



Report of the Admission of Women to the U. S. Military Academy

Project Athena II

1 June 1978

Report of the Admission of
Women to the U.S. Military Academy
(Project Athena II)

by

Major Alan G. Vitters
U.S. Military Academy

NOTE: Any conclusions in this report are not to be construed as official U.S. Military Academy or Department of the Army positions unless so designated by other authorized documents.

DISTRIBUTION: This document is prepared for official purposes only. Its contents may not be reproduced or distributed (in whole or in part) without specific permission of the Superintendent, U.S. Military, in each instance.

Department of Behavioral Sciences and Leadership
United States Military Academy
West Point, New York 10996

1 June 1978

TABLE OF CONTENTS

	<u>Page</u>
LIST OF ILLUSTRATIONS.....	iii
LIST OF TABLES	iv
LIST OF INCLOSURES	vi
ACKNOWLEDGEMENTS	vii
ABSTRACT	viii
EXECUTIVE SUMMARY	ix
Part I. BACKGROUND. THE INTELLECTUAL BASES FOR THE ROLE OF WOMEN IN THE MILITARY	1
Part II. METHOD. THE CONCEPTUAL DESIGN OF PROJECT ATHENA	12
Part III. RESULTS	16
A. Entrance Characteristics. Comparisons of the Classes of 1980 and 1981 on Selected Measures	16
B. The Second Year of Coeducation - the Classes of 1980 and 1981	27
1. The Academic Experience	
2. The Physical Training Experience	
3. Attrition - An Analysis Overtime	
4. Satisfaction With Cadet Life	
5. The Experience of Women Cadets	
6. The Problem of Organizational Romance/(A Conceptual Model)	
7. The Military Training Experience	
8. Athletics - Womens' Sports	
9. Leadership Ratings	
10. Branch Preference of Class of 1980 Women	

	<u>Page</u>
C. The Second Year of Coeducation - the U.S. Military Academy	74
1. The Philosophy Toward Integration	
2. Women Faculty and Administration	
3. Approaches to Educational Awareness	
Part IV. PRELIMINARY CONCLUSIONS ON COEDUCATION AT WEST POINT AND SOME RECOMMENDATIONS FOR THE FUTURE	84
BIBLIOGRAPHY.....	86
INCLOSURES	

LIST OF ILLUSTRATIONS

FIGURE		<u>PAGE</u>
1.	USMA Systems Model.....	13
2.	Average Weekly % of Men and Women Reporting to Reconditioning in Lieu of Morning Reveille Exercise	38
PHOTOGRAPHS		
1.	A New Perspective in the Classroom	30
2.	The Physical Training Experience - The Horizontal Ladder	33
3.	Present-Arms: Inspection-in-Ranks	44
4.	The Military Training Experience - Weapons Firing	54
5.	The Rope Drop - RECONDO Confidence Building	55
6.	Every Cadet an Athlete - Women's Basketball	68
7.	Looking to the Future	83

LIST OF TABLES

TABLE	<u>PAGE</u>
1. Applicant Profile by Class	18
2. Entrance Characteristics by Class	20
3. Entrance Characteristics by Class (ABBR)	21
4. Comparison of AWS Scores for Men and Women at Several Institutions	23
5. Sex-Role Attitudes of Cadets and Army Personnel	24
6. Life-Style Preferences (in %)	26
7. First Semester Academic Attainments - Classes of 1980/1981	28
8. Physical Performance Data - Classes of 1980/1981	34
9. Physical Performance Data - Classes of 1980/1981 (II)	36
10. Attrition Rates of Male and Female Cadets - Classes of 1980/1981	40
11. Satisfaction of Cadets in the Class of 1980	43
12. Important Categories of Behavior in the Impact and Management of Organizational Romance	51
13. Training Results - Cadet Field Training	57
14. Training Results - Cadet Field Training II	58
15. Weapons Training - 1977 - Cadet Field Training ...	59
16. Injury/Illness Rate - Cadet Field Training	61

LIST OF TABLES (cont'd)

TABLE		<u>PAGE</u>
17.	Varsity Sport and Type Participation	67
18.	Specialty Selection Survey - Class of 1980 Women	73
19.	Assignment of Women to USMA	81

LIST OF INCLOSURES

INCLOSURE

1. The Attitude Toward Women Scale (AWS)
2. The Attitude Toward Women in the Army Scale
3. Third Class Cadet Field Training - 1977
4. Leaderprep (AY 77-78)
5. Women at West Point Cadet Workshop
6. Senior Management Conference on Leadership of an Integrated Army
7. U.S. Military Academy Staff Directory

ACKNOWLEDGEMENTS

The author would like to acknowledge the contribution made to Project Athena by Dr. Robert Priest (USMA), Dr Robert W. Rice and Miss Lisa S. Richer (SUNY - Buffalo), Lieutenant Colonel Howard Prince, Major Robert Knapp, Major Sam Brooks, Mrs. Sue Peterson, Captain Teresa Rhone, Major Randy Rigby, and Major Mary Willis. I am especially grateful to Colonel Harry A. Buckley who originally conceived of this project and provided the early impetus for it to be conducted. In addition, I acknowledge the contribution made to Athena by Dr. Jack Hicks (ARI) and Major Jerome Adams who will continue this project into the future. I am indebted to SP4 Wendy Angleman, Marie Coluccio, Paul Hirth, and Mike Orban for the countless hours of data analysis and typing support they have provided. I wish to especially thank Brigadier General Charles Bagnol (Deputy Superintendent), Brigadier General Frederick A. Smith, Jr. (Academic Dean), Brigadier General John C. Bard (Commandant), Lieutenant Colonel George Waters, Colonel James L. Anderson, and Brigadier General Richard Scholtes of the Military Academy and Colonel William Maus of the Army Research Institute for jointly cooperating in this research effort. Finally, my appreciation to Lieutenant General Andrew J. Goodpaster (USMA Superintendent) and Lieutenant General Dewitt C. Smith (Army DCSPER) who provided institutional support for research to be conducted.

The author is most grateful to the men and women of the Corps of Cadets who are West Point and who have made this study possible.

Abstract

Report on the Admission of Women to the U.S. Military Academy (Project Athena II)

The U.S. Military Academy admitted its first women cadets in July 1976. This report provides a comprehensive, systematic update on an analysis of coeducation from the period June 1977 to April 1978. Included are summaries of individual research projects conducted to understand and evaluate specific aspects of the coeducation process.

The report is organized in terms of topics of inquiry. Selection of these topics was guided by the overall purpose of Project Athena - to study coeducation at West Point by analyzing the impact of coeducation on cadets and on the institution. Among these topics are analyses of: characteristics of entering classes; academic, physical, and military training performance; resignation rates over time; the assignment of women to the staff and faculty; and approaches toward educational awareness on the issue.

Conclusions and recommendations are offered in the report, with evidence that coeducation is an evolving phenomenon at the Academy and is acquiring a health and strength that augurs its well-being.

Executive Summary

Project Athena was first conceived in December 1975, seven months prior to the admission of women to the U.S. Military Academy. Researchers from the Academy and from the Army Research Institute are monitoring coeducation and exchanging information on the topic with the external military and academic communities. The project is one of several presently underway, or recently concluded in the Army to examine the effect of assigning women to previously all-male units and to non-traditional duty assignments.

Segments of the report taken in isolation would suggest that coeducation at West Point is either without problems or without solutions. Neither is felt to be the case. It is the intention of the report to recognize both the existence of problems and the feasibility of solutions. In general, there is considerable evidence of progress in most areas analyzed in the report. There is also room for improvement in most areas. West Point is committed to learning as it goes in this important area.

Data for this report have derived from surveys, observation, and interviews of cadets and officers and from monitoring of official and unofficial communications on the topic. The report analyzes coeducation over the period June 1977-April 1978. What follows is a brief summary of the findings.

The classes of 1980 and 1981 were compared on a series of "class characteristics" at entrance. Results indicated that the classes were highly similar in terms of abilities, interests, and attitudes. Sex differences noted in the class of 1980 last year, were also found in the class of 1981 this year. Men and women differed significantly in physical aptitude, in attitudes toward appropriate roles for women in society - and in the Army, and in personal life-style preferences.

During Cadet Basic Training (July-August), women in the class of 1981 lost less training time due to minor injuries than women in the class of 1980. This could be attributed to differences in physical aptitude (class of '81 women have greater physical aptitude) and/or to modifications made to the physical training program to more effectively develop all new cadets this past summer. The voluntary resignation rate of both men and women in the class of 1981 was less than that of the class of 1980. The attrition rate of women in summer training (CBT) last year was 16 percent. This summer, it was 10 percent.

During Cadet Field Training (July-August) at Camp Buckner, men and women of the Class of 1980 performed similarly in most areas of military training. These areas included weapons firing, land navigation, communications, bridge building, and other military training skills. Women tended to experience difficulty on those aspects of military training requiring exceptional physical strength and/or endurance.

Similar to the previous summer, women tended to lose more training time due to minor injuries and also experienced discomfort from feminine-hygiene related problems in the field. Separate billeting (necessitated by the design of existing structures) also created problems for women serving in leadership positions.

During the academic year (September-June) comparisons were made between men and women in the classes of 1980/1981 in academics, leadership ratings, and in resignation rates. This year, (AY 77-78) women in both classes have performed similarly to men in all academic course areas. The attrition rate of both men and women in the class of 1981 is less than the attrition experienced last year at a similar point in time by the class of 1980. As of May 1978, the attrition rate of women in the class of 1981 is 21.1 percent, in comparison to 19.7 percent of the men. The attrition rate of women in the class of 1980 is 33.6 percent, in comparison to 30.4 percent of the men. In leadership ratings, men and women in the class of 1981 have been evaluated similarly by all categories of raters. Women in the class of 1980 continue to be evaluated significantly lower by upperclass cadets, but similarly by cadets and officers in the chain of command.

There has been a marked improvement in the climate surrounding coeducation at West Point. Evidence of this exists in objective reports, such as those cited above as well as in subjective analyses. Women are becoming more assertive and effective in managing their

relationships with other cadets. However, the "skewed gender distribution" which places women in the minority (a ratio of approximately 25 men for each woman) insures, to a degree, a built-in lack of male-female interaction with one another. Although men's attitudes toward appropriate roles for women in society tend to be traditional and relatively fixed, stereotypic attitudes and expectations toward women's abilities are giving way to a recognition of the talents and abilities of individual women cadets know.

A survey of cadets' attitudes toward cadet life revealed that cadets of both sexes are most satisfied with billeting, recreational facilities, intramurals, and relations with officers while being most dissatisfied with dating opportunities, privileges, and social activities.

West Point has assigned a greater number of women (military and civilian) to the staff and faculty. In addition, the Academy has developed and conducted a series of human relations workshops for both cadet and officer audiences. In April, West Point's senior leaders participated in a 4-hour workshop on the topic of the leadership of an integrated Army. The workshop combined lecture and experiential methods and was designed: to provide information on the integration of women in the profession, to gain top leaders' support for actions to facilitate integration and to evaluate USMA's role in the development of leaders for an integrated Army.

In conclusion, it appears that coeducation is an evolving phenomenon at the Academy and is acquiring a health and strength that augurs its well-being. In the words of one upperclass cadet, "the classes of 1978 and 1979 see the women as women. The classes of 1980 and 1981 see them as classmates."

Report on the Admission of Women to the U.S. Military Academy
(Project Athena II)

I. Background. The Intellectual Bases for the Role of Women in the Military.

The purpose of this chapter is to briefly outline the intellectual bases for the role of women in the military. More specifically, this chapter will focus on those societal/organizational forces which have impacted and continue to impact on the sex composition of the U.S. Army.

In a recent Brookings Institution report, Women and the Military, Martin Binkin and Shirley J. Bach have written:

"In many ways, the character and composition of a nation's military system mirror the society that it is established to protect and defend. Thus it comes as no surprise that the armed forces of the United States should now face a period of great uncertainty, at once under pressure to remain apace of the fundamental changes taking place in American society but at the same time understandably cautious about breaking with deeply rooted military traditions. Vividly illustrating this dilemma is the controversial question of the role of women in the changing military establishment.

Although, since the turn of the century, women have served intermittently in the armed forces of the United States, with the exception of the Second World War their participation has been relatively restricted. From the mid-forties to the early seventies they constituted less than 2 percent of total military strength and were confined largely to health care and administrative

occupations. The draft provided an abundant source of manpower and defense planners had little incentive to attract female recruits. Traditional attitudes as to women's "proper place" persisted, and there was little agitation for change. In short, women's status in the military was not a live issue." ¹

That state of affairs did not last, however. In the decade of the 1970's, a number of forces have been at work to influence the number and percent of women in the military. These forces can be viewed in terms of societal trends and organizational realities.

The number of American women who work outside their homes has been rising since 1947. But during the last two years, and especially in 1976, women have entered the job market at a pace called "extraordinary" by Alan Greenspan, past chairman of the President's Council of Economic Advisors. Eli Ginzberg, a Columbia University economist, calls the flood of women into the work force "the single most outstanding phenomena of our century." ²

The roots of the expanding female work force began in the 1960's with the economic liberation of young wives which was aided by effective birth control methods and spurred by inflation. Inflation has influenced the decision of many women, both single and married, to enter the labor force to maintain the life-style they have grown

accustomed to living. In addition, other significant factors have been a rising divorce rate; the level of husbands earnings; availability of child-care facilities; an increasing number of female college graduates who want careers; the psychological climate induced by publicity over the women's movement that makes it more socially acceptable for young mothers to work and has tended to de-value the role of housewife; and an increasing number of counseling centers that help prepare women for jobs.³

In addition to these general societal changes, a series of legislative and judicial actions by the Congress and the courts reflect a realization of the productive qualities of women apart from their historically perceived place in the home. The armed services, not oblivious to these changes, have in the last two years opened many opportunities to women which heretofore were restricted to men.

In spite of the measures taken to eliminate many of the distinctions between servicemen and servicewomen, there remain a considerable number of statutes and regulations that continue to differentiate between men and women. These statutes may well be discriminatory in nature. Some of these differentiations, it is argued, are based on "military necessity" and are rightfully required in order to maintain a necessary level of combat readiness. Other distinctions, however, are being eliminated as they are based on

outmoded stereotyped reasoning and serve no purpose other than to relegate women to the military background.⁴

The difficulty in determining which military regulations and policies are discriminatory has been complicated by two developments. The first was the passage of the Equal Rights Amendment (ERA) by Congress which has been submitted to the States for ratification. The amendment, if ratified, will remove sex as a factor in determining the legal rights of men and women. The second development was the supreme Court's decision in *Frontiero v. Richardson* in which the Court split evenly on the issue of whether sex is a suspect classification. A plurality held that a statutory classification based on sex was inherently suspect and must be subjected to strict judicial scrutiny. Because this issue remains unresolved, it is necessary to examine those areas of the military which retain distinctions between men and women under a variety of standards in order to determine the present and future legal effect of such classifications.⁵

As a prologue to the examination of questionable military statutes and regulations, the constitutional and legislative routes that are currently used to attack sex discriminatory action on the part of the federal government and private employers must be considered. On the legislative side, Title VII of the 1964 Civil

Rights Act was prelude to ERA. Although Title VII, and its enforcement arm, the Equal Employment Opportunity Commission (EEOC), are not considered to be applicable to the uniformed members of the military departments, the methodology and philosophy of Title VII are instructive in discovering and eliminating the discriminative features found in the armed forces. Finally, the ERA impacts on the potential limits of absolute equality of the sexes and its possible effect on the military remains subject to debate.

Paralleling the uncertainties of these social and legal changes of the last decade, the Army itself has undergone considerable change.

As an institution that manages violence, the military remains a male-dominated organization which excludes women from direct combat roles and thereby from significant assignments in administration. Nevertheless, with the evolution of the all-volunteer force, the number of women in the armed forces has dramatically increased and their assignments have steadily broadened. Concern over "quantity" and "quality" in the all-volunteer Army has served as a catalyst for expanded roles for women. Over the 1972-76 period, women recruits raised the quality (as measured by educational attainment and standardized

test scores) of the armed forces; tended to equalize the racial mix with that of the overall population; and, on average served longer than male counterparts.

In an article entitled "Utilization of Women in the Military", Nancy Goldman (1973) of the University of Chicago made the following observation:

"The encountered and projected increase of women in the armed forces reflects, first, external social change in the United States and the conscious effort of the military to recognize and incorporate such change. Second, because of the relatively low status of the profession, the traditional anti-military attitudes in the society and the negative impact generated by the war in Vietnam, the movement to an all-volunteer force requires the military to intensify its search for sufficient manpower. The armed forces have traditionally recruited disproportionately from the margins of American society; they have recruited heavily from the rural areas, particularly the South, where unemployment and underemployment are most prevalent; and more recently, personnel have been sought among the black community. Women also are a potential source of labor. Third, the changing character of the military establishment, together with its great emphasis on administration, logistics, and the like, plus its increasing emphasis on deterrence, alter the organizational milieu of the armed forces and potentially broaden sex roles in a direction favorable to women. ⁶

Influenced by these societal and organizational changes, the Pentagon decided in 1972 that the scope of women's participation had to be expanded and the many sources of sex discrimination removed. At that time there were about 45,000 females in the services, 1.9 percent of all military personnel. By 1976, close to 110,000 women constituted over 5 percent of the uniformed work force.⁷

For this expansion to take place women had to be assigned to a greater variety of jobs, most particularly at the enlisted level; there was no fear of a shortfall in officers who were less affected by the end of the draft. Traditionally, enlisted women had largely been confined to health care and clerical duties in peacetime. In fact, before the 1972 expansion, only 35 percent of all military enlisted occupations were open to women; by 1976 over 80 percent were open. The proportion actually assigned to the new kinds of nontraditional jobs also increased: 10 percent of all females in the armed forces were assigned to scientific, technical, or blue-collar labor specialties in 1972, whereas in 1976 the proportion was over 40 percent. Consistent with these changes to "structurally" bring about an expanded role for women in the military, in 1976 women were admitted to each of the nation's service academies by Congressional legislation.⁸ In December 1977, the Army proposed the following policy on women's assignments: that women may serve in any military job at any

organizational level "except battalion size and smaller units of infantry, armor, canon, field artillery, combat engineer, low altitude air defense artillery and other direct combat-related specialties such as Special Forces." The action opened all but 16 of the Army's 377 military specialties to women officers and enlisted personnel.

The dramatic expansion of women into the military; however, is largely complete if present laws and policies toward the "appropriate" roles for women in the military persist.

The high rate of increase in the total number of females in the military that occurred during the first half of the 1970's, averaging about 20 percent annually, started to abate in fiscal 1976. Annual growth of female strength is expected to average about 5 percent annually through fiscal year 1982, at which time about 147,000 women will constitute about 7 percent of the armed forces. ⁹ If these goals are to be exceeded, either Congress will have to change certain laws or the military service will have to alter certain policies that circumscribe women's opportunities.

At one extreme, maintaining the status quo denies to women a full measure of equality and responsibility. Moreover, by overlooking this large reservoir of labor, military planners run the risk of having to either unnecessarily increase monetary incentives or

reinstitute the draft in order to maintain the present size and quality of the armed forces. At the other extreme, removing all legislative and policy constraints based on sex (including those against using women in direct combat roles) runs counter to long-standing cultural mores and has uncertain implications for military effectiveness. Indeed Binkin and Bach argue that although present restrictions deny women access to significant jobs and deny the nation a pool of competent workers who might be willing to volunteer, the consequences of removing all barriers, especially the prohibition against assigning women to direct combat duty are not yet well enough understood to assess their influence on military effectiveness or on society as a whole. In addition, the lack of precedent of other countries on this matter, as well as the lack of scientific research in our own country in this area continues to cloud this issue.

To quote Nancy Goldman again:

"In his study of The Professional Soldier, completed in 1960, Morris Janowitz did not find it necessary to deal in any depth with women personnel because of their derivative role and lack of impact on the organizational climate of the profession. While Janowitz foresaw the end of the mass army and the movement toward a more contractual system, he did not anticipate an increased emphasis on the recruitment of women into the military. Charles Moskos, a decade

later, still had to point out that the position of women in military organizations is almost completely unresearched."¹⁰

Endnotes

1. Martin Binkin and Shirley J. Bach, Women and the Military, The Brookings Institute, Washington, D.C., 1977, p. 1.
2. Robert Lindsey, "Women Entering Job Market at an Extraordinary Pace", N.Y. Times, (15 September 1976), p. 49.
3. ibid., p. 50.
4. Harry C. Beans, "Sex Discrimination in the Military", Military Law Review, Vol. 67, pp. 19-82.
5. ibid.
6. Nancy Goldman, "The Utilization of Women in the Military", the Annals of the American Academy of Political and Social Science, Vol. 406 (March 1973), pp. 107-116.
7. Binkin and Bach, op. cit., p. 2.
8. ibid.
9. ibid.
10. Goldman, op. cit.

II. Method. The Conceptual Design of Project Athena

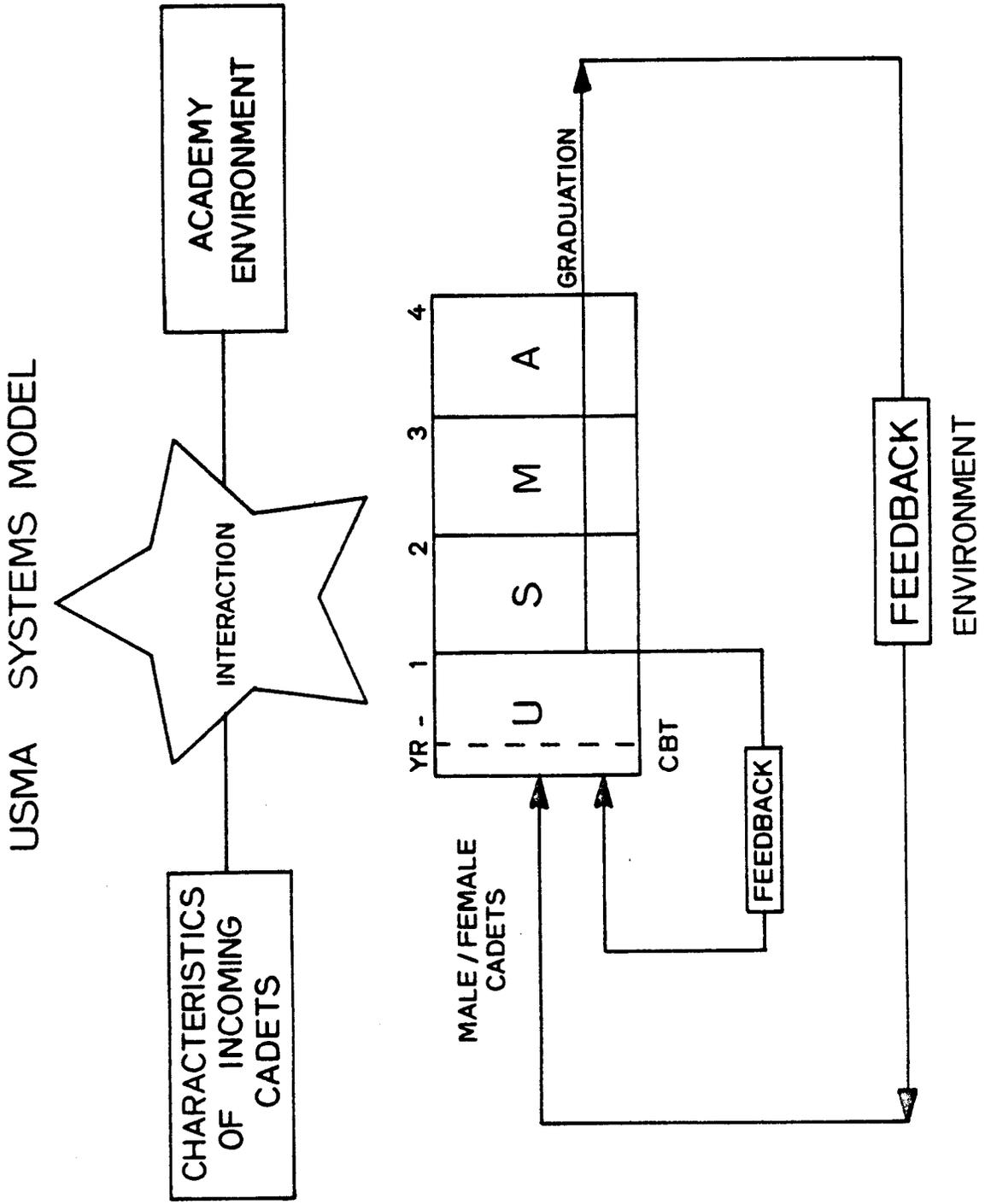
In order to study the process of coeducation at West Point, the researchers adopted an open-systems model to serve as a conceptual guide to the study. The U.S. Military Academy was analyzed as an organization with inputs (i.e. incoming male and female candidates), through-puts (i.e. activities designed to "educate, train, and motivate" cadets), and outputs (i.e. newly commissioned Second Lieutenants). This model portrays USMA as part of a larger environment to which it is responsive and upon which it is dependent. That environment not only includes the Army, but American society as well with all of its many sub-groups. (See Figure 1)

The researchers hypothesized that admitting women to the Academy would produce an interaction between two sets of factors - those associated with the individual and those associated with the institution. The global objectives of this research effort were, and are, to analyze the effect of entering USMA on individual cadets and to analyze the impact on the Academy itself of coeducation.

The study has been guided, but not limited to exploring the following broad research questions:

a. **Individual Adjustment:** How do psychological factors mediate the performance and integration of cadets into the USMA environment?

FIGURE 1



b. Attitudes: How do the attitudes of cadets toward women change over time and how do attitudes differ among subgroups in the USMA environment?

c. Social Background Characteristics: What significant sex differences on entrance characteristics exist and how do cadets compare with undergraduates at other educational institutions?

d. Individual Performance: How do women perform in comparison to men in traditional areas of cadet performance such as: academics, physical training, military training, peer evaluations, extracurricular activities, and intercollegiate athletics?

e. Attrition: What factors affect a female cadet's decision to voluntarily resign from West Point? How are these different from male cadets?

f. Unit Performance and Leadership: What are the differences in performance and morale in units with and without women, and what is the effect of the presence of women on the leadership process?

g. Institutional Reaction: What actions did West Point take to admit women and what modifications occurred once women had been admitted?

Data-Collection: Data for the study has been obtained through periodic: (1) surveys of cadets and officers at USMA; (2) interviews with cadets and officers; and (3) observation of training and interactions between individuals. The project was officially begun in January 1976, and initial baseline attitudinal data were collected shortly after that date. Project Athena is an on-going study, with commitment having been expressed to continue the research for at least two more years. Many of the research findings to date are "preliminary", in light of the relatively short period of time in which the Academy has been coeducational. Longitudinal analysis of findings, however, should provide invaluable insight not only into the process of coeducation, but into the broader context of male-female interactions in organizational settings.

III. Results.

A. Entrance Characteristics: Comparisons of the Classes of 1980 and 1981 on Selected Measures.

In a report entitled "New Cadets and Other College Freshmen: Class of 1981", Mr. John W. Houston (USMA) compared new cadets with a norm group of entering freshmen from 232 four-year colleges. Comparisons were made between male and female cadets in the class and male and female students at other 4-year colleges. Data were presented on secondary school and socioeconomic backgrounds, values, interests and activity patterns and were based on the American Council on Education's yearly survey.

In the report, Mr. Houston concluded:

"Some sex differences between USMA male and female cadets may be of interest. More female than male cadets had mothers who had education beyond high school. More women cadets had average secondary school grades of A- or above.

In regard to reasons very important in deciding to go to college, USMA women listed four significantly more often than male cadets: gain a general education, learn more about things, meet new and interesting people, and become a more cultured person.

Male cadets tended to be more conservative in their attitudes than female cadets. Male cadets agreed more frequently that: (1) there should be laws prohibiting homosexual relations; and (2) women's activities are best in the home.

Regarding preferential treatment, women cadets took a more conservative stand, in that female cadets believed less frequently that open admissions should be adopted by all publicly supported colleges.

The average grade in secondary school of female cadets was farther above the grade of male cadets than was the grade of female students above the male students in the national norm.

Regarding freshmen views, on the statement "Women's activities are best confined to the home," the percent of male cadets agreeing with this (41%) is farther above female cadets (15%) than the percent of male students (36%) was above female students (20%) at other colleges.

On college expectations, more male cadets than female cadets thought they "would marry within a year after college," while students in the norm groups had the opposite pattern.

On self-ratings of personal abilities, USMA men rated themselves within ten percentage points of men at four-year colleges on all items, while women cadets rated themselves more than ten points higher than women at four-year colleges on the following six items: (1) do at least 15 push-ups; (2) score a tennis match; (3) swim a mile without stopping; (4) know freedoms in Bill of Rights; (5) referee sporting events; and (6) bake a cake from scratch."

In Table 1 the classes of 1980 and 1981 are compared in terms of the volume of applicants. Analysis of this table reveals that:

TABLE 1

APPLICANT PROFILE BY CLASS

<u>Year</u>	<u>Applicant Files Started</u>			<u>Percent of Total Pool</u>	
	<u>Men</u>	<u>Women</u>	<u>Total</u>	<u>Men</u>	<u>Women</u>
1976	11358	867	12225	92.9	7.1
1977	9868	828	10696	92.3	7.7

<u>Year</u>	<u>Nominated and Examined</u>			<u>Percent</u>	
	<u>Men</u>	<u>Women</u>	<u>Total</u>	<u>Men</u>	<u>Women</u>
1976	6130	631	6761	90.7	9.3
1977	5616	534	6150	91.3	8.7

<u>Year</u>	<u>Qualified (Acad, Med, and Phy)</u>			<u>Percent</u>	
	<u>Men</u>	<u>Women</u>	<u>Total</u>	<u>Men</u>	<u>Women</u>
1976	2474	176	2650	93.4	6.6
1977	2433	152	2585	95.9	5.9

<u>Year</u>	<u>Percent of Applicants Qualified</u>	
	<u>Men</u>	<u>Women</u>
1976	21.8	20.3
1977	24.7	18.4

<u>Year</u>	<u>Admitted</u>			<u>Percent</u>	
	<u>Men</u>	<u>Women</u>	<u>Total</u>	<u>Men</u>	<u>Women</u>
1976	1366	119	1485	92.0	8.0
1977	1367	104	1471	92.9	7.1

<u>Year</u>	<u>Percent of Group Admitted After Qualification</u>	
	<u>Men</u>	<u>Women</u>
1976	55.2	67.6
1977	56.2	68.4

Source: USMA Admissions

(1) the number of men and women applying for admission has decreased

(2) the proportion of women in the total pool has increased

(3) the percentage of women determined qualified, once having applied, has slightly decreased

(4) the percentage of women admitted, once being qualified, has become slightly greater

Data in Tables 2,3 reveal that, in general, the Classes of 1980 and 1981 (both men and women) were highly similar in terms of the entrance characteristics analyzed. Of some note was the higher whole candidate score of Class of 1981 women. This score is a composite measure of academic, physical and leadership aptitude.

In a report which focused on differences between men and women cadets of the Classes of 1980 and 1981 in attitudes toward the roles of women in society, in the Army, and at West Point, Dr. Robert Priest concluded: "At entrance, the Class of 1981 had a pattern of attitudes and characteristics that was highly similar to the Class of 1980; men and women differ significantly on a number of attitudes."

TABLE 2
ENTRANCE CHARACTERISTICS BY CLASS

		Class of 1981		Class of 1980	
		Male	Female	Male	Female
WCS	N	1365	104	1381	119
	Mean	5925.6	5950.4	5960.8	5761.6
LPS	N	1365	104	1381	119
	Mean	607.1	594.0	606.7	594.9
PAE	N	1361	104	1377	119
	Mean	562.8	517.4	555.7	278.2*
ACEER	N	348	19	349	30
	Mean	588.9	605.0	595.5	606.4
CEER	N	1017	85	1033	80
	Mean	590.8	608.8	598.1	621.4
SAT-V	N	1017	85	1033	80
	Mean	546.5	562.2	548.8	569.3
SAT-M	N	1017	85	1033	80
	Mean	629.6	620.0	639.2	626.5
ACT-EN	N	348	19	349	39
	Mean	22.3	23.8	22.5	23.7
ACT-MA	N	348	19	349	39
	Mean	28.4	28.2	28.8	27.9

Source: Office of Institutional Research

*(Women in the Class of 1980 were evaluated using the physical standards of the men's scale)

TABLE 3

ENTRANCE CHARACTERISTICS BY CLASS (ABBR)

The following abbreviations apply to the previous table:

ACEER:	A weighted composite score of three ACT tests and a standardized High School Rank score.
ACT-EN:	American College Test, English.
ACT-MA:	American College Test, Mathematics.
CEER:	A weighted composite score of two College Entrance Examination Board tests and a standardized High School Rank score.
LPS:	Leadership Potential Score.
PAE:	Physical Aptitude Examination.
SAT-M:	Scholastic Aptitude Test-Mathematics.
SAT-V:	Scholastic Aptitude Test-Verbal.
WCS:	Whole Candidate Score, a weighted composite score of the CEER (or ACEER), LPS and PAE.

Source: Office of Institutional Research

(1) Attitudes toward Women in Society: Men and women in the Classes of 80 and 81 scored similarly on this particular scale. Men tend to be traditional in their views, that is they view the proper role of women as in the home, whereas women of both classes are more nontraditional. (See Table 4 and Inclosure 1)

(2) Attitudes toward Women in the Army: Men in the Class of 1981 at entrance were less traditional in their views toward the roles of women in the Army than men cadets were in the Class of 1980. Both groups, however, are quite traditional in comparison to active Army personnel surveyed later. (See Table 5 and Inclosure 2)

(3) Life-Style Preferences: The life style preferences for men and women were different, but each gender in the Class of 1981 had a pattern similar to the same group in the Class of 1980. The majority see "marriage, children, full-time job" as most desirable. Traditionally, men have all 3, while women have to forego marriage for a career or vice versa. Thus, women who choose all 3 are "nontraditional" in their life style preference. There is a notable percentage of women cadets, however, who opt for a very career-oriented life style: that is, marriage and a full-time job or single and a full-time job. It is interesting that some women and

TABLE 4

COMPARISON OF AWS* SCORES FOR MEN
AND WOMEN AT SEVERAL INSTITUTIONS

<u>Sample</u>	<u>Date</u>	<u>Number</u>	<u>Mean</u>	<u>S.D.</u>
University of Texas	1975			
Men		248	47.16	12.78
Women		282	53.16	12.56
U.S. Military Academy				
Class of 1980	1976			
Men		1278	42.35	9.93
Women		114	57.29	8.65
Class of 1981	1977			
Men		1360	42.56	10.05
Women		102	56.24	9.10
USMA Faculty	1976			
Men		236	48.83	11.64

* The AWS (Attitudes Toward Women Scale) is a 25-item instrument designed to measure traditionalism (low scores) or equalitarianism (high scores) in attitude toward the rights and roles of women in society (Spence, Helmreich, and Stapp, 1973; Spence and Helmreich, 1972)

Source: USMA, Project Athena

TABLE 5
SEX - ROLE ATTITUDES OF CADETS
AND ARMY PERSONNEL

<u>Sample</u>	<u>Date</u>	<u>Number</u>	<u>Mean</u>	<u>S.D.</u>
U.S. Military Academy				
Class of 1980	1977			
Men		916	-2.32	2.10
Women		75	1.46	2.03
Class of 1981	1977			
Men		1,359	-1.08	1.85
Women		102	1.61	1.93
Commissioned Army Officers	1975 ^b	2,113	-0.07	2.87
Warrant Officers, Army	1975 ^b	396	-0.15	2.98
Enlisted Personnel, Army	1975 ^b	3,331	+0.01	2.86
Women in the Army	1975 ^b	366	+2.08	2.50

^bSource: J. Savell and J. Woelfel, Army Research Institute paper, 1977. Negative scores indicate more traditional sex-role concept toward appropriate roles for women in the Army.

Source: USMA, Project Athena

men enter the academy while preferring "marriage, children, no full-time job" as a life style. In subsequent analysis it will be shown how these life style preferences relate to other indications of sex-role attitudes. (See Table 6)

TABLE 6

LIFE - STYLE PREFERENCES (IN %)

<u>Item</u>	Class of 1980		Class of 1981		Gallup Poll
	Men	Women	Men	Women	
Married, children, full-time job	74	46	79	47	45
Married, no children, full-time job	10	25	12	26	8
Married, children, no full-time job	3	11	2	14	31
Married, no children, no full-time job	1	2	1	0	1
Single, full-time job	10	14	6	14	15

Source: USMA, Office of Institutional Research

B. The Second Year of Coeducation - the Class of 1980 and 1981

1. The Academic Experience. Educating men and women

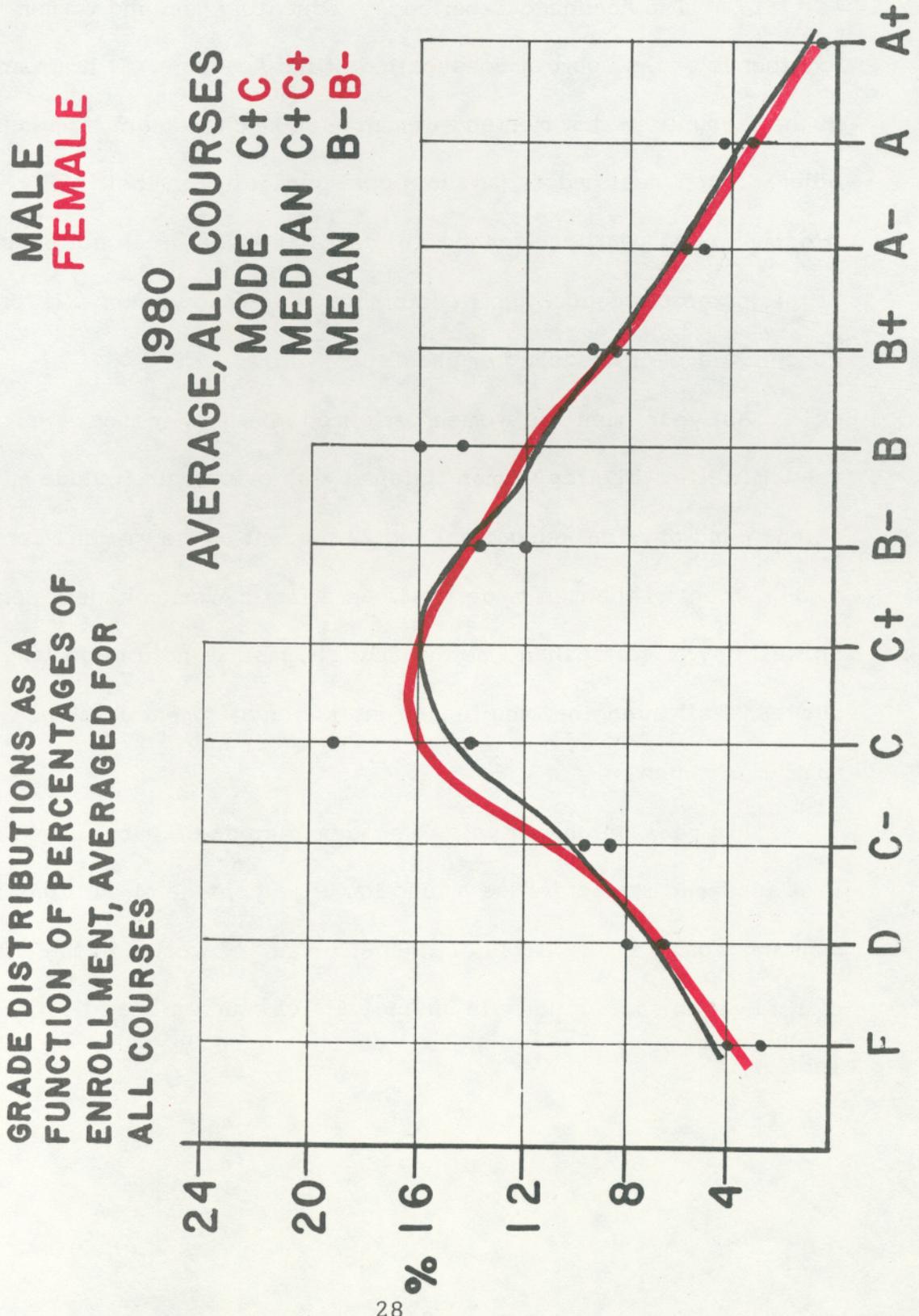
together is at the heart of coeducation at the Academy. It is grounded in the recognition that men and women have much to learn from each other. Since most cadets pursue a core curriculum in their plebe (freshman) and yearling (sophomore) years at USMA, it is not possible at this stage of coeducation to determine where the women will tend to concentrate their academic emphasis.

Last year, men and women performed similarly in most areas of academic life. The top woman finished 44th overall (to include military science and physical education) and 23 percent of the women, compared to 30 percent of the men made the Dean's List. Women cadets performed as well as, or better than, men in English, math, and foreign languages, but less well in engineering fundamentals, environmental science, and military science.

This year, in an analysis of academic grade distributions for the first academic semester, (as a function of percentage of enrollment), men and women in the Class of 1980 and men and women in the Class of 1981 performed similarly in an analysis of courses overall. (See Table 7)

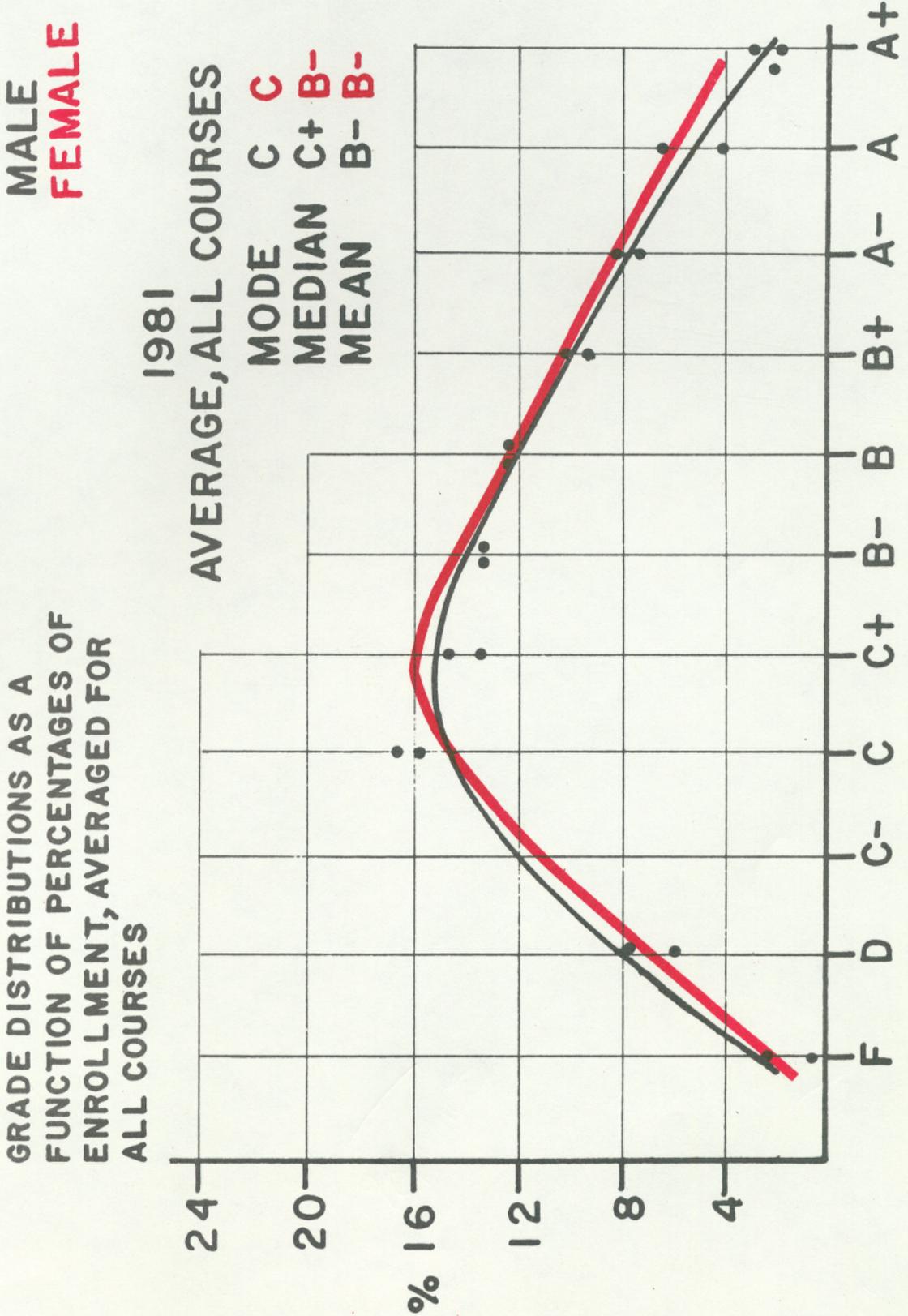
TABLE 7a

FIRST SEMESTER ACADEMIC ATTAINMENTS
 CLASS OF 1980/1981 (AY 1977-1978)



FIRST SEMESTER ACADEMIC ATTAINMENTS
 CLASS OF 1980/1981 (AY 1977-1978)

TABLE 7b





During the first semester, women in the Class of 1980 performed slightly better (i.e. tended to receive higher letter grades than men) in foreign languages. Women achieved similarly to men in English and history. Women achieved slightly less well than men in chemistry, physics, and math. Differences in these areas were minimal.

During the first semester, women in the Class of 1981 performed slightly better (i.e. tended to receive slightly higher letter grades than men) in foreign languages and English. Women achieved similarly to men in military science and math (similar performance by women in military science this year was in contrast to differences noted in this course last year). Women achieved slightly less well than their male counterparts in engineering fundamentals and environmental science.

While statistics of achievement reflect something of the educational atmosphere, they cannot fully represent the quality of the academic experience. In many classes, women often find themselves the sole woman in the section. Most sections are small, consisting of approximately fifteen cadets. It is unclear how such a situation effects the learning process or the participation of women in that process. Distribution of women in the classroom may be a factor to consider in enrolling women to small-group seminars, if discussion can be enhanced by enrolling a greater number of women to the section.

Another issue which has surfaced in interviews with women is the discomfort they have periodically experienced in class because of their feminine identity. Examples, although infrequent in number, of

instructors being too familiar with women (by using their first names while calling on men by their last), of ignoring women, of being overly attentive to women's contributions in class, and of modifying content, style, examples, and humor for a mixed-sex class, in contrast to previously all-male classes, have been cited.

In general, however, it appears that in formal and informal ways, in designed and spontaneous discussion, in sharing preparations in the barracks for common academic requirements, and in being open to academic exploration and discovery, West Point men and women have begun to experience what it means to be coeducational.

2. The Physical Training Experience: This year, as last year, women were graded on separate scales in most physical education courses and events, since prior research at USMA showed practically no overlap in the distribution of men and women's physical performance scores (Peterson, et.al., 1976). In addition, plebe women continue to take "self-defense" - consisting of judo and karate - instead of required men's courses in boxing and wrestling.

Although comparisons are difficult to draw across classes due to many varying factors, there is some evidence that women in the Class of 1981, when compared with women in the Class of 1980, have higher physical aptitudes. This could be due to changes taking place in society, which encourage the development of physical skills in women as well as in men. Tables 8 and 9 provide some comparisons of the Classes

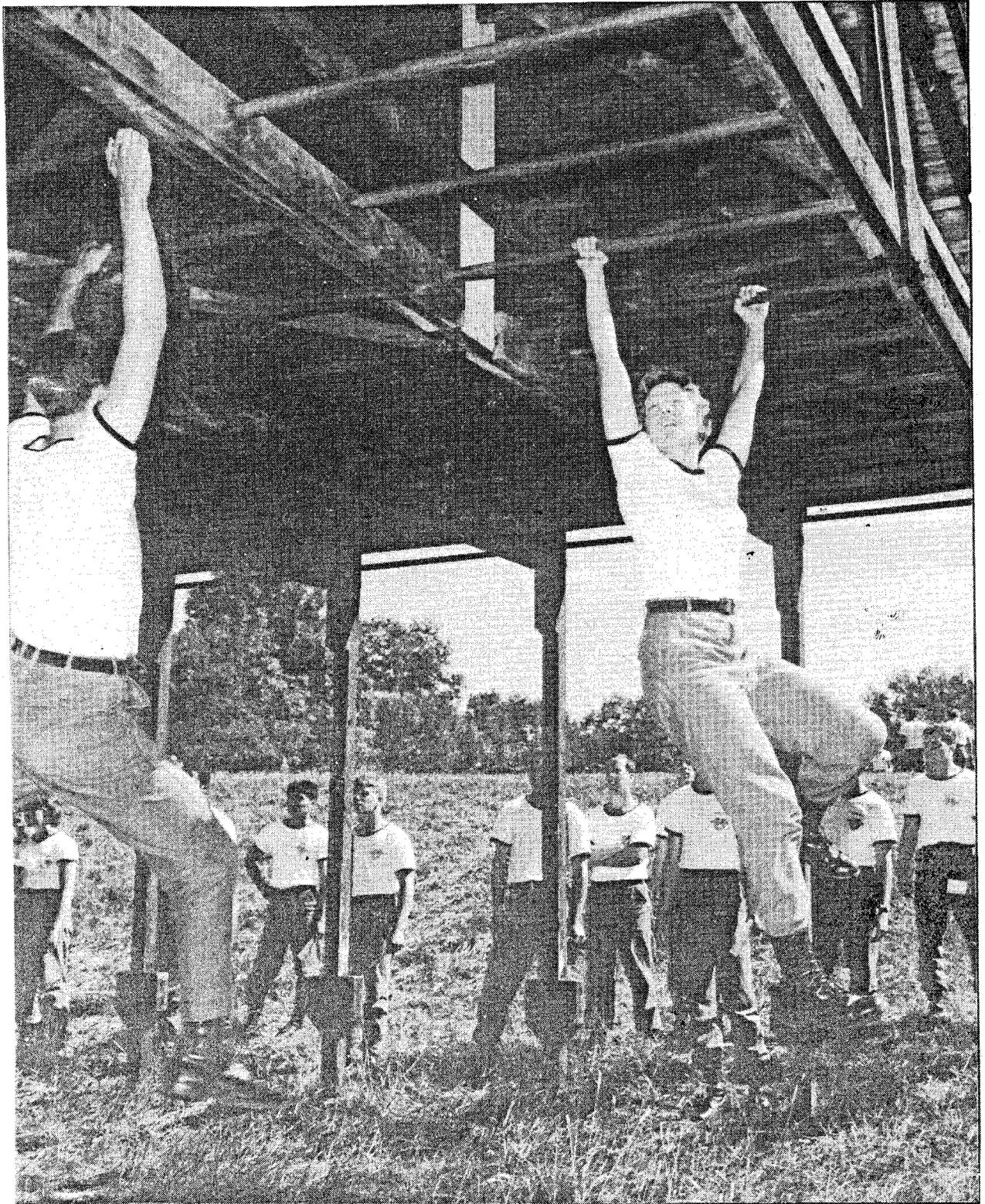


TABLE 8a

PHYSICAL PERFORMANCE DATA
CLASSES OF 1980 AND 1981

Physical Aptitude Test (given each December)

Class of 1980 Means	Men	Women
Pull-ups	9.4	1.58
Standing Long Jumps	90.4 in	75.5 in
Modified Basketball Throw	68.8 ft	41.9 ft
300-yard Shuttle Run	58.8 sec	65.5 sec
Class of 1981 Means	Men	Women
Pull-ups	10.1	2.8
Standing Long Jump	90.6 in	74.0 in
Modified Basketball Throw	70.6 ft	43.3 ft
300-yard Shuttle Run	58.5 sec	65.3 sec
Minimum	Men	Women
Pull-ups	6	-
Standing Long Jump	86 in	72 in
Modified Basketball Throw	62 ft	39 ft
300-yard Shuttle Run	62 sec	69 sec

Indoor Obstacle Course

Class of 1980	Men	Women
1976 Average Time	3 min 9 sec	5 min 13 sec
1977 Average Time	3 min 9 sec	5 min 35 sec
Minimum	3 min 45 sec	7 min 9 sec

Pull-Up Averages (women only)

Class of 1980	Jul '76	Sep '76	Mar '77
	0.42	0.70	2.32
Class of 1981	Jul '77	Sep '77	Dec '77
	1.1	1.23	2.8

Source: Department of Physical Education

TABLE 8b

PHYSICAL PERFORMANCE DATA
CLASSES OF 1980 AND 1981Two-Mile Run (October of each year)

Class of 1980	Men	Women
Averages	13.18 min	15.83 min
Class of 1981	Men	Women
Averages	not available	15.4 min
Minimum Standards	Men	Women
	13.95 min	17.10 min

Source: Department of Physical Education

TABLE 9

PHYSICAL PERFORMANCE DATA
 CLASSES OF 1980 AND 1981 - II

Reveille Runs, Cadet Basic Training (CBT)

Women in the Class of 1980

<u>Date</u>	<u>Run/Walk</u>	<u>Pace</u>	<u>Fallout Percentage</u>
31 Jul	10 min/1 min	8:30	17.9
14 Aug	30 min/0 min	8:15	36.0
21 Aug	30 min/0 min	8:15	26.4
23 Aug	30 min/0 min	8:00	35.0

Women in the Class of 1981

<u>Date</u>	<u>Run/Walk</u>	<u>Pace</u>	<u>Fallout Percentage</u>
16 Jul	8 min/2 min	8:30	10.5
23 Jul	9 min/1 min	8:30	11.5
30 Jul	10 min/1 min	8:30	2.0
6 Aug	15 min/0 min	8:15	14.0
13 Aug	30 min/0 min	8:15	12.5
20 Aug	30 min/0 min	8:00	31.0

Less than one percent of the men fell out of any of the runs.

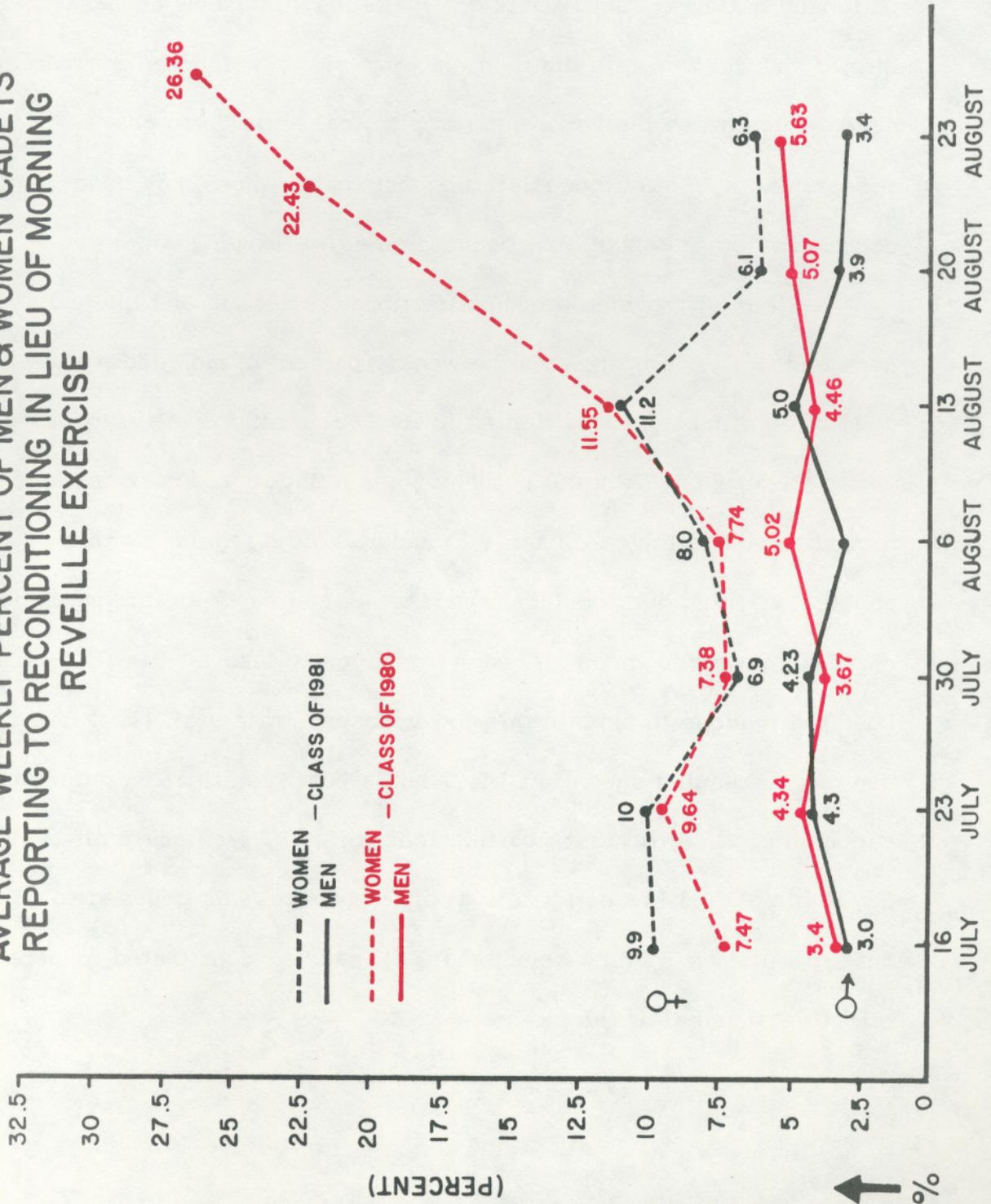
Source: Department of Physical Education

of 1980 and 1981 on selected physical performance measures. An analysis of these tables reveals that women in the Class of 1981 performed better on such events as: pull-ups, the modified basketball throw, and the two-mile run than the prior class. Since prior studies have demonstrated the importance of physical aptitude to peer acceptance at USMA, these data suggest that changes may have occurred in other aspects of coeducation as well over the past year

Figure 2 provides a comparison of the Classes of 1980 and 1981 (men and women) on "the average weekly percent of men and women cadets reporting to reconditioning in lieu of morning reveille exercise" during Cadet Basic Training (July-August). Cadets report to reveille reconditioning if they are unable to undertake the regular morning physical training due to minor injuries. As can be seen, the percentage of women reporting in CBT-77 was significantly less than in CBT-76. Possible reasons to explain this lower absence rate are: (1) that the use of new running shoes in CBT 77 had a positive effect on reducing minor injuries, or (2) that modifications to the PT program itself to develop high and low performers at different rates, as opposed to having a uniform running standard for all cadets, contributed to more effective physical development.

FIGURE 2

AVERAGE WEEKLY PERCENT OF MEN & WOMEN CADETS REPORTING TO RECONDITIONING IN LIEU OF MORNING REVEILLE EXERCISE



3. Attrition - Analysis Over Time: Table 10 provides an analysis of attrition rates of men and women in the Classes of 1980 and 1981 from July 1976 - January 1978. Since Cadet Basic Training - 1976, the attrition rate of women in the Class of 1980, in comparison with men, has remained at a figure about 5 percent higher than that of the men. The significance of this statistic may not be the slightly higher resignation rate of women which exists, but the number of women who remain when challenged by a highly equalitarian approach to coeducation. It may well be, however, that USMA will experience a higher attrition rate of women in the Class of 1980 in the future as: (1) women decide to pursue more traditional career paths; (2) consider the alternative of civilian college education (women in the Class of 1980 had significantly more prior-college education before being admitted to USMA than men in the class); (3) find the unique stresses of being in an environment of such "skewed gender distributions" an unnatural one to live in; (4) decide to get married; (5) lack the commitment for a military career; or (6) are not favorably impressed with Army life after their Cadet Troop Leader Training experiences.

As can be seen in the table, the attrition rate of both men and women in the Class of 1981 in Cadet Basic Training was less than that of the Class of 1980. A number of reasons have been offered to explain this differential: (1) that women in the Class of 1981 had more realistic expectations regarding the nature of the cadet environment as a result of publicity given last year's class and from

TABLE 10

ATTRITION RATES OF MALE AND FEMALE CADETS
CLASSES OF 1980/1981
(July 1976 - January 1978)

<u>Class of 1980</u>	<u>Males (1366)</u>		<u>Females (119)</u>		<u>Total (1485)</u>	
	%	N	%	N	%	N
<u>Cadet Basic Training:</u> (7 Jul 76 - 6 Sep 76)	9.9	(135)	15.9	(19)	10.4	(154)
<u>Fourth Class Year</u>						
<u>First Semester:</u> (7 Sep 76 - 22 Jan 77)	6.4	(88)	6.7	(8)	6.5	(96)
<u>Second Semester:</u> (24 Jan 77 - 28 May 77)	4.1	(56)	3.4	(4)	4.0	(60)
<u>Cadet Field Training/</u>						
<u>Leave:</u> (28 May 77 - 5 Sep 77)	5.6	(76)	5.0	(6)	5.5	(82)
<u>Third Class Year</u>						
<u>First Semester:</u> (6 Sep 77 - 22 Jan 78)	1.1	(15)	1.7	(2)	1.1	(17)
<u>Total Attrition Rate:</u> (7 Jul 76 - 22 Jan 78)	27.1	(370)	32.8	(39)	27.5	(409)
<u>Class of 1981</u>						
<u>Cadet Basic Training:</u> (6 Jul 77 - 5 Sep 77)	7.0	(95)	9.6	(10)	7.1	(105)
<u>Fourth Class Year</u>						
<u>First Semester:</u> (6 Sep 77 - 22 Jan 78)	5.3	(73)	4.8	(5)	5.3	(78)
<u>Total Attrition Rate:</u> (6 Jul 77 - 22 Jan 78)	12.3	(168)	14.4	(15)	12.5	(183)

academy publications which more clearly specified physical and military requirements; (2) that adjustments made in the conduct of physical training to more directly discriminate between high and low performers enabled all cadets to develop at a rate more commensurate with their level of ability; and (3) that leadership seminars conducted prior to summer training for cadets and officers were instrumental in creating a more supportive leadership climate, conducive to the training and development of all cadets.

In a study entitled "A Longitudinal Study of the Relationship Between Organizational Commitment, Motivation, and Cognitive and Behavioral Measures of Attrition in the U.S. Military Academy Environment", the author found that women tended to value more those aspects of the environment found in civilian colleges, i.e. taking the academic courses they like, acquiring an appreciation of ideas, getting along with people and making new friends. They tended to value less those characteristics of USMA associated with military skills, i.e. firing weapons, being trained to fight in combat, wearing a uniform and having daily physical workouts. (An exception to this was a preference for parades and ceremonies.) In addition, the study found that attrition during Cadet Basic Training is affected by personality factors (as the individual's "commitment"), as well as environmental factors, and the interaction between the two.

Data reveal that some cadets come to USMA initially just to "look it over." In some cases, a mis-match is perceived to exist between the individual's "expectations" of the Academy, and what they actually experience. Some individuals can relieve this dissonance through early resignation. (A number of additional studies are presently underway at USMA to study the phenomena of cadet attrition).

4. Satisfaction with Cadet Life: In April 1977, a survey was administered to all cadets of the Class of 1980 to determine their satisfaction with various aspects of cadet life. Table 11 provides an analysis of these findings. In general, cadets were satisfied with most of the aspects of cadet life measured. Cadets of both sexes were most satisfied with billeting, recreational facilities, intramurals, and relations with officers at USMA. They tended to be most dissatisfied with dating opportunities, privileges, and social activities. Women were significantly more dissatisfied than men with uniforms and hair length standards while being significantly more satisfied than men with privileges and parades and ceremonies. Interviews were conducted with cadets to more fully understand their views in these areas.

In evaluating coeducation to date, it is significant to note the degree of satisfaction perceived to exist by cadets toward billeting arrangements at USMA. The interaction of cadets with one another is an essential component of education, as well as of professional socialization. The academic and military aspects of Academy life