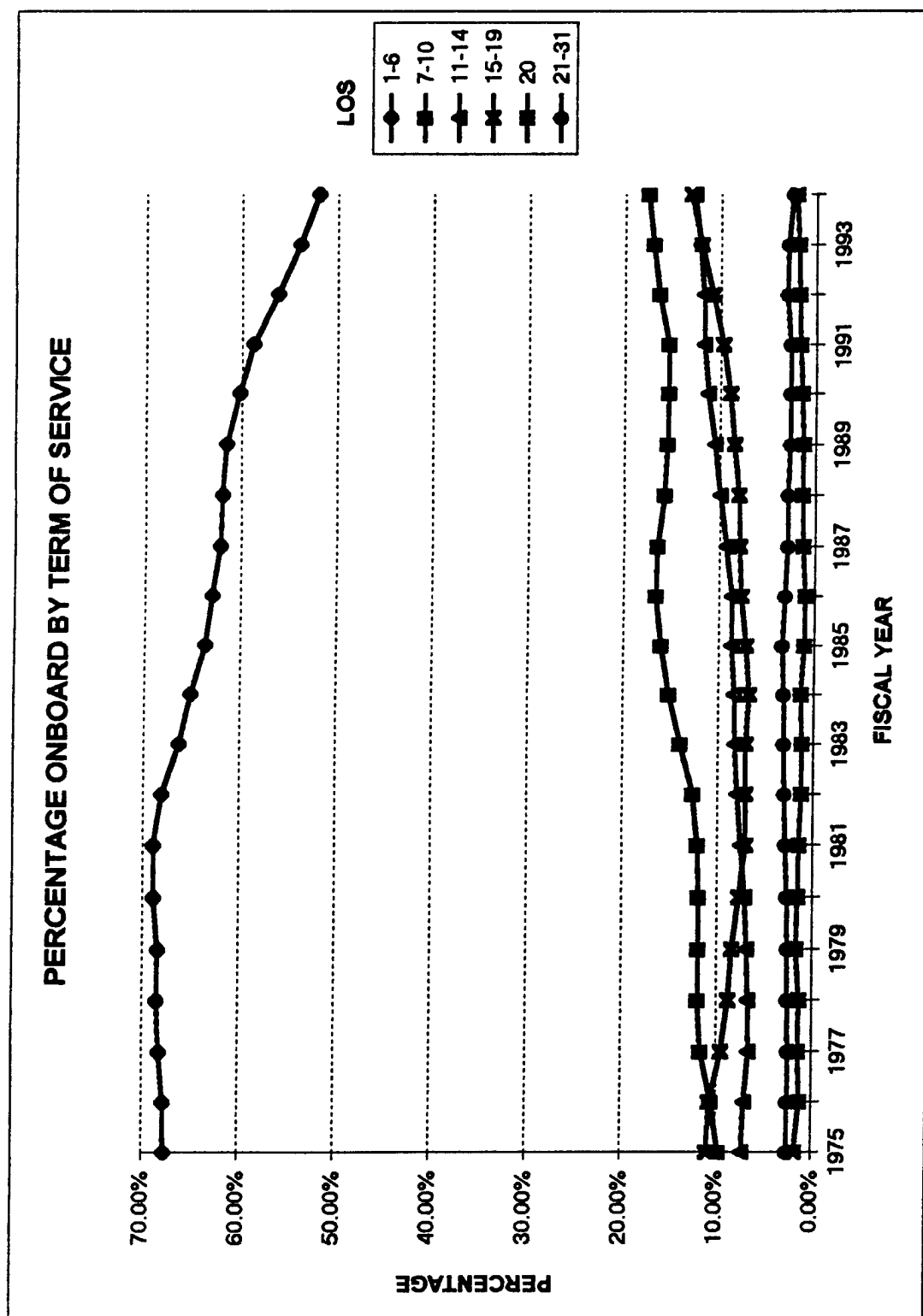


Figure 27. Percentage of Personnel onboard by Term of Service.

Second, third, and fourth-term personnel are on the rise, indicating a shift to a more career force.

6. The Future (See Figures 28 and 29)

What is the force structure likely to be in the year 2000? Utilizing Tables C-12 and C-13, graphs were done to project the future force structure using the average length of service computed from 1985 to 1994 as the base for the projections. The projection is computed in Excel, using linear extrapolation, by computing the average difference between the average length of service numbers and using this average to "forecast" the future.

Using this method, average length of service for the total force is projected to continue to rise, especially for E-5 and E-6 personnel. The percentages of non-career personnel will continue to decrease, while those in later YOS, 11-20, will rise.

A second projection exercise was undertaken to determine when a given force mix would be achieved. In particular, if we assume a 50-50 mix of career and non-career personnel is the optimal force structure, estimates were made as to when this mix would occur and what the size of the force would be at that time. By increasing the non-career numbers and decreasing the career numbers by equal percentages each year, using actual 1994 figures as the base, an optimal force would be reached in 1999. This force would have roughly 397,000 personnel. These calculations are presented in Table 2. This projected force is equivalent in size to the force projected by a Bureau of Naval Personnel brief presented to students at the Naval Postgraduate School at the end of 1993. The projected end strength for FY 1999 was 397,714.

According to the Chief of Naval Operations, as reported by the Navy News Service in June 1994, the Navy's accessions for the coming years will be approximately 56,000 individuals each year. Using this number for accessions and the projected

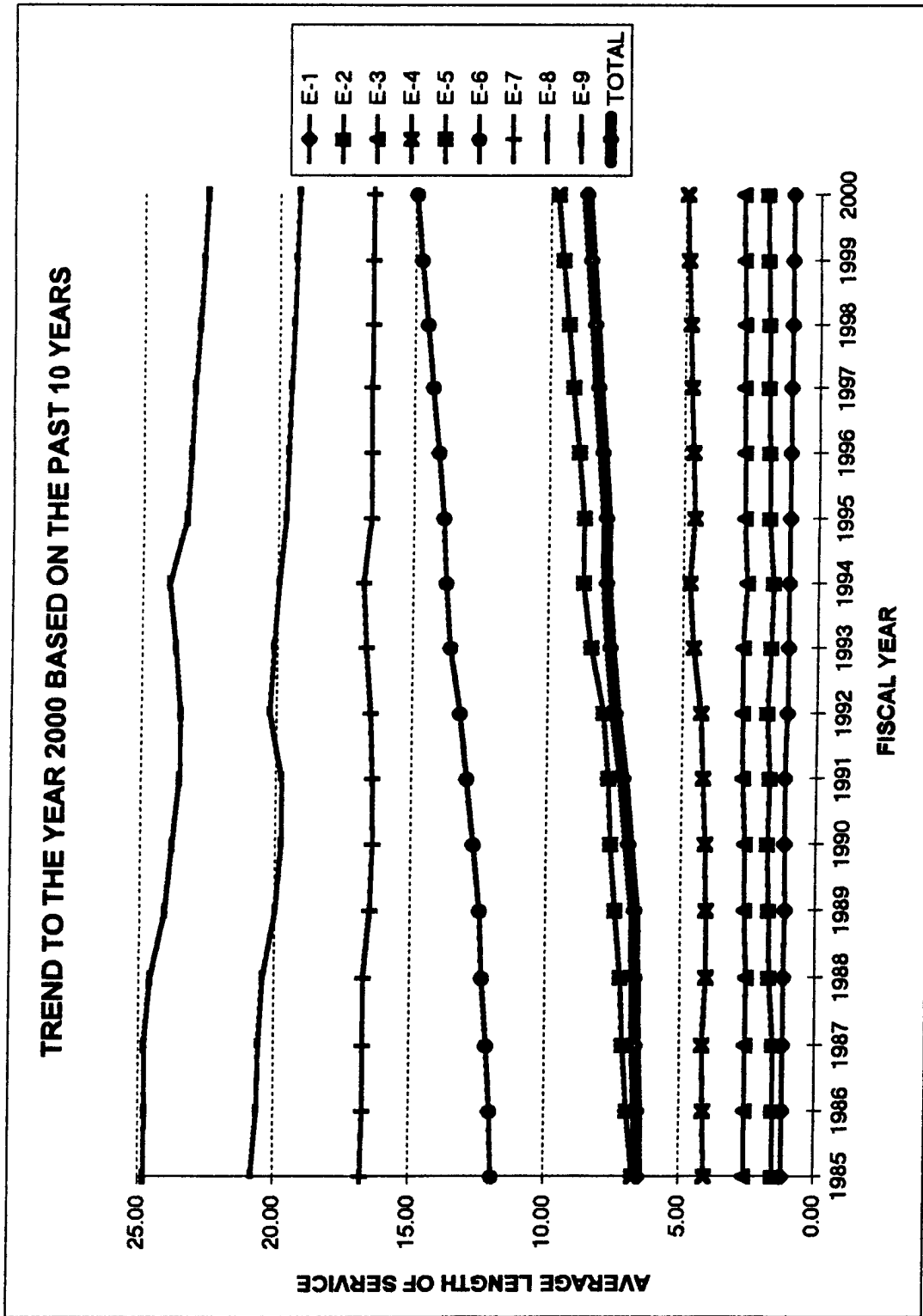


Figure 28. Projected trend of the Average Length of Service.

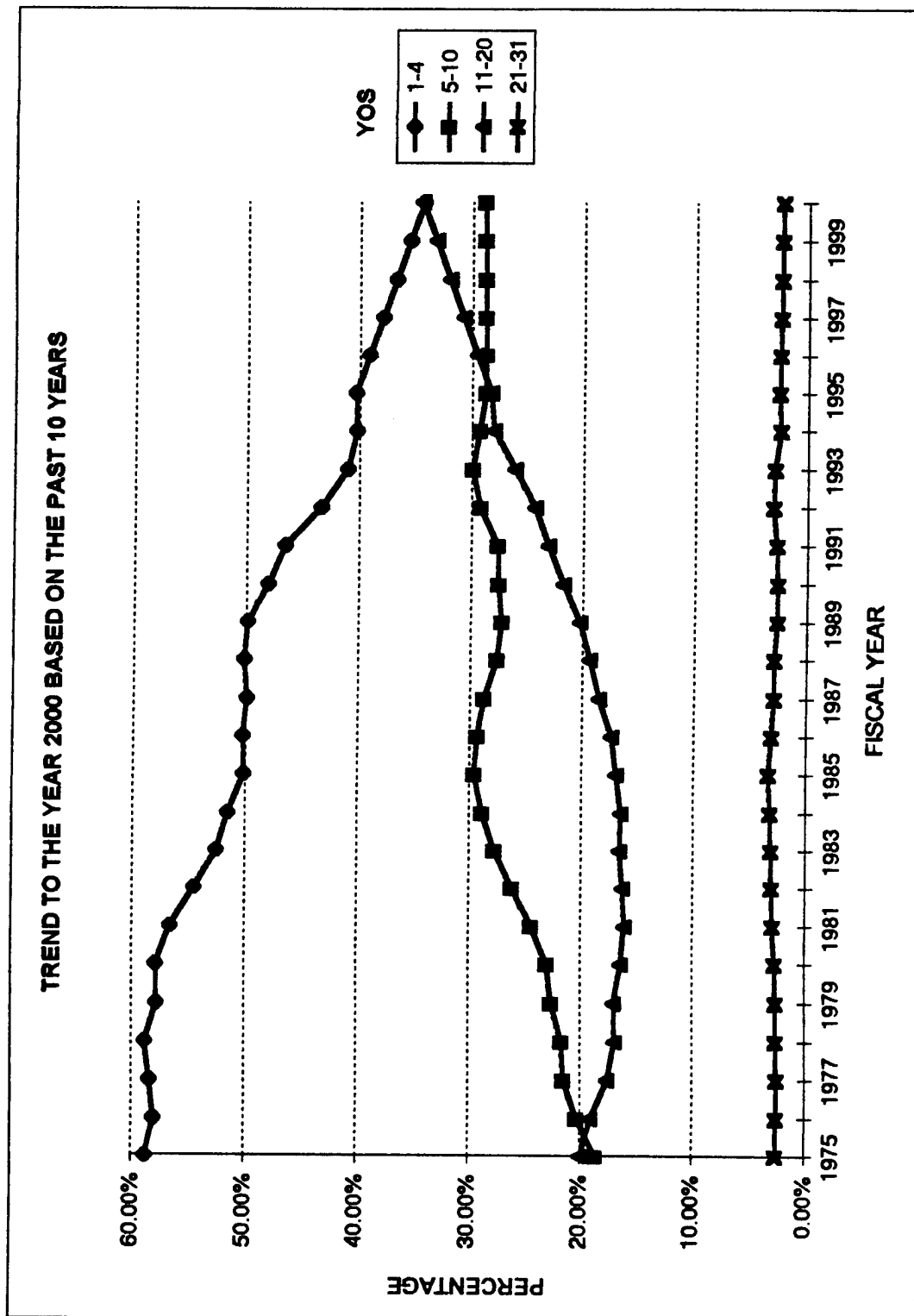


Figure 29. Projected trend of Career Personnel to the Year 2000.

LOS 1-4				LOS 5-31			
FY	0.25% Change		TOTAL	FY	0.5% Change		TOTAL
	100.25%	99.75%			100.5%	99.5%	
1995	164,188	242,395	406,584	1995	164,598	241,788	406,386
1996	172,398	230,276	402,674	1996	172,828	229,699	402,526
1997	181,018	218,762	399,780	1997	181,469	218,214	399,683
1998	190,069	207,824	397,892	1998	190,543	207,303	397,846
1999	199,572	197,433	397,005	1999	200,070	196,938	397,008
2000	209,551	187,561	397,112	2000	210,073	187,091	397,164
FY	1% Change		TOTAL	FY	2% Change		TOTAL
	101%	99%			102%	98%	
1995	165,417	240,573	405,990	1995	167,055	238,143	405,198
1996	173,688	228,544	402,232	1996	175,407	226,236	401,643
1997	182,372	217,117	399,489	1997	184,178	214,924	399,102
1998	191,491	206,261	397,752	1998	193,387	204,178	397,564
1999	201,065	195,948	397,013	1999	203,056	193,969	397,025
2000	211,118	186,151	397,269	2000	213,209	184,270	397,479
FY	3% Change		TOTAL	FY	4% Change		TOTAL
	103%	97%			104%	96%	
1995	168,692	235,713	404,405	1995	170,330	233,283	403,613
1996	177,127	223,927	401,054	1996	178,847	221,619	400,465
1997	185,983	212,731	398,714	1997	187,789	210,538	398,327
1998	195,283	202,094	397,377	1998	197,178	200,011	397,189
1999	205,047	191,990	397,036	1999	207,037	190,010	397,048
2000	215,299	182,390	397,689	2000	217,389	180,510	397,899
FY	5% Change		TOTAL				
	105%	95%					
1995	171,968	230,853	402,821				
1996	180,566	219,310	399,877				
1997	189,595	208,345	397,939				
1998	199,074	197,927	397,002				
1999	209,028	188,031	397,059				
2000	219,480	178,630	398,109				

Table 2. Projection to a 50-50 Career Mix from 1994 numbers by increasing Non-Career and decreasing Career Personnel.

force size of 397,714, steady-state projections of the career force were estimated (Tables 3 and 4). The methodology used to determine steady-state is described in Appendix E to this thesis.

Using survival rates from the previous period when the force had a 50-50 career mix, and assuming annual accessions of 56,000, steady-state for the non-career force is 230,991. This would present a total end strength of 461,982 enlisted personnel, far exceeding the required end strength of 397,714. Accessions would have to be 48,487 to achieve a non-career force of approximately 200,000 enlisted members using survival rates from the earlier period when a 50-50 career mix was maintained. Survival rates for the 1991 cohort were lower, and may present a more accurate basis for estimating steady-state. These indicate a non-career force size of 215,222 with a total force size of 430,444. Steady-state accessions would be set at 52,039 individuals. Accessions at 56,000 individuals appears to be greater than needed, but may be necessary to increase the non-career force to 50 percent from its current 40.3 percent.

YOS	Cohort			Avg for 1985-87	Cohort 1991
	1985	1986	1987		
1	100	100	100	100	100
2	89.77	90.14	92.27	90.727	88.522
3	72.96	72.35	73.40	72.903	59.635
4	48.87	48.38	49.31	48.854	36.168
5	21.44	21.14	21.67	21.415	
6	8.16	7.90	8.02	8.027	
7	2.41	2.34	2.31	2.355	
8	0.650	0.626	0.600	0.6252	
9	0.155	0.139		0.1470	
10	0.031			0.0310	

Table 3. Survival Rates (s_t) as a Percentage.

Projected Accessions (E)	56,000
Steady State Non-Career Force using average survival rates (F)	230,991
Steady State Non-Career Force using 1991 cohort survival rates (F)	215,222
Steady State Accessions using 200,000 as Steady State Non-Career Force and average survival rates (E)	48,487
Steady State Accessions using 200,000 as Steady State Non-Career Force and 1991 cohort survival rates (E)	52,039

Table 4. Steady State Distribution and
Accessions for Non-Career Force.

V. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

Two of the important characteristics of the "hollow force" of the late 1970's were lower promotion rates and higher attrition rates, which were due to the accidental admission of low quality recruits into the military from the misnormed ASVAB. The data used for this thesis contained all AFQT categories and did not differentiate among members by AFQT categories. As a result, the findings presented the trends for the entire enlisted force in all AFQT categories and not for the sub-groups that might have verified the AFQT characteristics of the "hollow force."

The data indicate that one attribute of the hollow force was a slowdown in the pace of promotion. There were higher percentages of paygrades E-3 and below in YOS 5-8 for the cohorts that entered the Navy during the period the ASVAB was misnormed. These percentages started dropping with the 1979 cohort and continued to decline until the 1986 cohort, at which point they started to rise again. Paygrades E-4 and E-5 had minimal variation in their percentage makeup of the force in the earlier cohorts. The proportion of paygrade E-4 began to rise and the proportion of paygrade E-5 began to decline starting in fiscal year 1986. These trends continued until fiscal year 1994.

Attrition and continuation behavior steadily improved from 1975 until the beginning of the downsizing, at which point policies were instituted to encourage personnel to voluntarily leave. Continuation rates steadily improved for YOS 1-4 for the first seven cohorts, which would have extended through 1985, the fourth year of the 1982 cohort. By this time the desired force structure had been achieved and recruiting goals were being met. Thus, commanders were given

the tools to continue to mold the force by having more options to separate adverse personnel.

Beginning studies on the AVF hypothesized that the force would become more career-oriented. The data support this hypothesis: the force became comprised of a higher percentage of career personnel and, as a result, the average length of service increased. This may or may not be a good situation, especially in light of the current downsizing trend. With fewer accessions, what will happen to the force when this smaller number of entry level personnel becomes the career force in eight to ten years?

B. RECOMMENDATIONS

This type of aggregate data is difficult to use to determine all of the trends that may be pertinent to define a "hollow force," especially trends in the quality of the enlisted force. Further study on the hollow force should examine directly those individuals who were misnormed and compare them with their peers who met or exceed the true norms for entering the military.

The data did clearly highlight the aging of the force, and the growth in careerists. With the reduced accessions brought about by the current downsizing, the proportion of the force in the career ranks could possibly increase in the future. This aspect is potentially alarming and warrants further study to determine the possible effects of having such a high percentage of career personnel in the force. In particular, what are the costs and benefits of such a high proportion of career personnel?

APPENDIX A.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	25,545	42,542	12,123	9,514	76	26	6	2	0	89,834
2	2,889	22,754	31,533	12,961	184	42	11	1	0	70,375
3	1,140	6,004	23,996	31,863	3,085	87	16	4	3	66,198
4	231	1,230	8,263	22,510	14,862	88	12	1	3	47,200
5	39	96	2,188	6,765	12,780	539	21	4	0	22,432
6	17	39	876	3,650	12,539	1,984	31	2	2	19,140
7	14	21	636	1,579	9,687	3,261	36	1	3	15,238
8	3	11	513	1,133	6,135	4,114	58	6	2	11,975
9	3	7	316	819	3,903	3,652	118	13	1	8,832
10	2	3	162	720	3,295	4,718	333	7	5	9,245
11	3	4	85	603	3,131	4,515	551	13	5	8,910
12	1	0	49	308	2,145	4,692	911	25	4	8,135
13	1	1	29	138	1,389	4,641	1,281	54	6	7,540
14	1	0	23	124	1,405	5,527	2,038	157	7	9,282
15	2	3	22	190	1,403	5,502	2,580	299	32	10,033
16	0	0	5	124	956	5,079	3,098	539	97	9,898
17	0	0	13	97	721	4,803	3,729	832	174	10,369
18	0	0	4	48	590	4,478	4,333	1,126	303	10,882
19	0	0	7	38	424	3,713	3,929	1,240	363	9,714
20	1	0	6	45	448	2,688	3,453	1,133	416	8,190
21	0	0	2	11	111	997	2,189	872	364	4,546
22	0	0	3	10	37	315	933	382	202	1,882
23	0	0	3	3	13	170	596	342	204	1,331
24	0	0	1	1	15	85	446	303	294	1,145
25	0	0	0	0	5	56	243	189	193	686
26	0	0	1	3	8	20	98	72	78	280
27	0	0	1	2	4	31	144	135	166	483
28	0	0	0	1	4	29	174	155	224	587
29	0	0	1	0	2	17	121	106	139	386
30	0	0	1	1	4	30	171	126	161	494
31	0	0	0	1	7	30	68	69	105	280
TOTAL	29,892	72,715	80,862	93,261	79,368	65,929	31,728	8,210	3,556	465,522

Table A-1. Navy Enlisted Force Structure for FY1975.
Source: YAFS Reports, FY1975.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	22,956	43,086	12,735	6,532	74	23	3	3	2	85,414
2	2,431	21,046	35,612	18,088	763	26	4	0	0	77,970
3	959	5,046	22,181	25,459	2,832	59	9	2	0	56,547
4	263	1,103	6,573	24,822	12,364	128	24	8	2	45,287
5	73	131	1,932	7,503	13,637	621	20	2	3	23,922
6	18	42	628	4,290	13,651	2,095	18	2	1	20,745
7	9	16	251	1,760	9,910	3,058	23	2	4	15,033
8	3	7	150	1,143	7,916	5,018	52	3	4	14,296
9	10	5	87	938	4,582	5,022	142	4	0	10,790
10	2	5	57	420	2,909	4,146	404	10	3	7,956
11	4	2	33	339	2,476	4,890	791	11	6	8,552
12	0	2	20	216	2,429	4,766	975	29	5	8,442
13	1	0	14	101	1,577	4,749	1,370	88	4	7,904
14	0	0	3	60	985	4,413	1,831	144	11	7,447
15	0	0	8	43	983	5,171	2,600	295	23	9,123
16	1	0	8	58	1,063	5,110	3,109	470	57	9,876
17	0	1	4	40	691	4,562	3,503	757	142	9,700
18	0	0	5	32	548	4,185	4,037	1,042	248	10,097
19	0	0	1	16	435	3,819	4,276	1,250	373	10,170
20	0	1	2	6	172	1,736	2,678	926	377	5,898
21	0	0	0	1	52	965	1,971	792	365	4,146
22	0	0	0	0	29	424	1,393	640	309	2,795
23	0	0	0	0	5	131	570	268	177	1,151
24	0	0	0	0	2	53	396	250	172	873
25	0	0	0	0	1	36	317	231	265	850
26	0	0	0	0	1	10	188	151	175	525
27	0	0	0	0	0	2	61	58	61	182
28	0	0	0	0	0	9	111	108	138	366
29	0	0	0	0	0	8	146	130	189	473
30	0	0	0	0	0	0	95	65	76	236
31	0	0	0	0	0	2	33	44	88	167
TOTAL	26,730	70,493	80,304	91,867	80,087	65,237	31,150	7,785	3,280	456,933

Table A-2. Navy Enlisted Force Structure for FY1976.
Source: YAFS Reports, FY1976.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	39,985	29,162	15,104	3,639	91	20	11	2	2	88,016
2	2,540	22,037	36,249	12,181	532	28	6	3	0	73,576
3	781	4,036	21,213	30,417	5,941	31	11	1	0	62,431
4	235	1,246	7,561	24,616	11,770	84	13	4	0	45,529
5	60	125	1,873	7,808	12,515	402	16	7	3	22,809
6	23	46	751	4,781	14,640	2,428	27	4	3	22,703
7	10	17	256	1,944	11,258	3,348	26	4	4	16,867
8	3	8	166	873	7,912	5,224	54	7	1	14,248
9	0	3	119	549	5,385	6,211	146	6	4	12,423
10	1	2	85	541	3,404	5,684	437	9	1	10,164
11	0	5	48	216	1,954	4,389	694	21	6	7,333
12	1	3	35	134	1,593	4,288	1,182	21	4	7,261
13	2	4	19	107	1,846	5,045	1,415	91	9	8,538
14	0	1	13	43	996	4,390	1,827	195	6	7,471
15	0	0	8	34	659	3,925	2,237	287	16	7,166
16	0	0	9	19	575	4,308	2,971	499	45	8,426
17	0	0	3	24	663	4,251	3,403	729	83	9,156
18	0	0	3	19	512	4,098	3,906	1,088	175	9,801
19	0	0	1	21	380	3,404	3,981	1,230	330	9,347
20	1	0	0	6	195	1,887	3,037	1,164	443	6,733
21	0	0	3	0	26	517	1,554	766	406	3,272
22	0	0	0	0	10	355	1,186	659	385	2,595
23	0	0	0	0	4	212	917	549	335	2,017
24	0	0	0	0	4	59	460	299	236	1,058
25	0	0	0	0	2	19	242	166	155	584
26	0	0	0	0	0	17	242	188	257	704
27	0	0	0	0	0	4	139	133	182	458
28	0	0	0	0	1	2	42	43	76	164
29	0	0	0	0	0	4	66	68	98	236
30	0	0	0	0	0	6	108	91	145	350
31	0	0	0	0	0	0	26	37	72	135
TOTAL	43,642	56,695	83,519	87,972	82,868	64,640	30,382	8,371	3,482	461,571

Table A-3. Navy Enlisted Force Structure for FY1977.
Source: YAFS Reports, FY1977.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	31,954	22,931	15,400	3,661	64	21	3	0	0	74,034
2	3,435	23,423	38,600	12,013	527	21	7	1	0	78,027
3	1,126	5,170	25,475	29,881	4,399	42	5	4	0	66,102
4	296	1,246	7,522	28,528	16,114	68	8	1	0	53,783
5	40	150	1,682	8,166	14,215	142	17	3	0	24,415
6	19	48	660	4,412	14,003	1,195	17	6	2	20,362
7	16	14	266	2,391	11,360	3,358	36	5	1	17,447
8	2	9	165	1,024	7,441	6,611	71	2	5	15,330
9	1	7	100	476	4,310	6,521	300	4	2	11,721
10	0	6	69	317	2,848	6,935	625	10	4	10,814
11	1	0	34	264	2,027	5,622	1,120	17	1	9,086
12	0	3	20	133	1,171	4,350	1,238	33	6	6,954
13	0	1	23	71	935	4,038	1,723	59	4	6,854
14	0	3	13	59	1,098	4,910	1,975	157	7	8,222
15	0	0	8	24	592	3,981	2,316	283	10	7,214
16	0	1	5	25	385	3,425	2,687	423	27	6,978
17	0	0	3	19	331	3,729	3,223	844	79	8,228
18	0	0	4	13	404	3,774	3,524	1,141	129	8,989
19	0	0	2	14	335	3,470	3,892	1,396	251	9,360
20	0	0	1	8	189	1,747	2,853	1,170	391	6,359
21	0	0	0	2	46	581	1,841	929	468	3,867
22	0	0	1	0	8	187	969	610	433	2,208
23	0	0	0	1	1	157	740	495	402	1,796
24	0	0	0	0	1	87	586	428	380	1,482
25	0	0	0	0	0	37	318	227	250	832
26	0	0	0	0	0	6	181	125	160	472
27	0	0	0	0	0	9	134	126	241	510
28	0	0	0	0	0	2	84	102	163	351
29	0	0	0	0	0	2	34	32	80	148
30	0	0	0	0	0	2	47	52	77	178
31	0	0	0	0	0	2	24	41	86	153
TOTAL	36,890	53,012	90,053	91,502	82,804	65,032	30,598	8,726	3,659	462,276

Table A-4. Navy Enlisted Force Structure for FY1978.
Source: YAFS Reports, FY1978.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	34,727	20,113	14,561	2,862	46	18	5	1	2	72,335
2	3,728	18,086	31,420	12,199	250	30	3	1	0	65,717
3	1,976	6,593	27,955	30,333	3,480	30	10	2	0	70,379
4	571	1,869	9,542	30,590	12,796	70	6	3	0	55,447
5	85	204	1,933	9,223	17,010	129	5	4	0	28,593
6	22	78	728	4,752	13,331	1,096	13	7	0	20,027
7	15	24	317	2,499	11,085	2,079	21	8	3	16,051
8	8	6	184	1,388	7,932	5,954	43	4	1	15,520
9	0	5	132	640	4,027	7,774	131	2	2	12,713
10	0	2	80	309	2,469	6,950	408	4	2	10,224
11	0	2	43	180	1,702	6,682	916	9	4	9,538
12	1	1	42	132	1,436	5,482	1,467	17	1	8,579
13	0	1	23	79	795	4,035	1,659	34	6	6,632
14	0	1	11	50	635	3,714	2,118	88	5	6,622
15	0	1	11	40	687	4,513	2,480	174	7	7,913
16	0	0	5	15	375	3,500	2,754	319	14	6,982
17	0	1	5	16	257	2,935	2,948	555	35	6,752
18	0	0	0	17	203	3,154	3,557	1,047	95	8,073
19	0	0	1	10	286	3,263	3,694	1,360	163	8,777
20	0	0	1	4	205	2,508	3,376	1,354	320	7,768
21	0	0	0	2	50	596	1,638	928	344	3,558
22	0	0	0	1	7	272	1,077	671	395	2,423
23	0	0	0	0	3	95	568	466	372	1,504
24	0	0	0	0	1	75	466	375	348	1,265
25	0	0	0	0	1	32	375	380	360	1,148
26	0	0	0	0	0	19	221	206	227	673
27	0	0	0	0	0	1	113	89	140	343
28	0	0	0	0	0	4	92	99	207	402
29	0	0	0	0	0	1	66	84	156	307
30	0	0	0	0	0	1	26	25	65	117
31	0	0	0	0	0	0	10	29	79	118
TOTAL	41,133	46,987	86,994	95,341	79,069	65,012	30,266	8,345	3,353	456,500

Table A-5. Navy Enlisted Force Structure for FY1979.
Source: YAFS Reports, FY1979.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	38,023	22,215	15,091	2,936	45	9	2	1	0	78,322
2	7,387	19,953	26,068	12,226	229	30	7	1	1	65,902
3	2,385	6,563	16,488	31,598	3,551	30	5	2	0	60,622
4	1,134	2,869	9,267	32,707	14,480	48	7	3	0	60,515
5	138	318	2,447	9,409	15,550	243	7	2	1	28,115
6	41	96	737	4,487	15,587	1,533	11	3	1	22,496
7	14	40	423	2,365	10,331	2,474	17	6	0	15,670
8	10	10	263	1,324	7,703	5,246	27	7	3	14,593
9	3	7	186	777	4,261	7,865	87	6	1	13,193
10	3	4	95	335	2,457	8,020	407	5	3	11,329
11	3	1	61	188	1,456	6,626	785	7	1	9,128
12	1	2	43	108	1,136	6,076	1,612	9	4	8,991
13	2	1	35	85	1,012	4,803	2,145	27	3	8,113
14	0	0	13	44	525	3,568	2,151	64	6	6,371
15	0	1	15	37	450	3,306	2,395	178	6	6,388
16	0	3	6	25	461	4,098	2,804	306	8	7,711
17	0	0	7	12	245	3,079	2,843	588	22	6,796
18	0	0	5	10	193	2,619	2,804	932	65	6,628
19	0	0	1	12	144	2,877	3,402	1,346	145	7,927
20	0	0	0	10	177	2,452	2,983	1,369	249	7,240
21	0	0	0	1	51	844	1,753	999	354	4,002
22	0	1	0	0	13	314	1,012	705	341	2,386
23	0	0	0	0	4	156	670	503	323	1,656
24	0	0	0	0	0	46	361	355	327	1,089
25	0	0	0	1	0	44	301	283	312	941
26	0	0	0	0	0	19	260	290	346	915
27	0	0	0	0	0	12	128	147	205	492
28	0	0	0	0	0	1	76	70	113	260
29	0	0	0	0	0	1	66	89	184	340
30	0	0	0	0	0	2	40	51	118	211
31	0	0	0	0	0	1	13	20	77	111
TOTAL	49,144	52,084	71,251	98,697	80,061	66,442	29,181	8,374	3,219	458,453

Table A-6. Navy Enlisted Force Structure for FY1980.
Source: YAFS Reports, FY1980.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	36,848	25,646	15,977	3,200	41	14	4	1	0	81,731
2	3,982	17,958	36,040	14,396	250	21	6	2	0	72,655
3	2,186	5,007	17,050	31,772	3,459	32	10	0	0	59,516
4	1,032	2,110	7,360	27,292	13,783	49	9	2	1	51,638
5	316	532	3,269	12,178	17,722	279	11	3	1	34,311
6	80	168	991	5,308	15,127	1,952	12	3	0	23,641
7	33	48	434	2,217	10,814	3,804	23	4	1	17,378
8	14	30	274	1,386	7,412	5,182	33	5	3	14,339
9	13	14	176	769	4,740	7,082	119	4	5	12,922
10	5	9	125	468	3,034	7,901	522	4	3	12,071
11	1	4	63	210	1,752	7,097	1,134	5	2	10,268
12	2	2	46	116	1,096	5,808	1,607	18	1	8,696
13	0	2	32	83	803	5,171	2,412	28	6	8,537
14	1	1	6	63	801	4,166	2,727	121	5	7,891
15	0	0	7	27	417	3,083	2,479	163	8	6,184
16	0	1	9	23	340	2,823	2,659	335	10	6,200
17	0	1	7	10	349	3,445	3,198	524	22	7,556
18	0	0	9	14	168	2,589	2,926	905	67	6,678
19	0	0	7	6	154	2,174	2,866	1,173	129	6,509
20	1	0	1	10	95	2,055	3,011	1,491	235	6,899
21	0	0	1	1	50	873	1,813	1,050	336	4,124
22	0	0	0	0	21	402	1,193	822	404	2,842
23	0	1	0	0	4	167	671	541	333	1,717
24	0	0	0	0	2	70	479	412	329	1,292
25	0	0	0	0	1	20	269	277	340	907
26	0	0	0	1	0	22	223	236	301	783
27	0	0	0	0	0	11	169	213	319	712
28	0	0	0	0	0	9	94	115	194	412
29	0	0	0	0	0	1	67	65	106	239
30	0	0	0	0	0	1	52	60	159	272
31	0	0	0	0	0	1	28	25	115	169
TOTAL	44,514	51,534	81,884	99,550	82,435	66,304	30,826	8,607	3,435	469,089

Table A-7. Navy Enlisted Force Structure for FY1981.
Source: YAFS Reports, FY1981.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	29,911	20,480	15,503	2,983	63	26	3	0	0	68,969
2	4,455	18,579	40,285	13,352	244	50	6	2	0	76,973
3	2,139	5,028	24,829	29,702	3,434	51	13	1	1	65,198
4	1,021	1,828	8,561	26,234	12,646	72	12	2	1	50,377
5	514	559	3,294	12,561	18,759	156	15	2	1	35,861
6	149	253	1,510	6,949	18,822	1,515	16	3	1	29,218
7	52	69	563	2,929	12,033	3,060	17	4	1	18,728
8	23	40	281	1,325	8,136	6,279	27	2	1	16,114
9	16	14	211	889	5,355	6,730	74	4	3	13,296
10	11	9	117	525	3,526	7,839	340	6	5	12,378
11	2	8	80	308	2,308	7,723	1,037	7	3	11,476
12	2	4	27	139	1,366	6,366	1,960	16	2	9,882
13	0	2	34	85	875	5,135	2,226	57	1	8,415
14	2	0	19	61	628	4,646	2,846	121	5	8,328
15	1	1	9	33	588	3,877	2,961	267	4	7,741
16	2	0	5	20	320	2,817	2,568	338	14	6,084
17	1	0	6	17	273	2,597	2,593	607	28	6,122
18	0	1	4	7	262	3,190	3,156	795	61	7,476
19	2	1	6	15	132	2,393	2,862	1,087	128	6,626
20	0	0	4	4	108	1,774	2,551	1,216	219	5,876
21	0	0	0	2	29	860	1,867	1,095	368	4,221
22	0	0	1	0	18	478	1,254	848	386	2,985
23	0	0	0	0	7	238	817	649	386	2,097
24	0	0	0	0	3	102	475	430	334	1,344
25	0	0	0	0	1	45	354	321	329	1,050
26	0	0	0	0	1	14	203	219	334	771
27	0	0	0	0	0	18	149	195	276	638
28	0	0	0	0	0	7	118	167	309	601
29	0	0	0	0	0	8	82	106	192	388
30	0	0	0	0	0	1	50	48	96	195
31	0	0	0	0	0	0	38	38	175	251
TOTAL	38,303	46,876	95,349	98,140	89,937	68,067	30,690	8,653	3,664	479,679

Table A-8. Navy Enlisted Force Structure for FY1982.
Source: YAFS Reports, FY1982.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	25,741	20,660	17,706	2,921	56	28	4	0	0	67,116
2	4,259	16,039	34,738	13,263	148	26	2	0	0	68,475
3	2,290	5,011	28,133	30,409	2,787	52	9	1	1	68,693
4	1,226	1,885	9,707	29,710	12,820	61	12	3	0	55,424
5	630	511	3,037	13,171	18,810	173	19	2	1	36,354
6	364	301	1,610	7,926	20,080	1,485	20	2	1	31,789
7	160	158	762	4,103	15,585	3,297	24	3	1	24,093
8	83	57	340	1,793	9,736	5,365	32	5	0	17,411
9	42	27	179	938	6,148	7,492	154	1	1	14,982
10	24	9	131	629	4,108	7,222	388	8	2	12,521
11	22	9	59	406	2,788	7,667	842	5	5	11,803
12	13	2	53	221	1,876	7,173	1,779	10	1	11,128
13	11	2	15	121	1,123	5,795	2,513	23	2	9,605
14	8	3	14	68	713	4,625	2,647	100	4	8,182
15	3	1	4	44	521	4,285	3,103	203	3	8,167
16	3	1	3	27	451	3,649	3,068	378	9	7,589
17	1	0	6	14	261	2,598	2,584	484	20	5,968
18	4	1	1	20	197	2,407	2,428	871	60	5,989
19	3	0	2	8	217	2,961	2,935	1,141	108	7,375
20	1	2	4	10	113	2,018	2,508	1,251	219	6,126
21	1	0	0	6	31	802	1,604	1,027	326	3,797
22	1	0	0	2	7	523	1,274	939	419	3,165
23	0	0	1	0	4	273	897	746	396	2,317
24	0	0	0	0	5	151	582	546	387	1,671
25	0	0	0	0	3	56	339	365	328	1,091
26	0	0	0	0	1	34	281	289	311	916
27	0	0	0	0	0	11	159	182	293	645
28	0	0	0	0	0	15	116	170	269	570
29	0	0	0	0	0	8	101	155	293	557
30	0	0	0	0	0	4	68	88	179	339
31	0	0	0	0	0	1	42	49	182	274
TOTAL	34,890	44,679	96,505	105,810	98,589	70,257	30,534	9,047	3,821	494,132

Table A-9. Navy Enlisted Force Structure for FY1983.
Source: YAFS Reports, FY1983.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	28,598	21,608	17,162	3,126	66	41	6	3	1	70,611
2	2,378	10,321	37,416	13,907	174	20	3	0	0	64,219
3	1,867	3,234	27,087	25,521	3,049	37	9	0	1	60,805
4	1,112	1,395	11,404	30,199	12,636	53	6	0	1	56,806
5	665	335	2,630	13,942	18,576	147	14	3	2	36,314
6	406	177	1,369	7,874	19,126	1,595	17	2	1	30,567
7	291	147	800	4,452	15,130	4,155	13	0	1	24,989
8	176	93	388	2,500	10,902	7,067	32	6	1	21,165
9	72	29	195	1,068	6,125	7,379	182	5	0	15,055
10	34	18	98	589	3,600	8,200	697	2	1	13,239
11	27	3	57	389	2,514	7,129	1,001	9	2	11,131
12	22	1	30	264	1,813	6,870	1,678	6	2	10,686
13	17	3	23	145	1,258	6,172	2,548	23	1	10,190
14	8	2	8	95	709	4,868	2,988	45	3	8,726
15	7	0	8	41	467	3,805	2,910	134	3	7,375
16	10	0	3	33	350	3,624	3,284	271	5	7,580
17	4	0	1	23	318	3,170	2,830	696	21	7,063
18	3	0	5	11	167	2,162	2,274	777	36	5,435
19	2	0	1	11	147	2,084	2,224	1,077	107	5,653
20	3	0	1	12	157	2,467	2,655	1,214	171	6,680
21	1	0	1	4	29	881	1,487	980	305	3,688
22	1	0	0	3	5	444	1,098	799	393	2,743
23	1	0	0	1	4	306	855	766	435	2,368
24	0	0	0	0	1	150	646	574	387	1,758
25	1	0	0	0	2	78	439	413	396	1,329
26	0	0	0	0	2	35	259	299	349	944
27	0	0	0	0	1	18	212	226	323	780
28	0	0	0	0	0	8	126	145	289	568
29	0	0	0	0	0	11	103	147	265	526
30	0	0	0	0	0	7	86	122	282	497
31	0	0	0	0	0	4	30	57	241	332
TOTAL	35,706	37,366	98,687	104,210	97,328	72,987	30,712	8,801	4,025	489,822

Table A-10. Navy Enlisted Force Structure for FY1984.
Source: YAFS Reports, FY1984.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	32,878	25,979	12,088	3,214	66	31	7	1	0	74,264
2	1,919	10,657	37,971	14,428	429	36	4	1	2	65,447
3	689	2,211	22,560	28,452	4,764	37	6	4	0	58,723
4	398	1,017	9,753	24,624	13,579	56	4	1	0	49,432
5	174	251	2,932	13,949	18,786	351	5	1	1	36,450
6	93	108	1,088	7,731	19,001	2,505	12	2	2	30,542
7	76	68	644	4,462	14,697	4,828	20	3	0	24,798
8	58	55	388	2,672	11,253	7,987	25	2	0	22,440
9	32	36	170	1,400	7,279	9,232	239	5	1	18,394
10	10	18	100	650	4,179	8,039	689	5	0	13,690
11	11	5	41	365	2,486	7,815	1,546	4	2	12,275
12	6	5	23	249	1,857	6,586	1,794	11	2	10,533
13	7	2	30	154	1,351	6,140	2,511	34	3	10,232
14	6	3	13	118	931	5,392	3,147	135	2	9,747
15	4	0	9	45	543	4,167	3,408	244	5	8,425
16	3	0	3	26	352	3,228	3,157	405	14	7,188
17	1	1	2	27	266	3,026	3,177	856	45	7,401
18	2	0	0	17	232	2,692	2,804	1,109	101	6,957
19	0	0	2	11	137	1,859	2,245	993	125	5,372
20	0	0	2	7	125	1,738	2,112	1,147	277	5,408
21	0	0	1	3	58	1,203	1,857	1,080	289	4,491
22	1	0	0	1	8	461	1,085	807	371	2,734
23	0	0	0	0	3	214	790	636	408	2,051
24	0	0	1	0	3	151	602	630	467	1,854
25	2	0	0	0	2	65	472	465	412	1,418
26	1	0	0	0	0	33	330	358	430	1,152
27	0	0	0	0	1	15	177	250	351	794
28	0	0	0	0	1	9	137	207	314	668
29	0	0	0	0	0	6	102	125	299	532
30	0	0	0	0	0	8	78	119	239	444
31	0	0	0	0	0	2	30	63	299	394
TOTAL	36,371	40,416	87,821	102,605	102,389	77,912	32,572	9,703	4,461	494,250

Table A-11. Navy Enlisted Force Structure for FY1985.
Source: YAFS Reports, FY1985.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	36,138	25,607	10,880	2,912	46	28	7	1	1	75,620
2	2,376	13,389	36,775	13,902	196	25	5	0	0	66,668
3	639	2,321	24,965	28,502	3,671	23	7	1	0	60,129
4	256	695	8,432	28,089	12,869	29	8	3	0	50,381
5	168	181	2,399	14,096	16,884	216	4	0	3	33,951
6	101	84	1,057	8,252	18,666	1,942	6	2	1	30,111
7	77	57	499	4,698	14,886	4,511	8	2	2	24,740
8	41	36	343	2,820	11,679	7,350	25	3	0	22,297
9	55	38	212	1,579	8,381	9,360	185	1	1	19,812
10	38	28	103	849	5,328	9,631	708	4	1	16,690
11	9	11	50	416	2,983	7,607	1,329	8	0	12,413
12	8	4	21	248	1,878	7,030	2,320	16	1	11,526
13	9	4	16	164	1,407	5,850	2,412	50	3	9,915
14	7	3	17	113	1,028	5,334	3,091	111	3	9,707
15	7	2	9	72	740	4,701	3,485	306	2	9,324
16	4	0	4	32	446	3,622	3,548	462	9	8,127
17	4	1	3	30	274	2,823	2,883	920	38	6,976
18	1	1	1	18	217	2,674	3,055	1,176	98	7,241
19	3	0	1	9	187	2,419	2,687	1,326	199	6,831
20	0	0	3	7	114	1,590	2,055	1,087	239	5,095
21	0	1	0	2	39	841	1,308	889	384	3,464
22	0	0	0	0	10	541	1,285	853	399	3,088
23	0	0	0	1	2	212	750	600	402	1,967
24	0	0	0	0	2	99	512	506	426	1,545
25	1	0	0	0	0	57	441	473	473	1,445
26	1	0	0	0	1	25	360	360	433	1,180
27	1	0	0	0	0	18	227	273	422	941
28	0	0	0	0	0	9	97	190	330	626
29	0	0	0	0	0	6	86	184	307	583
30	0	0	0	0	0	3	63	88	266	420
31	0	0	0	0	0	1	26	54	299	380
TOTAL	39,944	42,463	85,790	106,811	101,934	78,577	32,983	9,949	4,742	503,193

Table A-12. Navy Enlisted Force Structure for FY1986.
Source: YAFS Reports, FY1986.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	33,434	26,373	10,784	2,921	24	21	5	0	0	73,562
2	2,697	15,798	36,213	13,238	200	17	2	0	0	68,165
3	613	2,591	26,408	27,939	2,776	23	5	0	1	60,356
4	250	684	9,167	29,438	12,314	28	3	1	1	51,886
5	95	112	2,007	14,160	17,127	192	6	1	0	33,700
6	72	67	848	8,405	17,511	1,932	3	0	0	28,838
7	63	51	431	4,816	14,730	4,286	5	2	1	24,385
8	37	28	250	2,951	11,839	7,125	19	4	1	22,254
9	33	21	160	1,691	8,601	8,807	124	5	0	19,442
10	15	16	109	936	6,097	9,973	645	3	1	17,795
11	16	15	46	489	3,836	9,230	1,436	2	1	15,071
12	7	9	25	271	2,245	7,085	2,008	15	1	11,666
13	6	2	12	139	1,408	6,363	2,910	62	2	10,904
14	6	2	9	122	1,049	5,346	2,822	140	4	9,500
15	3	1	8	86	781	4,813	3,373	236	3	9,304
16	0	2	8	47	607	4,234	3,573	550	7	9,028
17	1	0	10	31	349	3,287	3,311	932	25	7,946
18	1	0	2	22	235	2,571	2,733	1,195	66	6,825
19	0	0	5	17	159	2,481	2,959	1,390	151	7,162
20	0	1	2	6	132	2,193	2,534	1,389	326	6,583
21	1	0	0	4	41	784	1,293	823	314	3,260
22	0	0	1	0	12	410	884	728	405	2,440
23	0	0	0	0	4	274	864	669	398	2,209
24	1	0	0	0	2	93	512	470	410	1,488
25	0	0	0	0	1	35	375	398	416	1,225
26	0	0	0	0	0	16	315	395	435	1,161
27	1	0	0	0	1	10	232	279	410	933
28	0	0	0	0	0	6	108	220	376	710
29	0	0	0	0	0	5	59	148	311	523
30	0	0	0	0	0	5	61	147	248	461
31	0	0	0	0	0	1	13	32	233	279
TOTAL	37,352	45,773	86,505	107,729	102,081	81,646	33,192	10,236	4,547	509,061

Table A-13. Navy Enlisted Force Structure for FY1987.
Source: YAFS Reports, FY1987.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	44,708	20,796	10,352	3,660	40	13	3	2	0	79,574
2	3,326	21,746	28,198	14,359	225	19	2	0	0	67,875
3	943	3,217	23,473	29,756	3,288	15	1	0	0	60,693
4	249	818	7,464	29,771	11,408	30	4	1	1	49,746
5	93	102	1,449	13,291	17,051	161	7	0	1	32,155
6	48	45	644	7,556	18,715	1,791	6	0	0	28,805
7	57	34	298	4,304	14,606	3,634	4	1	1	22,939
8	42	27	183	2,579	12,118	6,717	18	0	0	21,684
9	33	14	88	1,496	8,872	8,491	141	2	1	19,138
10	34	11	72	885	6,448	9,321	563	5	0	17,339
11	23	8	34	437	4,406	9,516	1,379	5	0	15,808
12	13	11	21	241	2,865	8,641	2,229	13	0	14,034
13	8	2	11	145	1,675	6,427	2,628	76	3	10,975
14	2	1	8	75	1,050	5,714	3,282	228	1	10,361
15	8	1	10	72	813	4,821	3,091	281	5	9,102
16	4	2	6	42	643	4,325	3,469	475	6	8,972
17	4	0	1	33	466	3,852	3,387	946	44	8,733
18	1	0	4	25	281	2,914	3,251	1,160	121	7,757
19	1	0	0	14	193	2,339	2,673	1,301	188	6,709
20	1	2	3	11	141	2,248	2,812	1,410	322	6,950
21	2	1	0	1	38	1,144	1,696	1,039	387	4,308
22	2	0	0	1	8	405	900	635	346	2,297
23	0	0	0	0	2	204	613	518	393	1,730
24	0	0	0	1	4	122	600	540	396	1,663
25	0	0	0	0	0	26	361	371	400	1,158
26	0	0	0	0	0	7	277	324	408	1,016
27	0	0	0	0	0	7	177	280	398	862
28	0	0	0	0	0	2	94	204	373	673
29	1	0	0	0	0	1	54	167	331	554
30	0	0	0	0	0	3	28	115	246	392
31	0	0	0	0	0	0	15	30	197	242
TOTAL	49,603	46,838	72,319	108,755	105,356	82,910	33,765	10,129	4,569	514,244

Table A-14. Navy Enlisted Force Structure for FY1988.
Source: YAFS Reports, FY1988.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	45,840	19,680	9,325	2,611	36	14	0	1	0	77,507
2	2,924	29,115	22,911	14,673	228	14	2	0	0	69,867
3	870	2,884	24,741	27,124	2,882	16	3	0	0	58,520
4	241	856	8,512	30,806	10,123	27	2	0	0	50,567
5	50	105	1,613	15,198	15,432	173	4	1	0	32,576
6	24	43	496	7,528	17,863	1,702	6	0	1	27,663
7	23	25	228	3,967	14,789	3,716	10	0	0	22,758
8	10	18	128	2,439	12,048	5,893	15	0	0	20,551
9	15	7	78	1,297	9,506	8,103	177	0	0	19,183
10	9	11	52	785	6,821	8,938	633	2	1	17,252
11	7	5	30	368	4,823	9,049	1,269	6	1	15,558
12	8	1	19	221	3,326	8,851	2,303	18	0	14,747
13	4	3	9	127	2,213	7,739	3,076	91	0	13,262
14	2	1	3	58	1,221	5,719	3,170	242	2	10,418
15	3	2	4	48	803	4,930	3,726	447	6	9,969
16	1	0	3	36	647	4,219	3,217	624	19	8,766
17	2	1	2	27	537	3,715	3,442	965	48	8,739
18	0	0	3	19	385	3,389	3,282	1,277	165	8,520
19	3	0	1	13	242	2,651	3,050	1,432	256	7,648
20	0	0	1	10	178	2,124	2,492	1,281	407	6,493
21	0	0	2	0	32	924	1,564	1,015	437	3,974
22	0	1	0	0	5	476	1,057	755	469	2,763
23	0	0	0	0	0	175	554	470	363	1,562
24	1	0	0	0	0	61	367	372	399	1,200
25	0	0	0	1	1	20	359	376	408	1,165
26	0	0	0	0	0	6	217	283	394	900
27	0	0	0	0	0	3	87	209	345	644
28	0	0	0	0	0	2	38	180	335	555
29	0	0	0	0	0	0	17	93	319	429
30	0	0	0	0	0	0	23	82	248	353
31	0	0	0	0	1	0	4	18	124	147
TOTAL	50,037	52,758	68,161	107,356	104,142	82,649	34,166	10,240	4,747	514,256

Table A-15. Navy Enlisted Force Structure for FY1989.
Source: YAFS Reports, FY1989.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	32,604	16,400	9,272	2,304	90	30	7	1	0	60,708
2	3,039	31,008	21,867	13,383	243	39	14	3	0	69,596
3	768	3,221	28,346	27,055	3,010	52	23	6	2	62,483
4	190	791	8,102	31,160	9,042	102	22	7	1	49,417
5	39	102	1,598	16,413	14,623	223	33	5	2	33,038
6	17	30	541	8,920	17,614	1,125	15	1	0	28,263
7	12	22	195	4,015	14,345	2,923	17	3	2	21,534
8	6	11	102	2,331	12,387	5,595	29	1	0	20,462
9	9	3	53	1,295	9,653	7,034	144	2	1	18,194
10	6	1	24	696	7,339	8,719	617	3	1	17,406
11	5	3	15	294	5,186	8,819	1,275	6	4	15,607
12	1	4	9	151	3,753	8,604	2,076	14	1	14,613
13	4	3	9	101	2,620	7,970	3,204	68	0	13,979
14	2	3	3	59	1,735	6,921	3,740	230	0	12,693
15	1	1	8	35	995	5,077	3,518	353	9	9,997
16	1	0	1	22	658	4,377	3,793	748	20	9,620
17	1	2	1	22	534	3,829	3,052	1,030	60	8,531
18	1	0	0	19	446	3,405	3,238	1,331	116	8,556
19	1	0	0	9	342	3,140	3,038	1,554	285	8,369
20	0	1	1	15	209	2,495	2,788	1,469	483	7,461
21	0	0	0	0	22	914	1,381	990	532	3,839
22	0	1	0	1	2	414	1,021	801	501	2,741
23	1	0	0	0	2	200	690	586	477	1,956
24	0	0	0	0	0	26	362	369	370	1,127
25	0	0	0	0	0	13	247	281	382	923
26	0	0	0	0	0	3	222	295	408	928
27	0	0	0	0	0	1	52	202	349	604
28	0	0	0	0	0	0	16	133	306	455
29	0	0	0	0	0	2	9	43	293	347
30	0	0	0	0	0	0	4	27	259	290
31	0	0	0	0	0	0	3	13	99	115
TOTAL	36,708	51,607	70,147	108,300	104,850	82,052	34,650	10,575	4,963	503,852

Table A-16. Navy Enlisted Force Structure for FY1990.
Source: YAFS Reports, FY1990.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	28,803	18,032	10,142	2,283	38	20	3	0	1	59,322
2	2,476	22,453	19,340	11,274	159	17	2	2	0	55,723
3	844	3,425	33,172	22,508	2,834	35	16	0	2	62,836
4	198	837	11,316	30,968	9,269	25	6	2	0	52,621
5	31	112	1,978	15,522	14,523	137	17	9	0	32,329
6	20	41	573	9,196	17,452	975	10	2	1	28,270
7	9	19	205	4,614	14,767	2,336	9	1	0	21,960
8	9	10	87	2,268	12,086	5,005	12	0	2	19,479
9	5	8	48	1,209	9,632	7,202	125	0	2	18,231
10	7	3	25	640	7,252	8,092	505	2	0	16,526
11	8	0	6	224	5,400	8,875	1,270	0	1	15,784
12	4	2	11	121	3,885	8,605	2,079	14	3	14,724
13	7	3	6	82	2,854	8,148	2,827	62	1	13,990
14	5	2	9	56	2,006	7,496	3,736	194	0	13,504
15	2	1	3	37	1,348	6,436	3,908	395	6	12,136
16	1	2	4	25	799	4,830	3,414	574	28	9,677
17	2	0	2	13	548	4,121	3,389	1,199	99	9,373
18	3	0	2	20	446	3,645	2,812	1,271	137	8,336
19	0	1	1	18	383	3,281	2,970	1,571	219	8,444
20	0	0	0	10	310	2,985	2,747	1,581	511	8,144
21	0	1	1	2	21	1,074	1,568	1,091	561	4,319
22	0	0	0	0	0	404	848	774	531	2,557
23	0	0	0	0	1	192	638	604	509	1,944
24	0	0	0	0	2	22	442	451	462	1,379
25	0	0	0	0	0	5	238	286	362	891
26	0	0	0	0	0	2	164	215	364	745
27	0	0	0	0	0	1	32	212	358	603
28	0	0	0	0	0	1	12	135	287	435
29	0	0	0	0	0	0	2	22	257	281
30	0	0	0	0	0	1	2	12	218	233
31	0	0	0	0	0	0	0	4	51	55
TOTAL	32,434	44,952	76,931	101,090	106,015	83,968	33,803	10,685	4,973	494,851

Table A-17. Navy Enlisted Force Structure for FY1991.
Source: YAFS Reports, FY1991.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	28,811	11,342	8,980	1660	10	8	0	0	1	50,812
2	888	21,636	19,289	10453	232	12	3	0	0	52,513
3	652	2,809	22,626	20648	1921	11	0	1	0	48,668
4	218	955	12,607	30096	7261	15	2	0	1	51,155
5	37	123	2,294	17215	13258	108	2	0	0	33,037
6	18	47	635	9583	15925	1012	7	0	0	27,227
7	6	16	244	5405	14630	2092	5	2	0	22,400
8	7	5	90	2844	13041	4006	7	0	0	20,000
9	7	3	38	1281	9845	6315	145	0	1	17,635
10	0	3	35	656	7337	7964	557	1	0	16,553
11	3	3	7	177	4975	7977	1104	2	0	14,248
12	6	3	4	78	3743	8299	2059	2	0	14,194
13	1	1	6	49	2770	7811	2844	12	4	13,498
14	2	3	2	36	2001	7323	3566	67	2	13,002
15	1	1	4	31	1386	6596	4304	222	7	12,552
16	2	1	2	20	983	5565	4335	430	32	11,370
17	1	0	1	13	619	4250	3405	841	73	9,203
18	2	1	1	10	442	3747	3445	1273	191	9,112
19	2	0	4	11	404	3447	2795	1321	234	8,218
20	1	0	1	16	350	3106	2912	1538	364	8,288
21	0	0	1	2	45	1370	1709	1183	524	4,834
22	0	0	0	0	2	514	1061	817	532	2,926
23	0	0	0	0	0	190	581	589	475	1,835
24	0	0	0	0	0	18	458	464	474	1,414
25	0	0	0	0	0	6	305	354	429	1,094
26	0	0	0	0	0	1	172	242	336	751
27	0	0	0	0	0	0	20	167	296	483
28	0	0	0	0	0	0	2	152	310	464
29	0	0	0	0	0	0	1	22	231	254
30	0	0	0	0	0	0	0	4	187	191
31	0	0	0	0	0	0	0	3	35	38
TOTAL	30,665	36,952	66,871	100,284	101,180	81,763	35,806	9,709	4,739	467,969

Table A-18. Navy Enlisted Force Structure for FY1991.
Source: YAFS Reports, FY1991.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	28,864	14,950	9,130	992	18	11	0	0	0	53,965
2	708	22,276	15,034	7388	120	9	0	0	0	45,535
3	420	1,847	18,835	17375	1475	11	1	0	0	39,964
4	195	764	10,303	25220	4301	7	0	0	0	40,790
5	30	127	2,677	17112	9332	42	3	1	0	29,324
6	13	43	743	11742	14177	686	2	0	0	27,406
7	7	19	275	6171	13197	1522	4	0	0	21,195
8	3	14	110	3793	13303	2984	8	1	0	20,216
9	4	4	42	1840	11003	4748	63	0	0	17,704
10	2	1	18	785	7960	6482	355	0	0	15,603
11	2	2	6	155	5674	7563	894	2	0	14,298
12	1	1	10	88	3989	7567	1513	3	0	13,172
13	0	0	2	52	3035	7770	2456	10	0	13,325
14	2	0	0	30	2249	7240	3156	52	4	12,733
15	1	3	1	26	1637	6686	3751	135	3	12,243
16	0	2	4	23	1176	6117	4287	325	13	11,947
17	1	0	3	8	853	5175	3776	1022	42	10,880
18	1	0	0	8	538	3977	2988	1273	83	8,868
19	1	0	1	14	409	3626	3162	1552	227	8,992
20	1	0	2	9	387	3344	2556	1367	418	8,084
21	1	0	1	4	41	907	1618	1085	455	4,112
22	0	0	0	1	5	461	929	805	534	2,735
23	0	0	0	0	1	199	616	519	504	1,839
24	0	0	0	0	0	13	329	404	434	1,180
25	0	0	0	0	0	2	224	302	445	973
26	0	0	0	0	0	2	178	244	407	831
27	0	0	0	0	0	0	18	126	286	430
28	0	0	0	0	0	0	3	88	242	333
29	0	0	0	0	0	0	1	21	256	278
30	0	0	0	0	0	0	0	5	167	172
31	0	0	0	0	0	0	0	2	30	32
TOTAL	30,257	40,053	57,197	92,836	94,880	77,151	32,891	9,344	4,550	439,159

Table A-19. Navy Enlisted Force Structure for FY1993.
Source: YAFS Reports, FY1993.

LOS/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	21,486	15,712	8,477	905	3	13	1	0	0	46,597
2	777	19,708	21,906	6,174	85	12	0	0	0	48,662
3	278	1,494	16,457	13,244	1,062	7	0	0	0	32,542
4	132	519	8,335	23,150	3,832	10	0	0	0	35,978
5	13	77	2,056	14,479	7,186	29	1	1	0	23,842
6	10	25	730	10,959	11,689	417	0	0	0	23,830
7	7	10	299	6,629	12,563	1,174	2	0	0	20,684
8	6	8	135	3,955	12,487	2,504	4	0	0	19,099
9	0	2	37	2,083	10,843	3,816	23	1	0	16,805
10	0	2	18	957	8,324	5,429	153	0	0	14,883
11	0	2	3	130	6,115	6,968	650	0	0	13,868
12	0	1	6	70	4,477	7,584	1,306	3	0	13,447
13	0	3	2	50	3,083	7,161	1,931	15	0	12,245
14	0	1	2	27	2,366	7,092	2,822	31	0	12,341
15	0	1	2	15	1,832	6,717	3,372	118	5	12,062
16	0	2	2	17	1,321	6,197	3,738	353	4	11,634
17	2	0	3	14	964	5,637	3,893	917	28	11,458
18	0	0	0	3	682	4,658	3,280	1,233	66	9,922
19	1	0	0	9	430	3,682	2,742	1,382	134	8,380
20	0	0	0	10	396	3,423	2,884	1,497	337	8,547
21	0	0	1	2	35	258	1,277	876	353	2,802
22	0	0	1	0	3	23	951	816	433	2,227
23	0	0	0	0	3	10	542	545	447	1,547
24	0	0	0	0	0	3	334	388	441	1,166
25	0	0	0	0	0	0	1	271	347	646
26	0	0	0	0	0	0	1	207	397	614
27	0	0	0	0	0	0	0	22	287	313
28	0	0	0	0	0	0	0	5	229	236
29	0	0	0	0	0	0	1	2	199	202
30	0	0	0	0	0	0	0	2	186	188
31	0	0	0	0	1	0	0	2	12	15
TOTAL	22,712	37,567	58,472	82,882	89,782	72,826	29,949	8,687	3,905	406,782

Table A-20. Navy Enlisted Force Structure for FY1994.
Source: YAFS Reports, FY1994.

APPENDIX B. COHORT DATA

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1975	25,545	42,542	12,123	9,514	76	26	6	2	0	89,834
2	1976	2,431	21,046	35,612	18,088	763	26	4	0	0	77,970
3	1977	781	4,036	21,213	30,417	5,941	31	11	1	0	62,431
4	1978	296	1,246	7,522	28,528	16,114	68	8	1	0	53,783
5	1979	85	204	1,933	9,223	17,010	129	5	4	0	28,593
6	1980	41	96	737	4,487	15,587	1,533	11	3	1	22,496
7	1981	33	48	434	2,217	10,814	3,804	23	4	1	17,378
8	1982	23	40	281	1,325	8,136	6,279	27	2	1	16,114
9	1983	42	27	179	938	6,148	7,492	154	1	1	14,982
10	1984	34	18	98	589	3,600	8,200	697	2	1	13,239
11	1985	11	5	41	365	2,486	7,815	1,546	4	2	12,275
12	1986	8	4	21	248	1,878	7,030	2,320	16	1	11,526
13	1987	6	2	12	139	1,408	6,363	2,910	62	2	10,904
14	1988	2	1	8	75	1,050	5,714	3,282	228	1	10,361
15	1989	3	2	4	48	803	4,930	3,726	447	6	9,969
16	1990	1	0	1	22	658	4,377	3,793	748	20	9,620
17	1991	2	0	2	13	548	4,121	3,389	1,199	99	9,373
18	1992	2	1	1	10	442	3747	3445	1273	191	9,112
19	1993	1	0	1	14	409	3626	3162	1552	227	8,992
20	1994	0	0	0	10	396	3,423	2,884	1,497	337	8,547

Table B-1. Progression of 1975 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1975-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1976	22,956	43,086	12,735	6,532	74	23	3	3	2	85,414
2	1977	2,540	22,037	36,249	12,181	532	28	6	3	0	73,576
3	1978	1,126	5,170	25,475	29,881	4,399	42	5	4	0	66,102
4	1979	571	1,869	9,542	30,590	12,796	70	6	3	0	55,447
5	1980	138	318	2,447	9,409	15,550	243	7	2	1	28,115
6	1981	80	168	991	5,308	15,127	1,952	12	3	0	23,641
7	1982	52	69	563	2,929	12,033	3,060	17	4	1	18,728
8	1983	83	57	340	1,793	9,736	5,365	32	5	0	17,411
9	1984	72	29	195	1,068	6,125	7,379	182	5	0	15,055
10	1985	10	18	100	650	4,179	8,039	689	5	0	13,690
11	1986	9	11	50	416	2,983	7,607	1,329	8	0	12,413
12	1987	7	9	25	271	2,245	7,085	2,008	15	1	11,666
13	1988	8	2	11	145	1,675	6,427	2,628	76	3	10,975
14	1989	2	1	3	58	1,221	5,719	3,170	242	2	10,418
15	1990	1	1	8	35	995	5,077	3,518	353	9	9,997
16	1991	1	2	4	25	799	4,830	3,414	574	28	9,677
17	1992	1	0	1	13	619	4250	3405	841	73	9,203
18	1993	1	0	0	8	538	3977	2988	1273	83	8,868
19	1994	1	0	0	9	430	3,682	2,742	1,382	134	8,380

Table B-2. Progression of 1976 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1976-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1977	39,985	29,162	15,104	3,639	91	20	11	2	2	88,016
2	1978	3,435	23,423	38,600	12,013	527	21	7	1	0	78,027
3	1979	1,976	6,593	27,955	30,333	3,480	30	10	2	0	70,379
4	1980	1,134	2,869	9,267	32,707	14,480	48	7	3	0	60,515
5	1981	316	532	3,269	12,178	17,722	279	11	3	1	34,311
6	1982	149	253	1,510	6,949	18,822	1,515	16	3	1	29,218
7	1983	160	158	762	4,103	15,585	3,297	24	3	1	24,093
8	1984	176	93	388	2,500	10,902	7,067	32	6	1	21,165
9	1985	32	36	170	1,400	7,279	9,232	239	5	1	18,394
10	1986	38	28	103	849	5,328	9,631	708	4	1	16,690
11	1987	16	15	46	489	3,836	9,230	1,436	2	1	15,071
12	1988	13	11	21	241	2,865	8,641	2,229	13	0	14,034
13	1989	4	3	9	127	2,213	7,739	3,076	91	0	13,262
14	1990	2	3	3	59	1,735	6,921	3,740	230	0	12,693
15	1991	2	1	3	37	1,348	6,436	3,908	395	6	12,136
16	1992	2	1	2	20	983	5565	4335	430	32	11,370
17	1993	1	0	3	8	853	5175	3776	1022	42	10,880
18	1994	0	0	0	3	682	4,658	3,280	1,233	66	9,922

Table B-3. Progression of 1977 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1977-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1978	31,954	22,931	15,400	3,661	64	21	3	0	0	74,034
2	1979	3,728	18,086	31,420	12,199	250	30	3	1	0	65,717
3	1980	2,385	6,563	16,488	31,598	3,551	30	5	2	0	60,622
4	1981	1,032	2,110	7,360	27,292	13,783	49	9	2	1	51,638
5	1982	514	559	3,294	12,561	18,759	156	15	2	1	35,861
6	1983	364	301	1,610	7,926	20,080	1,485	20	2	1	31,789
7	1984	291	147	800	4,452	15,130	4,155	13	0	1	24,989
8	1985	58	55	388	2,672	11,253	7,987	25	2	0	22,440
9	1986	55	38	212	1,579	8,381	9,360	185	1	1	19,812
10	1987	15	16	109	936	6,097	9,973	645	3	1	17,795
11	1988	23	8	34	437	4,406	9,516	1,379	5	0	15,808
12	1989	8	1	19	221	3,326	8,851	2,303	18	0	14,747
13	1990	4	3	9	101	2,620	7,970	3,204	68	0	13,979
14	1991	5	2	9	56	2,006	7,496	3,736	194	0	13,504
15	1992	1	1	4	31	1386	6596	4304	222	7	12,552
16	1993	0	2	4	23	1176	6117	4287	325	13	11,947
17	1994	2	0	3	14	964	5,637	3,893	917	28	11,458

Table B-4. Progression of 1978 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1978-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1979	34,727	20,113	14,561	2,862	46	18	5	1	2	72,335
2	1980	7,387	19,953	26,068	12,226	229	30	7	1	1	65,902
3	1981	2,186	5,007	17,050	31,772	3,459	32	10	0	0	59,516
4	1982	1,021	1,828	8,561	26,234	12,646	72	12	2	1	50,377
5	1983	630	511	3,037	13,171	18,810	173	19	2	1	36,354
6	1984	406	177	1,369	7,874	19,126	1,595	17	2	1	30,567
7	1985	76	68	644	4,462	14,697	4,828	20	3	0	24,798
8	1986	41	36	343	2,820	11,679	7,350	25	3	0	22,297
9	1987	33	21	160	1,691	8,601	8,807	124	5	0	19,442
10	1988	34	11	72	885	6,448	9,321	563	5	0	17,339
11	1989	7	5	30	368	4,823	9,049	1,269	6	1	15,558
12	1990	1	4	9	151	3,753	8,604	2,076	14	1	14,613
13	1991	7	3	6	82	2,854	8,148	2,827	62	1	13,990
14	1992	2	3	2	36	2001	7323	3566	67	2	13,002
15	1993	1	3	1	26	1637	6686	3751	135	3	12,243
16	1994	0	2	2	17	1,321	6,197	3,738	353	4	11,634

Table B-5. Progression of 1979 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1979-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1980	38,023	22,215	15,091	2,936	45	9	2	1	0	78,322
2	1981	3,982	17,958	36,040	14,396	250	21	6	2	0	72,655
3	1982	2,139	5,028	24,829	29,702	3,434	51	13	1	1	65,198
4	1983	1,226	1,885	9,707	29,710	12,820	61	12	3	0	55,424
5	1984	665	335	2,630	13,942	18,576	147	14	3	2	36,314
6	1985	93	108	1,088	7,731	19,001	2,505	12	2	2	30,542
7	1986	77	57	499	4,698	14,886	4,511	8	2	2	24,740
8	1987	37	28	250	2,951	11,839	7,125	19	4	1	22,254
9	1988	33	14	88	1,496	8,872	8,491	141	2	1	19,138
10	1989	9	11	52	785	6,821	8,938	633	2	1	17,252
11	1990	5	3	15	294	5,186	8,819	1,275	6	4	15,607
12	1991	4	2	11	121	3,885	8,605	2,079	14	3	14,724
13	1992	1	1	6	49	2770	7811	2844	12	4	13,498
14	1993	2	0	0	30	2249	7240	3156	52	4	12,733
15	1994	0	1	2	15	1,832	6,717	3,372	118	5	12,062

Table B-6. Progression of 1980 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1980-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1981	36,848	25,646	15,977	3,200	41	14	4	1	0	81,731
2	1982	4,455	18,579	40,285	13,352	244	50	6	2	0	76,973
3	1983	2,290	5,011	28,133	30,409	2,787	52	9	1	1	68,693
4	1984	1,112	1,395	11,404	30,199	12,636	53	6	0	1	56,806
5	1985	174	251	2,932	13,949	18,786	351	5	1	1	36,450
6	1986	101	84	1,057	8,252	18,666	1,942	6	2	1	30,111
7	1987	63	51	431	4,816	14,730	4,286	5	2	1	24,385
8	1988	42	27	183	2,579	12,118	6,717	18	0	0	21,684
9	1989	15	7	78	1,297	9,506	8,103	177	0	0	19,183
10	1990	6	1	24	696	7,339	8,719	617	3	1	17,406
11	1991	8	0	6	224	5,400	8,875	1,270	0	1	15,784
12	1992	6	3	4	78	3743	8299	2059	2	0	14,194
13	1993	0	0	2	52	3035	7770	2456	10	0	13,325
14	1994	0	1	2	27	2,366	7,092	2,822	31	0	12,341

Table B-7. Progression of 1981 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1981-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1982	29,911	20,480	15,503	2,983	63	26	3	0	0	68,969
2	1983	4,259	16,039	34,738	13,263	148	26	2	0	0	68,475
3	1984	1,867	3,234	27,087	25,521	3,049	37	9	0	1	60,805
4	1985	398	1,017	9,753	24,624	13,579	56	4	1	0	49,432
5	1986	168	181	2,399	14,096	16,884	216	4	0	3	33,951
6	1987	72	67	848	8,405	17,511	1,932	3	0	0	28,838
7	1988	57	34	298	4,304	14,606	3,634	4	1	1	22,939
8	1989	10	18	128	2,439	12,048	5,893	15	0	0	20,551
9	1990	9	3	53	1,295	9,653	7,034	144	2	1	18,194
10	1991	7	3	25	640	7,252	8,092	505	2	0	16,526
11	1992	3	3	7	177	4975	7977	1104	2	0	14,248
12	1993	1	1	10	88	3989	7567	1513	3	0	13,172
13	1994	0	3	2	50	3,083	7,161	1,931	15	0	12,245

Table B-8. Progression of 1982 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1982-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1983	25,741	20,660	17,706	2,921	56	28	4	0	0	67,116
2	1984	2,378	10,321	37,416	13,907	174	20	3	0	0	64,219
3	1985	689	2,211	22,560	28,452	4,764	37	6	4	0	58,723
4	1986	256	695	8,432	28,089	12,869	29	8	3	0	50,381
5	1987	95	112	2,007	14,160	17,127	192	6	1	0	33,700
6	1988	48	45	644	7,556	18,715	1,791	6	0	0	28,805
7	1989	23	25	228	3,967	14,789	3,716	10	0	0	22,758
8	1990	6	11	102	2,331	12,387	5,595	29	1	0	20,462
9	1991	5	8	48	1,209	9,632	7,202	125	0	2	18,231
10	1992	0	3	35	656	7337	7964	557	1	0	16,553
11	1993	2	2	6	155	5674	7563	894	2	0	14,298
12	1994	0	1	6	70	4,477	7,584	1,306	3	0	13,447

Table B-9. Progression of 1983 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1983-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1984	28,598	21,608	17,162	3,126	66	41	6	3	1	70,611
2	1985	1,919	10,657	37,971	14,428	429	36	4	1	2	65,447
3	1986	639	2,321	24,965	28,502	3,671	23	7	1	0	60,129
4	1987	250	684	9,167	29,438	12,314	28	3	1	1	51,886
5	1988	93	102	1,449	13,291	17,051	161	7	0	1	32,155
6	1989	24	43	496	7,528	17,863	1,702	6	0	1	27,663
7	1990	12	22	195	4,015	14,345	2,923	17	3	2	21,534
8	1991	9	10	87	2,268	12,086	5,005	12	0	2	19,479
9	1992	7	3	38	1281	9845	6315	145	0	1	17,635
10	1993	2	1	18	785	7960	6482	355	0	0	15,603
11	1994	0	2	3	130	6,115	6,968	650	0	0	13,868

Table B-10. Progression of 1984 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1984-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1985	32,878	25,979	12,088	3,214	66	31	7	1	0	74,264
2	1986	2,376	13,389	36,775	13,902	196	25	5	0	0	66,668
3	1987	613	2,591	26,408	27,939	2,776	23	5	0	1	60,356
4	1988	249	818	7,464	29,771	11,408	30	4	1	1	49,746
5	1989	50	105	1,613	15,198	15,432	173	4	1	0	32,576
6	1990	17	30	541	8,920	17,614	1,125	15	1	0	28,263
7	1991	9	19	205	4,614	14,767	2,336	9	1	0	21,960
8	1992	7	5	90	2844	13041	4006	7	0	0	20,000
9	1993	4	4	42	1840	11003	4748	63	0	0	17,704
10	1994	0	2	18	957	8,324	5,429	153	0	0	14,883

Table B-11. Progression of 1985 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1985-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1986	36,138	25,607	10,880	2,912	46	28	7	1	1	75,620
2	1987	2,697	15,798	36,213	13,238	200	17	2	0	0	68,165
3	1988	943	3,217	23,473	29,756	3,288	15	1	0	0	60,693
4	1989	241	856	8,512	30,806	10,123	27	2	0	0	50,567
5	1990	39	102	1,598	16,413	14,623	223	33	5	2	33,038
6	1991	20	41	573	9,196	17,452	975	10	2	1	28,270
7	1992	6	16	244	5405	14630	2092	5	2	0	22,400
8	1993	3	14	110	3793	13303	2984	8	1	0	20,216
9	1994	0	2	37	2,083	10,843	3,816	23	1	0	16,805

Table B-12. Progression of 1986 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1986-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1987	33,434	26,373	10,784	2,921	24	21	5	0	0	73,562
2	1988	3,326	21,746	28,198	14,359	225	19	2	0	0	67,875
3	1989	870	2,884	24,741	27,124	2,882	16	3	0	0	58,520
4	1990	190	791	8,102	31,160	9,042	102	22	7	1	49,417
5	1991	31	112	1,978	15,522	14,523	137	17	9	0	32,329
6	1992	18	47	635	9583	15925	1012	7	0	0	27,227
7	1993	7	19	275	6171	13197	1522	4	0	0	21,195
8	1994	6	8	135	3,955	12,487	2,504	4	0	0	19,099

Table B-13. Progression of 1987 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1987-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1988	44,708	20,796	10,352	3,660	40	13	3	2	0	79,574
2	1989	2,924	29,115	22,911	14,673	228	14	2	0	0	69,867
3	1990	768	3,221	28,346	27,055	3,010	52	23	6	2	62,483
4	1991	198	837	11,316	30,968	9,269	25	6	2	0	52,621
5	1992	37	123	2,294	17215	13258	108	2	0	0	33,037
6	1993	13	43	743	11742	14177	686	2	0	0	27,406
7	1994	7	10	299	6,629	12,563	1,174	2	0	0	20,684

Table B-14. Progression of 1988 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1988-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1989	45,840	19,680	9,325	2,611	36	14	0	1	0	77,507
2	1990	3,039	31,008	21,867	13,383	243	39	14	3	0	69,596
3	1991	844	3,425	33,172	22,508	2,834	35	16	0	2	62,836
4	1992	218	955	12,607	30096	7261	15	2	0	1	51,155
5	1993	30	127	2,677	17112	9332	42	3	1	0	29,324
6	1994	10	25	730	10,959	11,689	417	0	0	0	23,830

Table B-15. Progression of 1989 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1989-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1990	32,604	16,400	9,272	2,304	90	30	7	1	0	60,708
2	1991	2,476	22,453	19,340	11,274	159	17	2	2	0	55,723
3	1992	652	2,809	22,626	20648	1921	11	0	1	0	48,668
4	1993	195	764	10,303	25220	4301	7	0	0	0	40,790
5	1994	13	77	2,056	14,479	7,186	29	1	1	0	23,842

Table B-16. Progression of 1990 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1990-FY1994.

YOS	YEAR/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1	1991	28,803	18,032	10,142	2,283	38	20	3	0	1	59,322
2	1992	888	21,636	19,289	10453	232	12	3	0	0	52,513
3	1993	420	1,847	18,835	17375	1475	11	1	0	0	39,964
4	1994	132	519	8,335	23,150	3,832	10	0	0	0	35,978

Table B-17. Progression of 1991 Entry Cohort through the Force Structure.

Source: YAFS Reports, FY1991-FY1994.

APPENDIX C.

COHORT YEAR										
YOS	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2	86.8	86.1	88.7	88.8	91.1	92.8	94.2	99.3	95.7	92.7
3	69.5	77.4	80.0	81.9	82.3	83.2	84.0	88.2	87.5	85.2
4	59.9	64.9	68.8	69.7	69.6	70.8	69.5	71.7	75.1	73.5
5	31.8	32.9	39.0	48.4	50.3	46.4	44.6	49.2	50.2	45.5
6	25.0	27.7	33.2	42.9	42.3	39.0	36.8	41.8	42.9	39.2
7	19.3	21.9	27.4	33.8	34.3	31.6	29.8	33.3	33.9	30.5
8	17.9	20.4	24.0	30.3	30.8	28.4	26.5	29.8	30.5	27.6
9	16.7	17.6	20.9	26.8	26.9	24.4	23.5	26.4	27.2	25.0
10	14.7	16.0	19.0	24.0	24.0	22.0	21.3	24.0	24.7	22.1
11	13.7	14.5	17.1	21.4	21.5	19.9	19.3	20.7	21.3	19.6
12	12.8	13.7	15.9	19.9	20.2	18.8	17.4	19.1	20.0	
13	12.1	12.8	15.1	18.9	19.3	17.2	16.3	17.8		
14	11.5	12.2	14.4	18.2	18.0	16.3	15.1			
15	11.1	11.7	13.8	17.0	16.9	15.4				
16	10.7	11.3	12.9	16.1	16.1					
17	10.4	10.8	12.4	15.5						
18	10.1	10.4	11.3							
19	10.0	9.8								
20	9.5									

Table C-1. Continuation Percentage of Total Enlisted Force in YOS-1 Remaining on Active Duty at the end of each Year of Service.

COHORT YEAR							
YOS	1985	1986	1987	1988	1989	1990	1991
1	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2	89.8	90.1	92.3	87.8	89.8	91.8	88.5
3	81.3	80.3	79.6	78.5	81.1	80.2	67.4
4	67.0	66.9	67.2	66.1	66.0	67.2	60.6
5	43.9	43.7	43.9	41.5	37.8	39.3	
6	38.1	37.4	37.0	34.4	30.7		
7	29.6	29.6	28.8	26.0			
8	26.9	26.7	26.0				
9	23.8	22.2					
10	20.0						

Table C-1. (Continued).

Source: Cohort Data, Appendix B.

COHORT										
YOS	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1	89.32	92.26	95.76	94.97	95.98	96.19	96.03	95.58	95.56	95.48
2	75.81	82.71	83.92	81.05	81.09	79.83	82.32	80.41	78.07	77.28
3	41.72	48.10	51.93	41.98	40.76	49.12	51.63	52.98	43.39	46.47
4	16.88	21.64	21.95	20.36	22.69	23.16	24.51	22.62	18.64	19.48
5	7.81	10.42	12.10	12.24	11.55	10.04	9.30	8.15	6.61	5.14
6	4.17	5.72	6.91	7.51	6.74	4.60	4.41	3.67	2.73	2.17
7	3.80	4.37	5.20	5.95	3.95	3.13	2.71	2.02	1.45	1.23
8	3.51	4.00	4.67	3.47	2.82	2.09	1.69	1.07	0.80	0.73

Table C-2. Personnel in Paygrades E3 and below
as percent of E1 to E5.

COHORT							
YOS	1985	1986	1987	1988	1989	1990	1991
1	95.58	96.09	96.00	95.35	96.58	96.05	96.09
2	78.84	80.28	78.51	78.67	80.41	79.47	79.65
3	49.09	45.54	48.71	51.82	59.64	53.62	52.82
4	17.16	19.01	18.43	23.49	26.95	27.61	24.98
5	5.46	5.31	6.59	7.45	9.68	9.01	
6	2.17	2.32	2.67	2.99	3.27		
7	1.19	1.31	1.53	1.62			
8	0.64	0.74	0.90				

Table C-2. (Continued).

Source: Cohort Data, Appendix B.

COHORT										
YOS	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1	10.59	7.65	4.14	4.95	3.96	3.75	3.92	4.33	4.35	4.43
2	23.21	16.56	15.40	18.57	18.56	19.82	17.36	19.38	21.66	22.06
3	48.75	45.24	43.13	52.15	53.42	45.60	44.31	42.00	48.49	47.43
4	53.12	55.25	54.10	52.92	52.17	53.68	53.22	49.88	55.80	56.77
5	32.41	33.77	35.80	35.20	36.43	38.57	38.65	41.79	42.27	41.55
6	21.42	24.49	25.10	26.17	27.20	27.59	29.30	31.24	27.98	29.01
7	16.37	18.72	19.76	21.38	22.37	23.24	23.97	22.30	20.84	21.60
8	13.51	14.93	17.78	18.52	18.90	19.54	17.25	16.66	15.71	15.68

Table C-3. Personnel in Paygrade E4 as percent of E1 to E5.

COHORT							
YOS	1985	1986	1987	1988	1989	1990	1991
1	4.33	3.85	3.97	4.60	3.37	3.80	3.85
2	20.86	19.43	21.16	21.01	19.25	20.24	19.91
3	46.31	49.04	46.37	43.36	35.85	42.44	43.49
4	59.89	60.96	63.22	58.89	58.85	61.84	64.36
5	46.91	50.08	48.26	52.28	58.45	60.81	
6	32.89	33.71	36.57	43.95	46.81		
7	23.52	26.62	31.37	33.98			
8	17.79	22.02	23.84				

Table C-3. (Continued).

Source: Cohort Data, Appendix B.

COHORT										
YOS	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
1	0.08	0.09	0.10	0.09	0.06	0.06	0.05	0.09	0.08	0.09
2	0.98	0.72	0.68	0.38	0.35	0.34	0.32	0.22	0.27	0.66
3	9.52	6.66	4.95	5.86	5.82	5.27	4.06	5.02	8.12	6.11
4	30.00	23.11	23.95	26.72	25.15	23.16	22.27	27.50	25.56	23.75
5	59.78	55.81	52.10	52.57	52.02	51.39	52.05	50.06	51.12	53.31
6	74.41	69.79	67.99	66.31	66.06	67.81	66.29	65.09	69.29	68.83
7	79.83	76.91	75.04	72.67	73.68	73.63	73.32	75.68	77.71	77.17
8	82.98	81.07	77.54	78.00	78.28	78.38	81.06	82.28	83.49	83.58

Table C-4. Personnel in Paygrade E5 as percent of E1 to E5.

COHORT							
YOS	1985	1986	1987	1988	1989	1990	1991
1	0.09	0.06	0.03	0.05	0.05	0.15	0.06
2	0.29	0.29	0.33	0.33	0.35	0.29	0.44
3	4.60	5.42	4.93	4.82	4.51	3.95	3.69
4	22.95	20.03	18.35	17.63	14.20	10.55	10.65
5	47.63	44.62	45.15	40.26	31.87	30.18	
6	64.94	63.97	60.76	53.06	49.93		
7	75.29	72.07	67.10	64.40			
8	81.57	77.24	75.26				

Table C-4. (Continued).

Source: Cohort Data, Appendix B.

FY	Paygrade									Total Force	
	E-1	E-2	E-3	E-1 E-3	E-4	E-5	E-6	E-7	E-8		E-9
1975	29,892	72,715	80,862	183,469	93,261	79,368	65,929	31,728	8,210	3,556	465,522
1976	26,730	70,493	80,304	177,527	91,867	80,087	65,237	31,150	7,785	3,280	456,933
1977	43,642	56,695	83,519	183,856	87,972	82,868	64,640	30,382	8,371	3,482	461,571
1978	36,890	53,012	90,053	179,955	91,502	82,804	65,032	30,598	8,726	3,659	462,276
1979	41,133	46,987	86,994	175,114	95,341	79,069	65,012	30,266	8,345	3,353	456,500
1980	49,144	52,084	71,251	172,479	98,697	80,061	66,442	29,181	8,374	3,219	458,453
1981	44,514	51,534	81,884	177,932	99,550	82,435	66,304	30,826	8,607	3,435	469,089
1982	38,303	46,876	95,349	180,528	98,140	89,937	68,067	30,690	8,653	3,664	479,679
1983	34,890	44,679	96,505	176,074	105,810	98,589	70,257	30,534	9,047	3,821	494,132
1984	35,706	37,366	98,687	171,759	104,210	97,328	72,987	30,712	8,801	4,025	489,822
1985	36,371	40,416	87,821	164,608	102,605	102,389	77,912	32,572	9,703	4,461	494,250
1986	39,944	42,463	85,790	168,197	106,811	101,934	78,577	32,983	9,949	4,742	503,193
1987	37,352	45,773	86,505	169,630	107,729	102,081	81,646	33,192	10,236	4,547	509,061
1988	49,603	46,838	72,319	168,760	108,755	105,356	82,910	33,765	10,129	4,569	514,244
1989	50,037	52,758	68,161	170,956	107,356	104,142	82,649	34,166	10,240	4,747	514,256
1990	36,708	51,607	70,147	158,462	108,300	104,850	82,052	34,650	10,575	4,963	503,852
1991	32,434	44,952	76,931	154,317	101,090	106,015	83,968	33,803	10,685	4,973	494,851
1992	30,665	36,952	66,871	134,488	100,284	101,180	81,763	35,806	9,709	4,739	467,969
1993	30,257	40,053	57,197	127,507	92,836	94,880	77,151	32,891	9,344	4,550	439,159
1994	22,712	37,567	58,472	118,751	82,882	89,782	72,826	29,949	8,687	3,905	406,782

Table C-5. Distribution of Total Navy Enlisted Force by Paygrade.

Source: YAFS Reports, FY1975-FY1994.

FY/PG	E1-E3	E-4	E-5	E-6	E-7	E-8	E-9
1975	39	20	17	14	7	2	1
1976	39	20	18	14	7	2	1
1977	40	19	18	14	7	2	1
1978	39	20	18	14	7	2	1
1979	38	21	17	14	7	2	1
1980	38	22	17	14	6	2	1
1981	38	21	18	14	7	2	1
1982	38	20	19	14	6	2	1
1983	36	21	20	14	6	2	1
1984	35	21	20	15	6	2	1
1985	33	21	21	16	7	2	1
1986	33	21	20	16	7	2	1
1987	33	21	20	16	7	2	1
1988	33	21	20	16	7	2	1
1989	33	21	20	16	7	2	1
1990	31	21	21	16	7	2	1
1991	31	20	21	17	7	2	1
1992	29	21	22	17	8	2	1
1993	29	21	22	18	7	2	1
1994	29	20	22	18	7	2	1

Table C-6. Distribution of Total Enlisted Force by Paygrade (in percent).
Source: YAFS Reports,
FY1975-FY1994.

FY	Paygrade									Force Avg
	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	
1975	1.21	1.54	2.63	3.59	7.21	13.42	17.65	19.83	22.39	6.35
1976	1.22	1.50	2.44	3.56	7.12	13.09	17.53	19.78	22.27	6.26
1977	1.12	1.62	2.42	3.69	6.89	12.75	17.52	19.79	22.54	6.15
1978	1.19	1.73	2.42	3.71	6.56	12.58	17.22	19.84	22.87	6.14
1979	1.24	1.82	2.54	3.77	6.57	12.61	17.31	20.28	23.45	6.20
1980	1.34	1.84	2.53	3.76	6.46	12.48	17.19	20.40	23.84	6.13
1981	1.31	1.74	2.46	3.76	6.49	12.23	17.03	20.52	24.04	6.08
1982	1.40	1.83	2.54	3.88	6.58	12.32	17.06	20.59	24.27	6.22
1983	1.57	1.83	2.57	3.99	6.76	12.45	17.08	20.91	24.58	6.38
1984	1.54	1.68	2.57	4.08	6.74	12.25	16.93	21.09	24.96	6.43
1985	1.20	1.52	2.59	4.06	6.71	11.94	16.78	20.81	24.80	6.53
1986	1.20	1.54	2.59	4.13	6.94	12.03	16.71	20.63	24.77	6.56
1987	1.19	1.55	2.58	4.17	7.11	12.15	16.71	20.57	24.80	6.65
1988	1.17	1.69	2.55	4.04	7.21	12.34	16.72	20.44	24.59	6.67
1989	1.13	1.73	2.63	4.06	7.43	12.44	16.50	19.98	24.09	6.70
1990	1.16	1.79	2.64	4.11	7.62	12.69	16.41	19.78	23.83	6.95
1991	1.17	1.73	2.73	4.20	7.72	12.97	16.44	19.81	23.57	7.16
1992	1.11	1.84	2.76	4.32	7.91	13.23	16.54	20.26	23.56	7.48
1993	1.09	1.73	2.77	4.61	8.39	13.62	16.71	20.12	23.75	7.70
1994	1.09	1.66	2.63	4.76	8.71	13.79	16.83	19.95	24.01	7.85
Paygrade Avg.	1.23	1.70	2.58	4.01	7.16	12.67	16.94	20.27	23.85	6.63

Table C-7. Average Years of Service for each Paygrade by Fiscal Year.

Source: YAFS Reports, FY1975-1994.

FY	LOS 1-4	LOS 5-30	TOTAL
1975	273,607	191,915	465,522
1976	265,218	191,715	456,933
1977	269,552	192,019	461,571
1978	271,946	190,330	462,276
1979	263,878	192,622	456,500
1980	265,361	193,092	458,453
1981	265,540	203,549	469,089
1982	261,517	218,162	479,679
1983	259,708	234,424	494,132
1984	252,441	237,381	489,822
1985	247,866	246,384	494,250
1986	252,798	250,395	503,193
1987	253,969	255,092	509,061
1988	257,888	256,356	514,244
1989	256,461	257,795	514,256
1990	242,204	261,648	503,852
1991	230,502	264,349	494,851
1992	203,148	264,821	467,969
1993	180,254	258,905	439,159
1994	163,779	243,003	406,782

Table C-8. Distribution of Total Non-Career
and Career Enlisted Force.
Source: YAFS Reports, FY1975-FY1994

FY	LOS 1-4	LOS 5-30
1975	58.8	41.2
1976	58.0	42.0
1977	58.4	41.6
1978	58.8	41.2
1979	57.8	42.2
1980	57.9	42.1
1981	56.6	43.4
1982	54.5	45.5
1983	52.6	47.4
1984	51.5	48.5
1985	50.1	49.9
1986	50.2	49.8
1987	49.9	50.1
1988	50.1	49.9
1989	49.9	50.1
1990	48.1	51.9
1991	46.6	53.4
1992	43.4	56.6
1993	41.0	59.0
1994	40.3	59.7

Table C-9. Percentage Distribution of Total Non-Career and Career Enlisted Force.
Source: YAFS Reports, FY1975-FY1994.

LOS/FY	1-4	5-10	11-20	21-31
1975	58.77	18.66	19.97	2.60
1976	58.04	20.30	19.09	2.57
1977	58.40	21.49	17.60	2.51
1978	58.83	21.65	16.93	2.60
1979	57.80	22.59	17.01	2.60
1980	57.88	22.99	16.42	2.71
1981	56.61	24.44	16.08	2.87
1982	54.52	26.18	16.27	3.03
1983	52.56	27.76	16.58	3.10
1984	51.54	28.85	16.44	3.17
1985	50.15	29.60	16.90	3.34
1986	50.24	29.33	17.32	3.11
1987	49.89	28.76	18.46	2.89
1988	50.15	27.63	19.33	2.90
1989	49.87	27.22	20.25	2.66
1990	48.07	27.57	21.72	2.64
1991	46.58	27.64	23.06	2.72
1992	43.41	29.24	24.29	3.05
1993	41.05	29.93	26.08	2.94
1994	40.26	29.29	28.00	2.45

Table C-10. Percent Distribution of
Enlisted Force by
Career/Non-Career Status.
Source: YAFS Reports,
FY1975-1994.

FY/LOS	1-6	7-10	11-14	15-19	20	21-31
1975	67.70	9.73	7.28	10.93	1.76	2.60
1976	67.82	10.52	7.08	10.72	1.29	2.57
1977	68.26	11.63	6.63	9.51	1.46	2.51
1978	68.51	11.97	6.73	8.82	1.38	2.60
1979	68.46	11.94	6.87	8.43	1.70	2.60
1980	68.92	11.95	7.11	7.73	1.58	2.71
1981	68.96	12.09	7.54	7.06	1.47	2.87
1982	68.09	12.62	7.94	7.10	1.22	3.03
1983	66.35	13.97	8.24	7.10	1.24	3.10
1984	65.19	15.20	8.32	6.76	1.36	3.17
1985	63.70	16.05	8.66	7.15	1.09	3.34
1986	62.97	16.60	8.66	7.65	1.01	3.11
1987	62.17	16.48	9.26	7.91	1.29	2.89
1988	62.00	15.77	9.95	8.03	1.35	2.90
1989	61.58	15.51	10.50	8.49	1.26	2.66
1990	60.24	15.40	11.29	8.95	1.48	2.64
1991	58.83	15.40	11.72	9.69	1.65	2.72
1992	56.29	16.37	11.74	10.78	1.77	3.05
1993	53.96	17.01	12.19	12.05	1.84	2.94
1994	51.98	17.57	12.76	13.14	2.10	2.45

Table C-11. Percent Distribution of Enlisted Force by Term of Service.
Source: YAFS Reports, FY1975-1994.

FY/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1975	1.21	1.54	2.63	3.59	7.21	13.42	17.65	19.83	22.39	6.35
1976	1.22	1.50	2.44	3.56	7.12	13.09	17.53	19.78	22.27	6.26
1977	1.12	1.62	2.42	3.69	6.89	12.75	17.52	19.79	22.54	6.15
1978	1.19	1.73	2.42	3.71	6.56	12.58	17.22	19.84	22.87	6.14
1979	1.24	1.82	2.54	3.77	6.57	12.61	17.31	20.28	23.45	6.20
1980	1.34	1.84	2.53	3.76	6.46	12.48	17.19	20.40	23.84	6.13
1981	1.31	1.74	2.46	3.76	6.49	12.23	17.03	20.52	24.04	6.08
1982	1.40	1.83	2.54	3.88	6.58	12.32	17.06	20.59	24.27	6.22
1983	1.57	1.83	2.57	3.99	6.76	12.45	17.08	20.91	24.58	6.38
1984	1.54	1.68	2.57	4.08	6.74	12.25	16.93	21.09	24.96	6.43
1985	1.20	1.52	2.59	4.06	6.71	11.94	16.78	20.81	24.80	6.53
1986	1.20	1.54	2.59	4.13	6.94	12.03	16.71	20.63	24.77	6.56
1987	1.19	1.55	2.58	4.17	7.11	12.15	16.71	20.57	24.80	6.65
1988	1.17	1.69	2.55	4.04	7.21	12.34	16.72	20.44	24.59	6.67
1989	1.13	1.73	2.63	4.06	7.43	12.44	16.50	19.98	24.09	6.70
1990	1.16	1.79	2.64	4.11	7.62	12.69	16.41	19.78	23.83	6.95
1991	1.17	1.73	2.73	4.20	7.72	12.97	16.44	19.81	23.57	7.16
1992	1.11	1.84	2.76	4.32	7.91	13.23	16.54	20.26	23.56	7.48
1993	1.09	1.73	2.77	4.61	8.39	13.62	16.71	20.12	23.75	7.70
1994	1.09	1.66	2.63	4.76	8.71	13.79	16.83	19.95	24.01	7.85
1995	1.14	1.74	2.72	4.54	8.01	12.88	16.35	20.30	24.59	7.47
1996	1.14	1.74	2.73	4.58	8.10	12.90	16.29	20.30	24.66	7.55
1997	1.13	1.75	2.75	4.63	8.18	12.92	16.23	20.30	24.73	7.63
1998	1.12	1.75	2.76	4.68	8.26	12.94	16.18	20.31	24.80	7.71
1999	1.11	1.76	2.77	4.73	8.34	12.96	16.12	20.31	24.87	7.79
2000	1.10	1.76	2.79	4.78	8.42	12.98	16.06	20.31	24.94	7.87

Table C-12. Linear Projection of Average Length of Service using Averages computed for FY1975 to FY1994 (Table C-7).

FY/PG	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	TOTAL
1985	1.20	1.52	2.59	4.06	6.71	11.94	16.78	20.81	24.80	6.53
1986	1.20	1.54	2.59	4.13	6.94	12.03	16.71	20.63	24.77	6.56
1987	1.19	1.55	2.58	4.17	7.11	12.15	16.71	20.57	24.80	6.65
1988	1.17	1.69	2.55	4.04	7.21	12.34	16.72	20.44	24.59	6.67
1989	1.13	1.73	2.63	4.06	7.43	12.44	16.50	19.98	24.09	6.70
1990	1.16	1.79	2.64	4.11	7.62	12.69	16.41	19.78	23.83	6.95
1991	1.17	1.73	2.73	4.20	7.72	12.97	16.44	19.81	23.57	7.16
1992	1.11	1.84	2.76	4.32	7.91	13.23	16.54	20.26	23.56	7.48
1993	1.09	1.73	2.77	4.61	8.39	13.62	16.71	20.12	23.75	7.70
1994	1.09	1.66	2.63	4.76	8.71	13.79	16.83	19.95	24.01	7.85
1995	1.08	1.82	2.75	4.61	8.70	13.89	16.59	19.74	23.39	7.88
1996	1.07	1.85	2.77	4.68	8.91	14.11	16.58	19.65	23.24	8.04
1997	1.05	1.88	2.79	4.74	9.11	14.32	16.57	19.56	23.10	8.20
1998	1.04	1.90	2.81	4.81	9.32	14.53	16.57	19.47	22.96	8.35
1999	1.03	1.93	2.82	4.88	9.52	14.75	16.56	19.38	22.81	8.51
2000	1.01	1.96	2.84	4.94	9.73	14.96	16.55	19.28	22.67	8.66

Table C-13. Linear Projection of Average Length of Service using Averages computed for FY1985 to FY1994 (Table C-7).

APPENDIX D. COMPARISON STATISTICS

FY	Unemployment Rates ¹	E-1 Base Pay ¹	# Ships ²	ACCESSIONS ³	LOSSES ³
1975	8.3	344			
1976	7.6	361			
1977	6.9	374	470	107,093	102,849
1978	6.0	398	452	85,530	90,270
1979	5.8	419	455	78,988	87,017
1980	7.1	449	462	90,445	88,300
1981	7.5	501	468	96,436	86,990
1982	9.5	547	487	81,816	75,404
1983	9.5	574	506	77,677	65,769
1984	7.4	596	526	78,583	70,585
1985	7.2	620	542	75,931	73,887
1986	7.0	639	555	81,221	74,176
1987	6.2	658	568	75,894	74,820
1988	5.5	671	570	82,849	79,948
1989	5.3	684	568	84,821	80,255
1990	5.5	699	551	68,425	73,510
1991	6.7	710	528	55,752	66,504
1992	7.4	752	456	45,745	71,988
1993	6.8	769	438	52,827	77,672
1994			413	38,625	74,436

Table D-1. Comparison Statistics

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1974-1994. Bureau of the Census,
U.S. Dept. of Commerce.

2 Manpower Requirements Report. 1974-1994. Office of
the Assistant Secretary of Defense(Manpower,
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3 Bureau of Naval Personnel Statistics. Annual
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APPENDIX E.

The steady-state distribution of the force (F) and the requirement for new enlistments (E) is derived as follows.

Let c_t be the continuation rate at year of service (YOS) t.

Then the survival from the initial entry point to year t is

$s_t = \prod_{j=1}^t c_j$. The total steady-state force is

$F = E + s_1 E + \dots + s_T E = (1 + \sum_{t=1}^T s_t) E$. The steady-state enlistment

(or accession) requirement is therefore $E = F / (1 + \sum_{t=1}^T s_t)$. [Ref. 19]

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