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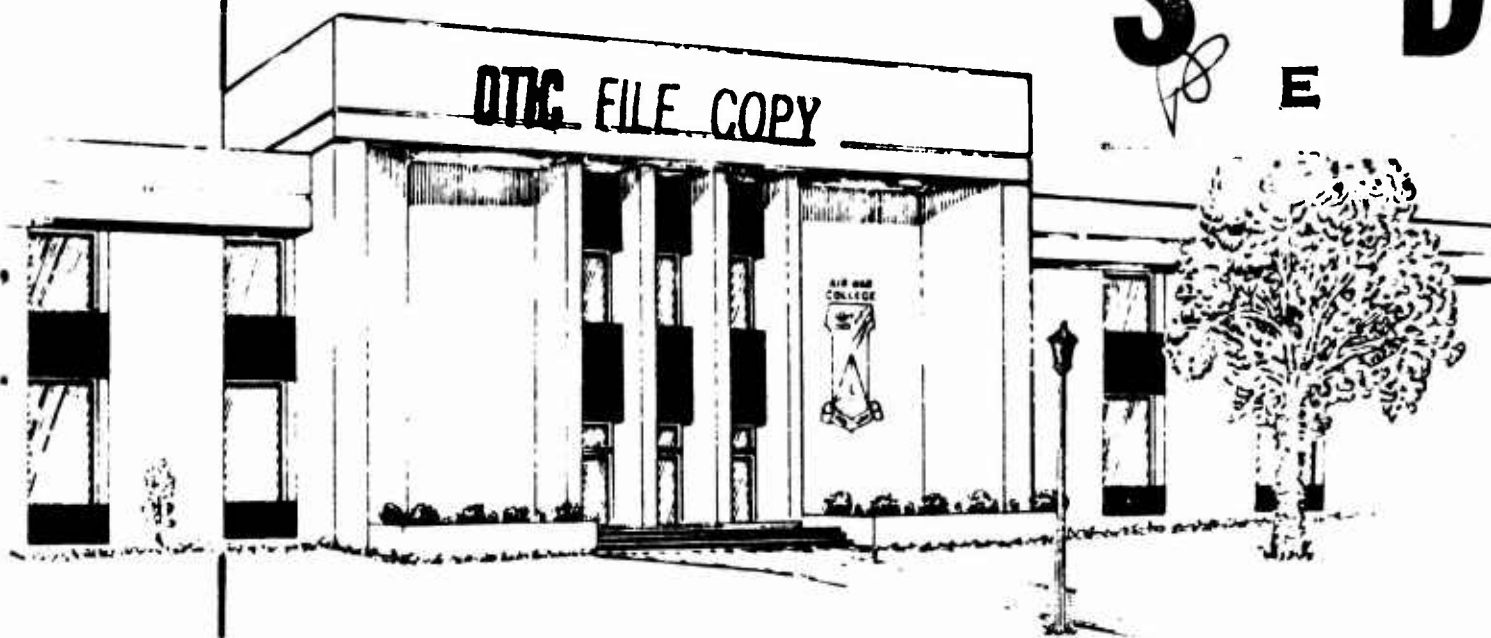
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DO WE NEED A QUOTA ON THE ACCESSION OF
FEMALES INTO THE AIR FORCE?

By LT COL THOMAS W. ISKRA

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AIR UNIVERSITY
UNITED STATES AIR FORCE
MAXWELL AIR FORCE BASE, ALABAMA

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FEMALES INTO THE AIR FORCE?

by

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A RESEARCH REPORT SUBMITTED TO THE FACULTY
IN
FULFILLMENT OF THE RESEARCH
REQUIREMENT

RESEARCH ADVISOR: Colonel Hans J. Asmus

MAXWELL AIR FORCE BASE, ALABAMA

March 1986

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ABSTRACT

TITLE: Do We Need a Quota on the Accession of Females into the Air Force?

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This abstract looks at increasing female accessions in the Air Force without imposing quotas or impacting combat readiness. It examines reports by two sociologists on how women performed during field deployment, one a 179 day TDY. Then the report examines how closely women are to the periphery of combat, combat proximity, by becoming increasingly ingrained in the combat support functions. It also delves into an extensive Air Force study that successfully refutes the House Armed Services Committee's perceptions about the declining youth population's impact on recruiting and the propensity for Air Force applicants to transfer to other branches of service. Finally it calls for a critical review and evaluation of specific aptitude and physical stamina requirements for female constrained Air Force Specialties.



EXECUTIVE SUMMARY

Quotas were first imposed on military female accession almost four decades ago as a maximum goal of 2 percent. The House Armed Services Committee, in looking at a shrinking youth population and trying to help improve Army recruiting, mandated a 25 percent minimum Air Force female accession for Fiscal Year (FY) 1986. When the Air Force completed the committee's directed study, the Air Force concluded it could only support a maximum of 18 percent female accession. Any greater female accession may impact quality and cost of the force. This report questions the Air Force derivative of an 18 percent female accession limit for FY 1986 as well as the need for a quota in the first place.

To set the role of women in the military in perspective today, a historical review of eight decades of evolution was necessary. For six or seven decades, women were called to serve to addend the male ranks in time of war and male recruitment difficulties. The societal changing role of women in the country crossed over into the military in the 1970's. Concurrently the influx of women was accompanied by opening combat support Air Force Specialties (AFSS) to women and placing them in combat proximity, or right on the cutting edge of the sword of combat. Additionally, maximum quotas

were eliminated and the double or higher standards previously applied to women were eliminated. In recent years, inconsistent progress of the All Volunteer Force, reluctance and refusal to reinstitute conscription and the female equal rights direction were some of the cause factors in significantly increasing accession of women in the military, especially in the Air Force.

The House Armed Services Committee mandated a 25 percent Air Force female accession for FY 1986 for starters because of their concern about the declining youth population and their belief that any decreases in Air Force male applicants would enlist in the Army. They tasked the Air Force to develop a methodology that highlighted its total capacity or demand for women. The Air Force convened a special study team which conducted an extensive review of its recruiting and accession policies. They made extensive use of civilian research experts who discounted the congressional perceptions, conducted an Organizational Assessment Study, and developed an elaborate model to determine the male-female gender mix for each AFS based on qualification requirements, youth applicant characteristics and youth interests. The researcher's bottom line was a maximum accession of 16 percent females as a ratio of total force without significant added costs of recruits or degradation of a quality force.

Performance of women in a combat support role was evaluated by two sociologists who evaluated the performance of women under deployed field conditions with a view of their impact on unit combat effectiveness. Their studies of two different deployments concluded that women performed as well as the males, were respected for their individual contributions and indeed enhanced the units' combat effectiveness.

The civilian researchers, under Air Force contract, surveyed over 12,000 Air Force personnel worldwide and conducted 800 interviews; one very positive conclusion was the direct relationship of quality supervision to just about every measurable factor. The better the supervision, the better the subordinate performance; problem areas were minimal. Additionally, the importance of training was an important factor cited by senior Air Force officers in facilitating the transition of more women into the Air Force.

Though the Air Force study was a comprehensive, thorough assessment, it had a major soft spot in that it did not reevaluate requirements for the AFSs; it held them to be totally accurate and valid as they exist. This report contends that aptitudes are erroneously perceived by the majority of personnel against how the Air Force actually uses the aptitudes in the accession process. It further points out that aptitude levels for each AFS requires review

because of the natural resistance of the functional manager to lower aptitudinal requirements. A second area of requirements that must be reviewed is the physical stamina standard or X factor for each AFS. The physical strength requirements were significantly increased in 1981 and should be carefully reviewed for possible revision while insuring the new Air Force personnel are capable of doing the job. If all the requirements and qualifications are realistic, objective and free of political misuses, there is no need for minimum or maximum quotas that often only serve special interests and not the needs of the Air Force or the country. This report contends that, with requirements objectively fleshed out, quotas are counterproductive and harmful.

BIOGRAPHICAL SKETCH

Lieutenant Colonel Thomas M. Iskra (M.B.A., University of Utah) served as a Tactical Air Forces aircraft maintenance officer since his commissioning in 1967. He dealt with the issue of utilization of women in the nontraditional maintenance specialties. Then, he worked directly with restructuring classification requirements for all aircraft maintenance specialties as an Occupational Analyst at the Air Force Manpower and Personnel center in the late 1970s. After tours of duty with USAFE, PACAF, TAC and AFMPC, he attended Air Command and Staff College. Lieutenant Colonel Iskra was assigned as Commander, 21st Equipment Maintenance Squadron, as Commander, 21st Aircraft Generation Squadron and then as Installation Commander, 5071st Combat Support Squadron, King Solomon Airport, Alaska. Lieutenant Colonel Iskra is a graduate of the Air War College, Class of 1986.

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CHAPTER I

BACKGROUND AND INTRODUCTION

A. WOMEN'S PROGRESS IN THE MILITARY AND THE UNITED STATES

AIR FORCE

The historical socialization of women in the armed forces and the United States Air Force is replete with much progress as well as many setbacks. From an ill conceived reputation as camp followers to the stories of heroines in the American Revolution and Civil War, utilization of women in the military was more out of necessity rather than military leadership interests in voluntary and viable careers for the women.¹ In the twentieth century American conflicts -- World Wars I and II, Korean War and the Vietnam War -- our nation accepted women in military service to supplement a shortage in the male force, to free men from support positions so they could fight and to fulfill a wartime requirement just as the civilian 'Rosie the Riveter' counterparts did in industry. Use of women in combat was congressionally outlawed; so was even close proximity to the forward battle area when a dedicated group of women ferry and training pilots (Women Air Force Service Pilots) compiled one incredible achievement after another in safety and sorties and hours flown; they proved the worth of women in garrison support during World War II but could not break into the role of combat support directly. General Hap Arnold, Air Force Chief

of Staff, barred the request to have the women ferry fighter, bomber and airlift aircraft near the combat zone or even overseas despite the female pilots superior flying credentials and experience over the men who accomplished the task. After the war the armed forces were drastically drawn down with women all but eliminated from military service. The memories of how nobly the women served were fast forgotten. During the Korean War, combat or combat proximity was off limits to the women. When the military tried to greatly increase the number of military women to fill traditionally female jobs in the CONUS, they failed miserably to meet their goals because they incorrectly perceived public reaction and the female reaction specifically.² The draft was out of the question; national and military leadership believed women would come forward to serve just as in World War II; and, women engulfed the civilian work force swelling to some 35 percent of the labor force and were not that interested in military service. Thus the 1948 congressionally mandated 2 percent ceiling on women in the military was not achieved before the late 1960's. The issue of drafting women has been discussed and debated in the twentieth century by Congress, the executive branch of government, senior military leadership, and women's reform movements as societal and cultural attitudes ever so slowly changed with respect to the working women and more slowing regarding women in the military. Again after the Korean War, few women remained in the services and double standards

-- lower ranks for officers, higher age and qualification requirements, unequal treatment of female spouses and the pregnant and out policy -- as well as quotas existed through 1974. Quotas in one form or another exist today. As late as 1969, the Air Force was seriously considering the elimination of women from service except in the medical field; however, senior Air Force leadership and Department of Defense officials refused the barment initiative. Though women were kept out of combat and combat proximity, the early 1970's was a time of breaking down barriers to utilization of women in the military. Despite pockets of Air Force intransigence on women in the military, the Air Force removed barriers, changed double standard policies, opened more specialities and treated women as male equals given public law. By the late 1970's, the Air Force tripled the number of women recruited -- in part to weigh against male recruitment difficulties and the perceived negative impact of the all volunteer force on recruiting -- and programmed to double female recruits by 1985. It can be hotly debated and argued for and against that we needed women in the military to fix shortfalls versus a slow evolving participation of women in the military as our American society and culture continues to change.

B. QUOTAS AND STANDARDS

At the start of the twentieth century, women entered the Army and Navy in 1901 and 1908 respectively to serve in

the medical corps.³ Then, only the Navy enlisted women to serve in support roles during World War I. World War II was a different story with over 266,000 women, about 1.5 percent of the total armed forces, serving as part of the 12,000,000 plus personnel in the military services.⁴ Military combat exclusion policies kept women out of direct or even peripheral combat operations. As the war ended, the great military force drawdown occurred and the United States almost reverted back to an all male service for the line components. However, the draft ended in 1947 and when the military could not get enough male volunteers; the services bridged or hoped to bridge the shortfall gap with females.⁵ To facilitate the services need to recruit women, Congress passed the Women's Armed Services Integration Act of 1948.

1. Women's Armed Services Integration Act of 1948

At the military's suggestion, Congress allowed for women's military service with restriction and quotas on women's utilization. A 2 percent total force ceiling was imposed on the enlisted women force structure and a 10 percent ceiling was imposed on women officers as a percent of enlisted women. Grade limitations were imposed -- one full colonel as the service component director of females -- and women could not serve as commanders. Only traditional skills were open to women, combat exclusion policies remained stringent and military services conservatively ruled on combat proximity. The Air Force put in an age differential for young volunteers

-- 19 for female and 18 for male -- and made the military wife prove civilian spouse dependency. The draft resumption of 1948, which continued to 1974, again decreased the need for the number of women in the military and the 2 percent quota was never exceeded. The Vietnam War brought new pressures to bear for more utilization of women in the military. In 1967 the Defense Department asked Congress to remove the quota ceiling and the officer grade restrictions.⁶

2. Public Laws PL 845 and PL 90-130 To Current Date

In 1956, PL 845 opened the reserves and national guard to women.⁷ PL 90-130 removed the ceiling and rank restrictions for women in the Army and Air Force. The proof of dependency for a civilian spouse was resolved in a Supreme Court case in the early 1970's. PL 93-290 lowered the voluntary enlistment age for women to 18. The Women in the Air Force (WAF) Selection Board was discontinued in 1973. In 1974, the Air Force removed the remaining dual standards that women had to meet -- higher aptitudes, interviews with a WAF Recruiting Squadron Coordinator, pictures, Women's Enlistment Screening Tests and higher educational standards. Female enlistments flourished in the 1970's as the Air Force tripled the number of women in the service from 1972 to 1978. Concurrently, the Defense Department's objective was to double the Air Force female population; this initiative in part was generated by pressure from the expected ratification of the Equal Rights Amendment and the congressional debates on the

All Volunteer Force as a result of the military recruiting difficulties in 1978 and 1979, Then the 1979 Air Force initiative of doubling the number of women (18 percent total force) by 1985 fell short. Higher migration rates, higher basic training attrition rates and forced distribution into non-traditional jobs for the females along with perhaps a perceived change in our new national leadership all served to revised Air Force military women end strength goals downward to 11.4 percent by 1985. Despite a setback momentarily in end strength objectives, qualitative and progressive changes occurred in women initiatives. Interpretation of the combat proximity exclusion policies were partially liberalized. Air Force carefully evaluated specialties formerly closed to women and began to slowly open some up. The Reserve Officer Training Corps program was opened to women in 1969. PL 94-106, which opened service academies to women in 1975, facilitated the admittance of 157 women cadets to the United States Air Force Academy in 1976.⁸ Women successfully passed the test as pilots and navigators in 1976 through 1979 and were assigned non-combat or combat support positions. Enlisted women became aircrew members as loadmasters, boom operators and flight engineers in 1980. Women were accepted in combat support crew positions on the E-3A and KC-10 aircraft. The security specialty of over 40,000 authorizations was opened to women in 1985. The future role of women in the Air Force depends on many interrelated variables -- societal changes,

congressional attitude, national leadership perspectives as leadership changes, health of the All Volunteer Force, senior Air Force officers' directions and probably most important, the perceived and real performance of military women in garrison, exercises and combat support roles today and in the future. My efforts will be to touch on one microscopic aspect of the variables -- do we need a quota on the number of women in the Air Force?

C. OVERVIEW

Congress recommended in the House Armed Services Committee Report on the FY 85 Department of Defense Authorization Act that the Air Force rapidly increase its accession of female recruits in order to free up an increased number of high-quality male recruits for the Army. The committee was concerned with the effects a declining youth population base through 1993 would have on the services recruitment under the All Volunteer Force concept. Since the Air Force had a significantly lesser ratio of positions impacted by the combat exclusion constraint, the committee mandated significant increases in Air Force's accession of women beginning in FY 86.⁹ An Air Force Special Study Team made a comprehensive examination of female accession with assistance of prominent national civilian efforts. This Air Force Study disproves congressional perceptions, presents an accession policy Congress asked for, explains Air Force requirements, presents the organizational study findings of the civilian experts,

discusses force management implications and asks Congress for relief from their female accession quota mandate.¹⁰ To get at my assessment I will cover separate analyses of how women performed in the field during deployment exercises. Critical factors -- supervision and training -- are discussed because of their direct correlation to female job performance, recruitment and career advancement. Key specialty requirements -- aptitude and physical stamina (X factor) -- are examined because of their restrictiveness on recruiting Force. My conclusion presents my introspection and recommendations for future Air Force recruiting goals for utilization of women.

CHAPTER II
UNITED STATES AIR FORCE STUDY ON INCREASING
FEMALE FORCE LEVELS

A. CONGRESSIONAL PERCEPTION OF THE HOUSE ARMED SERVICES
COMMITTEE

The Armed Services Committee mandated that the Air Force recruit females at a minimum of 25 percent of its accession requirements for FY 86. The declining youth population through the mid 1990's, with the lowest projected point being 1993, triggered congressional concern that the Army could not meet its approximate 100,000 personnel accession yearly recruiting goal without tapping into the Air Force pool of potential male recruits. They perceived that the Air Force could rapidly increase female accession and thereby improve the recruiting prospects of other military services (largely the Army) by increasing the pool of high-quality male prospects. Congress views the Air Force as the service with the greatest potential to increase women accession because few enlisted positions, currently 2.5 percent, are combat exclusive and are filled by males only. Indirectly contributing to the increase pressure on the Air Force to access more female recruits is the extremely negative view towards reinstituting conscription that is held by the public, Congress and our national leadership. The Chairman of the Committee on House Armed Services is figuratively leaving no

stone unturned or sacred cows untouched as he works to insure aggregate services recruiting goals are met within the framework of the all Volunteer Force concept.

B. EXCLUSION OF WOMEN FROM COMBAT

1. Based on senior services leadership policies, Defense Department mandates, public law and national leadership guidance over the years, women have been excluded from direct combat participation and from close proximity to combat -- especially the first half of the twentieth century. By law, the Air Force, Navy and Marines must preclude women from direct combat involvement. The Army restricts women from combat by Secretariat level policy exclusion. The Air Force specifies combat exclusion in a regulation to insure public law is not misinterpreted. Public Law, Title 10, United States Code, Section 8579, states "Female members of the Air Force ... may not be assigned to duty in aircraft engaged in combat missions."¹ Air Force's combat exclusion policy statement covers exclusion of females from aerial combat missions, air or ground duties or units with a high probability of exposure to hostile fire and substantial risk of capture, and instructor or staff positions where training or experience in combat aircraft is a prerequisite. Air Force policy further delineates the aircraft with primary wartime mission that are not suitable for the assignment of women, the enlisted and officer specialties that are closed to women, and the unit or unit elements not opened to women. Recent

Air Force calculations establish that 18,600 officer positions (17.5 percent of the officer force) and 10,200 enlisted positions (2.5 percent of the enlisted force) can only be filled by men.²

2. Evolutionary interpretation of Combat Exclusion Policies.

Fifteen years ago, the Air Force had no female officers or enlisted personnel in primary flight duties or missile launch duties; today it does. Over a continuum, changes in our society's, federal officials' and senior military leaders' values on utilization of women in the military have been liberalized. They have caused changes in public law and will probably result in more changes in future years. Presently the gray area of combat proximity and the slow shift toward liberalizing the utilization of women in combat support roles present few problems in garrison or even field deployment exercises. Even the small scale military action in Grenada was easy to control to insure women were not directly involved in combat despite the fact questions were raised about American military women in the country on the third day after combat actions were terminated. However, in the event of hostilities that are located in or very near the combat zone, women in the traditional male assignments (aircraft mechanics, security police and other combat support personnel) will in all probability be exposed to the lethal consequences of enemy action.³

In any future conventional war in Central Europe, women can certainly be expected to be subjected to extensive enemy fire. . . . In the United States and other highly industrialized nations with complex weapons and massive logistical systems, under conditions of conventional hostilities the distinction between combat support and actual involvement in combat becomes vague.⁴

The line between combat and non-combat becomes more and more difficult to draw. Moreover, women in combat support roles become highly vulnerable to potential attack.⁵

What distinguishes the combat support and the combat service support jobs that women now occupy from many of those from which they are excluded is not the degree of risk of their being killed, but rather the degree to which the jobs involve offensive or defensive combat potential. Women are permitted to occupy jobs that are likely to require them to be in combat in defensive positions. . . . Women are currently excluded from operating offensive line-of-sight weapons and from other jobs in units that use such weapons. At the same time, women are in jobs and locations that have the same potential for placing them in the lethal zone, although in defensive capacities. We certainly cannot assume that being a few miles from a current forward area of battle protects anyone from combat.⁶

The gradual expansion in the utilization of women in the military the past 40 years has largely taken place in a peacetime environment (despite our participation in the regional conflicts in Korea and Vietnam) where the military has been affected by the great societal influences -- civilian sector employment trends (a much higher percentage of women working overall and in management areas and other non-traditional job) and institutional issues such as the shortage of male personnel in the All Volunteer Force and the drive to full equality for women in society. A good case can

be made that women are already defensive combatants in the military. Wartime involvement in a large scale conventional conflict would merely serve to bring the gray issue of combat exclusions of women to full reality and force a major rethinking about women's role in combat and precipitate drastic actions or changes in our legislative, executive and military policies.

C. AIR FORCE ACCESSIONS POLICY

The Air Force developed a revised accession approach which brought together three major components in its new integrated enlisted accession model. The first component, Air Force requirements, is the heart of the model. It must consider the 18,600 officer positions and the 10,200 enlisted positions that must be filled by men only because of the combat exclusion factor; then, the critical stateside assignment rotation factor must be added to support the 2,400 male-only positions that exist overseas, again because of the combat exclusion factor. Finally, Air Force requirements are determined by the minimum entry requirements for Air Force service and specific jobs.⁷ These entry qualifications are by far the most critical factor in determining how many women the Air Force can access. Aptitudinal and physical stamina (X factor) qualifications largely determine the male and female mix in a specialty. Over 80 percent of the Air Force positions require a mechanical or electronic aptitude for admittance; the difficulty is that women score significantly

lower than men on these two aptitudinal positions of the qualification test. Coupled with this is the physical stamina (X factor) required for entry into a specialty. The stamina requirements for most aircraft maintenance and physical production type specialties are in the high X factor profile spectrum because of the physically demanding nature of the job. An added constraint is that most of the specialty that require high mechanical and electronic aptitudes also require high X factor qualification. The end result is that a large percentage of recruit eligible women cannot adequately perform in a large percentage of the specialties. The second accession component deals with the youth characteristics in the market place. Air Force competes in the market place with industry and schools and other military services for young men and women. Then mental and physical qualifications are predetermined and thus the Air Force cannot control that process of development. The expert civilian analyses show that proportionately fewer women than men are interested in Air Force service. Statistically, through youth surveys, the researchers determined that 2.5 times as many young men are interested in Air Force service than young women. Then, there are substantial differences in the proportions of young men and women who qualify because of the gender differences highlighted by the fact that young men do much better on the mechanical and electronic portions of the qualifications test as well as in physical stamina (X factor) testing. With

these youth characteristics matched against job qualifications needed and combat excluded specialties, the civilian experts factored an expected male-female accession mix for each specialty. The expected percentage mix of men to women range from the extremely high ratio for firefighters (98 percent/2 percent) and maintenance (94 percent/6 percent) specialties to the better balanced specialties of financial management (65 percent/35 percent) and the medical skills. Interest of potential young recruits is an important consideration that skews some of the male/female gender mixes further out of kilter. The final result is that the aggregate overall accession mix would be about 16 to 18 percent women given current specialty aptitude requirements, physical stamina requirements and interest of potential young recruits. The third major component of accession policy concerns the implications and possible additional constraints on female accession necessitated by the different male and female force mixes. The study group enlisted the aid of civilian experts to perform an extensive organization assessment study. They took a comprehensive look at work arounds, ready availability for deployment, effects of increased military marriages, single member parents, dependent care responsibilities and impacts of pregnancies and time available for duty. The researchers determined that though there would be adverse affects at a 16 to 18 percent female accession level such as the required manpower increase of 1,000

personnel, it would not constraint accessions significantly. The study group concluded their coverage on accession policy by pointing out that to increase the female force level past the 18 percent level can only be done by risking additional costs. It would cost more financially to penetrate one sector of the youth market more deeply than another. Quality would have to be sacrificed and reduced to access youth with lower minimum qualifications. The potential price of these actions could be longer training time, slower learners, added costs of technical training, lower productivity, unnecessary added attrition and the probability of jeopardizing comparable quality between young enlisted men and women. The USAF Special Study Team concluded that an 18 percent accession of women in FY 86 was the maximum female accession level the Air Force could handle without serious complications or impact. Air Force and the Defense Department asked the Chairman of the Armed Services Committee to remove the female accession goals contained in the 1985 Authorization Act that started with 25 percent for FY 86.⁸

D. ORGANIZATIONAL ASSESSMENT STUDY

1. Model.

Syllogistics Inc., under contract to the Air Force, developed a model to simulate the mix of men and women for Air Force Enlistment. The company did not evaluate or question any of the qualification requirements. Rather, it took

current Air Force prerequisites for each specialty and projected individual service interests based on the Youth Attitude Tracking Survey, the Ohio Vocational Interest Survey and the National Center for Education Statistics. It verified much of what the Air Force already knew but it also shed more light on the accession picture in the future. Probably the most important function was to highlight just how critically aptitudes and physical stamina requirements impact on whether or not there will be a high concentration of females in a specialty. The study also highlighted youth survey results that indicated 2.5 times as many males as females are willing to enlist.

The model estimates a total Air Force accession distribution of 84.82% male and 15.18% female, based on anticipated FY 1985 accessions. Results will vary given different AFS accession requirements. By partitioning AFSs into their respective aptitude requirements, however, the within-AFS distributions are significantly different from the total Air Force distribution. Mechanical and Electronic AFSs are predominately male (92.99% and 88.47%, respectively), while women are represented heaviest in Administrative (29.69%) and General (18.07%) aptitude area AFSs.⁹

The Air Force then applied this gender mix model for each specialty and prepared a minimum and maximum recruiting objective for males and females. As qualification factors change for a specialty so will its gender mix computation. Currently the Air Force position is we can access 18 percent females for FY 86. Above that level would require waivers on qualifications to start with and may well result in people unable to do the job right. The question will eventually

come -- How sacred and how accurate are the current aptitude and physical stamina requirements for the specialties? Chapter V will deal with these requirements in more detail.

2. Youth Population Impact.

a. Though the youth population is in fact declining over time, there are other trends in the labor market that mitigate this decline -- increases in the number of women in the labor market, increases in immigration, and decreases in the number of federal job training program participants. For the lowest projection year of 1993, they forecast that enlistment contracts would probably rise by 3 percent and that Army contracts could decline by as little as only 1 percent. These results are far superior to recruiting results for the services worst year of 1979 and would match 1982, which is considered one of the best years for recruiting.

b. If the Air Force accessed a greater percentage of women would the males who did not enter the Air Force opt for the Army? The Rand Corporation study, "Reducing the Air Force Male Enlistment Requirements" concludes that

. . . if the Air Force reduced its male enlistment requirement, most of the displaced male Air Force recruits would choose to remain civilians. Few would enlist in the other service branches. In particular we estimate that only 5 to 17 percent would enlist in the Army.¹⁰

herefore the Armed Services Committee's assumption that the males who do not enlist in the Air Force would go Army appears to be without foundation or validity.

3. Analysis of the effects of enlisted women in the Air Force via a survey of 30 Air Force Bases.

Approximately 20 percent more women than men now wish to transfer to another specialty. Stressful jobs also result in greater propensity to want to transfer as do equipment and personnel shortages. Males with eight or more years of service have an expected career length of about two years longer than women with the same experience. Females are 11 percent less likely to deploy quickly than males. Marital status and care for dependent children have a large, significant influence on mobility. Female pregnancy significantly reduced availability for TDY. Missed hours did not differ for male versus female but family status was an important predictor. Single parents missed scheduled work more than married counterparts, especially single female parents. The percentage of females in a group has a significant negative effect on the group's mobility. An increase in the percentage of women in groups larger than 13 increased the problem of work arounds (helping someone else do their job). Sexual harassment is a problem for enlisted women and is most prevalent working in a poor environment, in a slow paced job and in a group experiencing equipment and personnel shortages. However, what each individual considers sexual harassment,

However, what each individual considers sexual harassment, differs from one individual to another. A significant finding is that the presence of women has a negative effect on mobility and availability and the propensity for greater negative effect increases as the density of women increases. Also a greater density of women in a specialty or work place increases the probability of a work around. A far greater percentage of women transfer out of specialties with a low concentration of females than do males, almost twice as many. In the aircraft maintenance specialties this becomes especially critical because of the significant loss of experienced personnel. Differences between male and female performance can be attributed to family status.

Pregnant female members and single parents are less able to deploy quickly, are less available for TDY, and tend to miss work more frequently than other personnel.¹¹

4. Senior officer perspective

Across 30 Air Force bases, senior officers were surveyed and interviewed. Though the sample size is small, the surveys indicate definite patterns or opinions about the effect of enlisted women on the force. First, they were extremely positive about female duty performances, rating them above average and equaling or excelling male job performance. Over 90 percent of the senior officers or greater believe that women have a positive or neutral effect on

organizational morale, day-to-day performance, sexual harassment, people per job and discipline problems. However they raise concern about the females' ability to deploy and their assignment flexibility. An interesting portion of the survey dealt with senior officer views on the threshold of where enlisted women could have a negative effect and the reason why. These are depicted on Table 2-1 and 2-2. In Table 2-3 the senior officers project the effects of women on unit performance at current manning versus females at a level of one-half the force. Their perception also applies to a significant increase in female officers as shown in Table 2-4. Over 64 percent of the officers believe women would have a negative effect at a 24 percent manning level and 100 percent see a negative effect if women would constitute 50 percent of the force. The senior officers were very positive on female performance at current manning levels but perceive serious problems as we achieve greater than a 20 percent ratio of female to total Air Force population. They are concerned about women's ability to deploy and flexibility to do assigned tasks. Their perceptions about significantly increasing the ratio of females to total force are quite alarming and strongly indicate further research and analyses are mandatory, if and when we reach the point of a 21 to 50 percent female to total force ratio. Likewise, the senior officers' suggestions to facilitate transition to more women in the Air Force were quite revealing -- reduce or eliminate

barriers to women, better define women's role in the Air Force, increase training, and evaluate standards and change as necessary. These suggestions were recommended by 69 percent of the officers. Their ideas would require further and extensive study of the whole Air Force enlisted specialty structure and make-up.

E. MANAGING THE FORCE

A myriad of personnel factors must be considered now and in the future as we increase female end strength in the Air Force. The impact of increased manpower requirements, pregnancies, single member parents, military couples, deployment availability, migration out of specialties and retention difficulties will raise the cost of doing business in the future.

1. Increased manpower

From 1982 study data, nonavailability of females for duty was greater than nonavailability of males. The average nonavailable time for men was 22.49 hours per month, and the average nonavailable time for women was 24.89 hours per month.¹² The difference is largely in the medical area where females were nonavailable 5.78 hours per month -- pregnancy related incidence was only 1.66 hours per month of this total -- while males lost only 2.57 hours per month as nonavailable for work. In manpower costs, a one hour increase in nonavailable hours per month equaled 1,400 manpower spaces. For a 100 percent increase in female accession, from 11 to 22

percent, the estimated manpower cost is about 370 additional manpower requirements. Of course the nonavailable times may change over time; however, as the percentage of females in the Air Force increases, medical related nonavailability can be expected to increase because of pregnancy related absences from work.

2. Pregnancy

Currently, approximately 4 percent of Air Force females are pregnant at any one point in time. For the Army, the figure is much higher, 10 percent. In large populous work centers, pregnancies do not have a large impact at present female accession rates and current statistics on pregnancies. However when a pregnant woman works in a small section or shop, the impact is much greater. In a 10 person shop, two pregnancies cut the work force 20 percent and can severely degrade the shop's mission capability, especially during heightened readiness exercises and sortie surges. As the percentage of female accession increases, the impact on the available work force can become substantial and mission limiting.

3. Single Member Parents and Military Couples

Single member parents are already a problem in the Air Force. Air Force no longer enlists single member parents. Research indicates they are less available for mobility, TDYs and normal duty. Female single member parents are more non-available for duty than male single member parents. They

also attrite from the Air Force at much higher rates than males. The number of 7,300 single member parents will continue to grow -- to a projected 16,000 if we double the female accession rate to 23 percent -- and the impact and Air Force constraint is perceived as negative. The 20,000 Air Force married couples increase daily and will continue to increase. As the percentage of females in the Air Force increases, the Air Force projects the number of married couples to increase to 45,000 if the female accession rate increases to 23 percent of the total force for example. Statistics verify that female Air Force personnel marry Air Force males disproportionately to civilian male spouses. They respond more slowly to deployments and mobility requirements and go TDY less often than their peers in the service.

4. Migration Out of Specialties and Retention

Early research reveals that females migrate out of specialties that have low concentration of females. These specialties usually have higher electronic and mechanical aptitudinal and physical stamina requirements than the average specialty and require longer technical training courses. These specialties (such as the aircraft maintenance career fields) take longer to groom an experienced airman and at just the time they become valuable in the specialty, the migration out of the specialty or out of service occurs. The average migration out rate for females is almost double that of males. If the Air Force is forced to access more females

than the accession model supports, it will have to access them into the low concentration specialties of areas like aircraft maintenance, firefighters and other production based specialties that continue to lose females at twice the ratio of male losses. This will impact on total force retention. Retention of married Air Force females and females in low concentration specialties is already much lower than male retention. Women, in survey responses, indicate career intents that are an average two years less than the stated intentions of males. If women are involuntarily placed in specialties they dislike or in low concentration skills, research indicates they migrate out at alarming rates, the expected impact at the four year point will negatively impact on retention.

5. Deployment Availability

Although I have previously touched on the availability of females, this is an important mission limiting factor that needs to be covered separately. Surveys, interviews and research all indicate that females are almost 25 percent slower to deploy or are not able to deploy (pregnant, single member parents, married couples, or unable to get the children settled so they could depart the base). The inter-theater and intra-theater deployment requirement for the active enlisted force is 136,000. As the number of female accessions increases, so does their inability to deploy with the troops and means a peer must take their place even though he or she

may have already been TDY two or three times as much. Female availability to deploy has the potential to become a mission limiter.

6. Summary

The Air Force position to date has been one of watching and studying. At 18 percent female accession, it recognizes that these force management areas will have to be worked carefully. They are not yet mission limiting. However, the Air Force strongly caveats that accession beyond 18 percent will require added study for impact on the Air Force mission. I believe the impact will already begin to occur at 18 percent based on a 1984 Air Force contracted survey worldwide of 12,000 airmen at 30 bases with 800 interviews and the perceptions of supervisors and senior officers.

TABLE 2-1
OFFICER'S PERCEPTIONS THRESHOLD OF WHERE ENLISTED
WOMEN WOULD HAVE A NEGATIVE EFFECT

Percent of Women in Senior Officer's Unit	Percent of Senior Officers
10-14%	7%
15-19	32
20-24	25
25-29	17
30-49	14
50+	<u>5</u>
TOTAL	100

TABLE 2-2

MAIN REASON INCREASE IN WOMEN WOULD HAVE NEGATIVE EFFECT

Reasons	Percent of Total Responses	Percent at Which Effect Changes ¹
Availability ²	36%	19%
Inadequate Strength	21	26
Morale	16	23
Combat Exclusion Rule	14	21
General Performance	9	18
Leadership	<u>4</u>	<u>-</u>
TOTAL	100	

¹The mean percentage for all respondents giving that reason.

²Includes general effect on availability as well as effect caused by pregnancy and family concerns.

TABLE 2-3
EFFECTS ON WOMEN ON UNIT PERFORMANCE

Measure	Current Numbers			One-half of the Force		
	Pos.	Neu.	Neg. ¹	Pos.	Neu.	Neg
Group Performance						
-Day-to-day Performance	60%	38%	2%	10%	9%	80%
Availability	<u>20</u>	<u>58</u>	<u>22</u>	<u>6</u>	<u>20</u>	<u>74</u>
-Number of people needed to get the job done	27	64	9	12	22	66
-Supervisor's flexibility in assigning work	20	53	27	3	25	72
-Ability to deploy and mobilize	12	58	30	2	14	84
Group Dynamics	<u>44</u>	<u>55</u>	<u>1</u>	<u>19</u>	<u>34</u>	<u>46</u>
-Morale	50	50	0	3	18	78
-Incidence of sexual harassment	24	75	0	12	41	47
-Number of discipline problems	58	40	2	43	43	13

¹Cell percentages indicate the proportions of senior officers giving positive, neutral, or negative responses.

TABLE 2-4
EFFECT OF INCREASE IN FEMALE OFFICERS TO
HALF ACROSS ALL FUNCTIONAL AREAS¹

Performance Measure	Percent of All Senior Officers			
	Positive	Neutral	Negative	No Response
Day-to-day Performance	8%	53%	38%	0%
Mobility and Deployment Responsiveness	0	33	63	.3

¹Except for those affected by combat exclusion rule.

CHAPTER III

DEPLOYMENT PERFORMANCE

With a heavy deployment requirement for 136,000 personnel, performance during deployments is a critical part of mission readiness. The field conditions during an exercise can task the mettle of the airmen given generally poorer living conditions, longer duty hours and inclement weather (severe heat or cold). Two sociologists deployed with our armed forces to study how females performed under field conditions. Here are their findings:

A. JOINT CHIEF OF STAFF EXERCISE, 1982

This two week exercise was held in the southwestern United States. A radar squadron of 200 was an Air National Guard unit which operated around the clock and lived and worked under field conditions. Ten percent of the squadron were females who lived under the same austere living and working conditions as the males. The sociologist looked into two interpersonal relationship questions "Are women capable of surviving and working effectively under these kinds of conditions? How does incorporating women into a unit affect its combat effectiveness?"¹ The first question has been answered over the past 80 years that female nurses have deployed in field conditions in combat support roles. They performed and functioned admirably and as well as males, often outperforming the men. However, nurses were considered to be different and perhaps not representative of how other

females would perform in field units. The current concern is how women's presence influences the mission and the unit's combat effectiveness. In this exercise, observations reaffirmed that women can indeed perform effectively in a combat environment.

. . . individual mettle was what seemed to make a difference, and it is hard to generalize this as the exclusive property of one sex . . . how about physical toughness? It should again be emphasized that everyone worked hard in this situation: much of the labor was manual and all personnel had to pitch in. Also, given the extreme environmental conditions, it is quite surprising that much more sickness and injury did not occur . . . To summarize: yes, the women observed in this situation could and did "take it", both mentally and physically, in a combat-simulated environment. Individual rather than gender-related differences seemed to be the crucial explanatory variables here.²

Next, the evaluation turned to the issue of how women affected the unit's combat readiness. As time went on the protection factor refined itself.

In time, however, different norms began to emerge, and the situation became characterized more by "every person for him/herself." . . . The new emerging norms thus seemed to include the idea that gender was becoming generally less important and especially incidental to assistance . . . women and men begin to share daily tasks and duties . . . a sort of "we're all in this together" . . . and there was a push toward equality and interdependence. . . I found myself feeling closer to my work group than to my gender group . . . most of my time -- both on and off duty -- was spent with my co-workers.³

Bonding is another issue that is often hotly debated. It begins in garrison and intensifies in field or combat conditions. This research effort discounts a common perception

that females will have a difficult time bonding into a unit effort.

Male-female bonding of a nonsexual nature occurred in the field. . . common experience was crucial, and gender incidental, to interpersonal bonding . . . male-female bonding that is sexual in nature is less likely to occur in a field environment.⁴

Cohesion is yet another critical factor that must develop for a unit to function effectively especially in the field or in combat.

What seemed to bind this collection of individuals together was what they went through as a team . . . Those who had deployed had built up a store of common experience. . . what seemed to produce cohesiveness was having gone through the experience together and having been mutually interdependent. Gender seemed of less importance. The findings of this study thus suggest the hypothesis that cohesion is based on commonality of experience, shared risk, and mutual experiences of hardship, not on gender distinctions.⁵

Thus to conclude coverage of this exercise, the bottom line is combat readiness and how did the presence of women impact on it.

The women in this study affected the readiness of this particular unit in only one way: I felt they enhanced it. The women (and men) who were deployed with the unit were taken along because their jobs -- and their ability to perform them -- were critical to the unit's effective operation . . . Those members who were especially knowledgeable were particularly prized and highly depended upon; indeed, some of the unit's most valued "advance team" were women. These individuals were so designated because (1) the particular job they performed was crucial to the successful accomplishment of the unit's mission, and (2) they performed this job very effectively.⁶

B. GRANADERO I

This study dealt with observing and interviewing soldiers of American Army units that were TDY for 179 days in Honduras in 1984. The sociologist observed 700 soldiers, of which 50 were female, at two different locations. Field conditions were again austere and the weather was hot. As with enlisted women in the Army generally, the Army females TDY to Honduras were better educated and more intelligent than their male counterparts.

The morale and commitment of the American soldiers, male or female alike were remarkably high. . . considering the spartan living conditions and arduous work, the good spirits of the soldiers were striking . . . Efforts to maintain some level of privacy in sleeping and showering arrangements were not as stressful as we might expect . . . the women's concern for personal privacy quickly eroded over the course of the field experience . . . Women worked as effectively as men . . . the men were more likely to be defensive rather than derogatory of female work performance . . . There was no pattern by sex or of better or poorer workers. . . the women were increasingly judged as individuals and not by their sex. . . That sexual harassment did not seem to be a major concern of the female soldiers in Honduras was surprising . . . Enlisted women showed much more concern about their privacy in the field than did female officers . . . The incorporation of women in the extended deployment and field conditions of Honduras can be recorded as a success story. On balance, the women were working well in demanding jobs in a difficult environment. Work relations between the sexes were better in the field setting than was often the case in garrison. Over time, the women come to be regarded and evaluated as individuals rather than as a sexual category. This individualization contributed more than anything else to the successful incorporation of women into nontraditional assignments . . . women soldiers, under certain conditions do much better in nontraditional military roles than most people think.⁷

C. SUMMARY

Women performed up to and beyond expectations in these exercises. The longer and better the men and women knew each other over long term working relations, the greater the likelihood that both males and females would be treated as individuals rather than a gender or sexual category. The austere living conditions enhanced rather than detracted from a cohesive working environment. Both reports point out that women enhance the combat effectiveness of their units under field conditions.

CHAPTER IV
SUPERVISION AND TRAINING

A. SUPERVISION

One critical positive denominator that comes through powerfully in the 12,000 surveys conducted at 30 Air Force bases is the bright influence of quality supervision. High supervisory quality was strongly related to higher group morale, a lesser likelihood that individuals wanted to transfer out of specialties (especially stressful jobs), fewer airmen wanting to leave the Air Force early, longer expected career lengths for airmen, an improved probability that a unit will deploy all of its members quickly, and a lesser incidence of sexual harassment.

Supervisors play a key leadership role in high morale, few work arounds, fewer departures from the specialty, better group performance and high individual commitment. . . The quality of supervision is directly proportional to all performance indicators, except individuals' TDY availability and missed work hours.¹

It comes as no surprise that quality of supervision is directly related to better performance in just about every area of human reactions and work factors. Good supervisors can make a unit outstanding. Their ability to overcome problem areas in leading the shift, shop, branch, division and the unit itself strengthens mission effectiveness and combat readiness. Quality of supervision is critical to Air Force readiness.

B. TRAINING

Training and supervision go hand-in-glove. They are inter-dependent. Good supervisory qualities take time, experience and patience to develop and fine tune. However, good training provides the foundation of principles and basics for development of that supervisory quality. The Coast Guard learned this lesson the hard way in the mid 1970s when the decision was made to significantly increase the female population on a vessel without preparing the supervisors, the men and the women who became new crew members. No preparation or training was accomplished and the ship's morale and performance was severely affected. The Coast Guard had to regroup and prepare the crew for acceptance of the large influx of qualified females with fall back introspection into the problem, applied sensitivity and a human relations foundation on which to build a cohesive crew. The crew was quickly back on track and performing as a team. In the Organizational Assessment Study, senior Air Force officers at 30 bases addressed the very same issue in their suggestions for facilitating the transition to more women. One suggestion called for a similar approach.

Increase mental and physical training requirements for men and women, and provide "social actions" training to teach personnel how to manage and work with an increasingly feminized force.²

The Air Force experienced situations similar to the Coast

Guard situation as women began to trickle into the nontraditional specialties, e.g., aircraft maintenance career fields, where a woman was the first or only female in the shop, the supervisor had never supervised females before and supervisors had difficulties in handling the new challenge. Once experience was gained and supervisors worked smarter to transition the shop to the changing work environment, the problem was rapidly solved. Proper training and good supervision became subtle but important requirements in responding to a changing Air Force and effectively transitioning more females into the total force.

CHAPTER V

RECOMMENDATIONS

A. AIR FORCE POSITION

In responding to the House Armed Services Committee tasking, the Air Force studied the accession and utilization of enlisted personnel under Committee guidance to develop an approach based on its total capacity or "demand" for women. Extensive study and research by a civilian team of experts disproved Congressional concern that the shrinking pool of youths through the mid 1990s would adversely impact recruiting and the All Volunteer Force; it showed the opposite, a healthy recruiting projection for both the Army and the Air Force in the worst case year of 1993. The study then disproved the Committee's belief that any decrease in Air Force male recruits would automatically and inversely help the Army; Rand Corporation verified that only 17 percent would enlist in the Army while 83 percent would remain civilian if they could not enlist in the Air Force. The study presented an integrated enlisted accession model that factored in Air Force requirements, youth characteristics and calculated male-female force mixes based on requirements, constraints on accession of women and the youth characteristics. Air Force proposed the model based accession mix to be about 18 percent women and stated the Air Force could not support 25 percent for FY 1986. Though extensive, well documented and well thought out, the study itself has some soft spots.

First, the integrated enlisted accession model is largely a new tag on an old way of recruiting and accession. It quantifies more easily and clearly the procedures that have worked very well in the Air Force for years. Second and most important, it considered all requirements -- aptitude, physical and educational -- as completely valid and correct. The team made no effort to validate aptitudinal and physical stamina qualifications for the specialties to see if any could be scaled back. Finally, the team reviewed Force Management issues and determined they would not constrain an 18 percent female accession; however, the Organizational Assessment Study indicated negative impacts of women in the areas of mobility and flexibility on the job at a 20 percent accession level. I expect that the House Armed Services Committee will send the Air Force back to the drawing board to reevaluate its specialty qualifications.

B. APTITUDES

The perceived use of aptitudes and the Air Force stated use of aptitudes are 180 degrees out of synchronization. Youth, recruiters, and a major portion of Air Force members equate the Mechanical, Administrative, General and Electronic (MAGE) aptitudes to the type job the specialty actually is. However, Air Force has long used aptitudes as an indicator of probable success in completing the technical training course. The Occupational Measurement Center and Military Personnel Center review occupational surveys to

correlate aptitudes with technical training requirements and specialty difficulty. The functional managers have the human propensity to raise standards and fight any reductions even when the evidence supports reductions. In this regard, there is ample room for a wholesale review of decreasing or revising the MAGE aptitudes downward or even changing the specific aptitude for a specialty. Finally, depending on the recruiting market, the aggregate qualification requirements used at any given time exceeds the minimum qualification for a specialty. This Air Force added imposition of a higher overall qualification should receive a thorough review for restrictiveness, adequacy and constraint on female accession. Aptitudes are misunderstood; in addition, the natural tendency to want to maintain high standards justify a complete review of aptitude level and composition for the Air Force Specialties.

C. PHYSICAL STAMINA (X FACTOR)

The X-factor is one of the seven profiles of medical qualification and is used to identify strength requirements. Recruits are tested to determine the level of strength as part of the job classification process. Up until 1981, X-1 denoted the requirement to lift 70 pounds to six feet, X-2 40 pounds to elbow height and X-3 20 pounds to elbow height. A major review of the X factor requirements for each Air Force Specialty began in 1978 and the evaluation culminated in 1981 with major revisions upward. Now X-1 denotes the

requirement to lift 100 pounds to six feet, X-2 70 pounds to six feet and X-3 40 pounds to elbow height. The X factor is the toughest health profile for female accession into the AFSs. Only 3 or 4 percent of female recruits can achieve X-1 and only 32 percent of the females achieve X-2. Males conversely qualify at significantly higher rates than females with 80 percent of the males qualifying for X-1 and 98 percent qualify for X-2. Though the Air Force classification system reviews specialty requirements semi-annually, it has been six years since the X factor qualification make-up was revised. I believe that it is now time again for the Air Force to perform another objective review of the X factor make-up. Is there a middle ground between the old X factor composition and the current one, that meets the needs of the Air Force without compromising a male or females' ability to perform in the specialty? I believe it is time to reevaluate the X factor composition!

D. DO WE NEED A QUOTA?

We do not need the minimum female accession quota the Armed Services Committee mandated nor do we need a maximum quota like Congress imposed by the 1948 Women's Armed Services Integration Act. We more critically need an objective review of X factor, aptitudinal levels and make-up, add on recruiting qualification restrictions and actual constraints of the force management issues (pregnancy, single member parents,

married military couples with dependents, deployment availability and work arounds) at the FY 1986 level of an 18 percent female accession of total force. Quotas by their very nature can cause or facilitate unnecessary pressures, constraints and objectives at either end of the spectrum. Rather, we need to perform a continuing analysis of requirements that is realistic, critical and objective. The 1985 United States Air Force Study is a good start but we need to take it further.

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