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RESEARCH REPORT

WOMEN IN MILITARY AIRCREWS:
POSSIBLE OUTLOOKS FOR THE FRENCH AIR FORCE

LT COL FRANCOIS BECK
FRENCH AIR FORCE

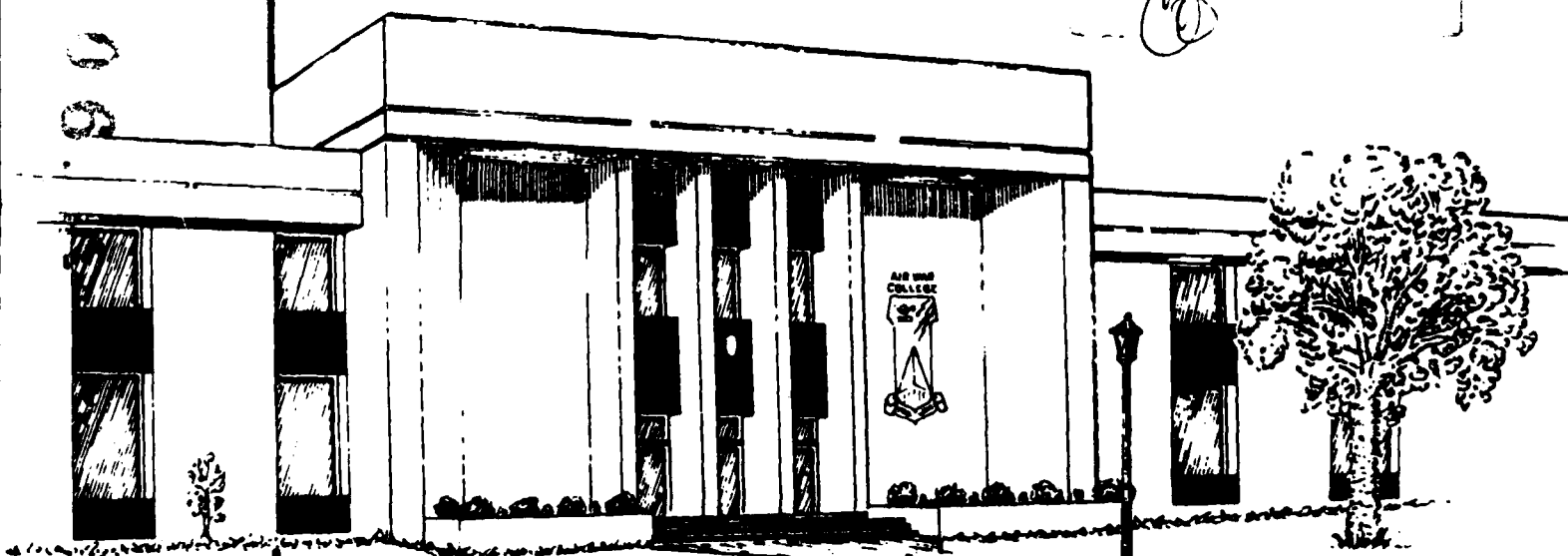
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WOMEN IN MILITARY AIRCREWS:
POSSIBLE OUTLOOKS FOR THE FRENCH AIR FORCE

by

Francois Beck

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A DEFENSE ANALYTICAL STUDY SUBMITTED TO THE FACULTY
IN
FULFILLMENT OF THE CURRICULUM
REQUIREMENT

ADVISOR: Colonel Charles J. Jernigan III, USAF

MAXWELL AIR FORCE BASE, ALABAMA

May 1989

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EXECUTIVE SUMMARY

TITLE: WOMEN IN MILITARY AIRCREWS: POSSIBLE OUTLOOKS FOR
THE FRENCH AIR FORCE

AUTHOR: Francois Beck, Lieutenant Colonel, French Air Force

Women are playing an increasingly important role in Western countries' Air Forces, a trend which reflects the changing role of women in society overall. Since 1983, the French Air Force has initiated a program to recruit female pilots, but on a limited basis. The U.S. Air Force experience with integrating women into aircrews has been both longer in duration and larger in scope.

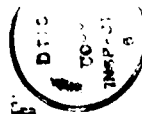
After describing the actual policy and current situation in the French Air Force, the author analyzes the opening of cockpit positions to females in the USAF. He discusses the specific issues which might impact on unit readiness and ability to deploy, such as recruitment quotas, pregnancy, joint spouse assignments and unit morale.

He draws on the successful U.S. Air Force experience and concludes that the lessons learned here may be used to project expanding roles for women in French military aircrews. He further brings some outlooks and recommendations to broaden the French Air Force program.

France (EG) A

BIOGRAPHICAL SKETCH

Lieutenant Colonel Francois Beck graduated from the "Ecole de l'Air" (French Air Force Academy) in 1971 with a degree in Aeronautical Engineering. Trained as a transport pilot, he served in various tactical airlift units from 1973 to 1982 successively at Orleans, Toulouse, and Evreux FAFB. He participated in several operational detachments in Chad and Gabon and was posted in 1982 to the Multinational Force and Observers, Sinai as first French Contingent Deputy Commander. He became commander of training squadron 1/63 at Toulouse and then class commander at the French Air Force Academy from 1984 to 1986. He was next assigned as deputy and then commander of the Transport Academy at Toulouse until 1988. Colonel Beck is a graduate of the Air War College, Class of 1989.



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TABLE OF CONTENTS

	PAGE
DISCLAIMER	ii
EXECUTIVE SUMMARY	iii
BIOGRAPHICAL SKETCH	iv
CHAPTER	
I INTRODUCTION-OVERVIEW	1
II THE INTEGRATION OF WOMEN IN FRENCH AIR FORCE AIRCREWS	6
Historical Review	6
The Situation Today	10
Issues	15
III THE INTEGRATION OF WOMEN INTO U.S. AIR FORCE AIRCREWS	20
Historical Review	20
Evolution of the Combat Exclusion Policy	23
Quota or Not Quota?	28
The Situation Today	29
Specific Issues	34
General Assessment	43
IV RECOMMENDATIONS FOR THE FRENCH AIR FORCE . .	51
Combat Exclusion Policy	52
Quota	53
Recruitment	54
Assignment Policy	55
Other Specialties	55
Joint Spouse Assignment	57
Pregnancy	58
Deployments	59
Pilot Retention	60
Unit Morale	60
V CONCLUSION	62
LIST OF REFERENCES	65
GLOSSARY	69

CHAPTER I

INTRODUCTION-OVERVIEW

Since the 60's, sociological changes in western societies have pushed more women into non-traditional jobs. Consequently, these waves of change also affected the armed forces, as the numbers of females in uniform increased over the years, and as women were no longer restricted to the tradition nurse, administrative, or personnel positions. New horizons developed in the late 70's as women were allowed to fly as pilots and navigators on military aircrews, positions which were previously considered as male positions.

The U.S. Air Force opened the first Undergraduate Pilot Training (UPT) program for women in 1976. The assignment policy was rather restrictive initially, but later some significant openings were achieved. However, female pilots have so far not been allowed to fly fighter or bomber aircraft.

The French Air Force started to recruit female pilots in 1983 on a very limited basis. Until now, they have only been assigned to liaison units and only have the opportunity to fly light-liaison aircraft.

The purpose of this analytical study is to determine if the USAF experience in integrating women into flying specialties is successful and if some positive outlooks may be used to broaden the French program.

As a matter of fact, the American model is quite interesting for the French Air Force (FAF) and is worth studying basically for two reasons:

- First of all, the USAF has a larger data base as far as feminization of aircrews is concerned, both in duration and in scope. Hence, trends and statistics are easier to see.

- Lastly, in a brief 1987 survey about women integration into the NATO Armed Forces, the FAF Direction of Personnel concluded that "the U.S. example seems the most likely to follow." (1)

Posing the problem, I will first describe the actual FAF policy concerning the opening of cockpit positions to females. In this action, I will outline the legal framework, the recruitment and assignment policies and make an overview of the present situation, including the problems encountered.

The next section will be the core of my study and is devoted to the USAF policy. A brief historical review will

deal with the implementation of the "equal opportunity and treatment program" and with the significant increase of women in the Air Force. Then, I will particularly focus on the evolution of the combat exclusion rule and the assignment policy since the late 70's. I will also discuss the limiting factors which are the most important concerns for the USAF and which may affect its combat readiness and the ability for its flying units to deploy: medical problems, pregnancies, joint spouse assignments, pilot retention, and impact on unit morale.

Having successively analyzed these problems, I will address some recommendations for the French Air Force. Considering the present experience of the USAF in integrating females into cockpit positions, I conclude that, although the quota in the FAF seems to me adequate, some arrangements may be implemented by opening all the cockpit specialties without any restriction to female officers and enlisted, by creating new career paths and by broadening the assignment policy to all flying units excluding direct combat units.

For my investigation, I used both literature and articles written on the subject during the past 15 years. Most of the figures and statistics were kindly provided to me by Headquarters United States Air Force, by the Air Force Military Personal Center, and by Headquarters Strategic Air

Command, Military Airlift Command, and Air Training Command. I also interviewed a dozen former squadron commanders from various major commands who had female crewmembers in their units. In addition, I had the opportunity to interview a few female pilots attending the Air Command and Staff College and Squadron Officer School. These interviews were conducted on a non-attribution basis.

From across the Atlantic, the United States is often perceived as a highly liberated society in which feminization in the military should be a normal and natural process. I discovered, however, that the reality is much more complicated and that the issue is still passionate and emotional.

Between hardline reactions such as "leadership and authority are male attributes ordained by God. Women in combat roles violates the order of creation, will of God." (2) and "Men must learn to . . . treat [women] as human beings, not another species." (3) I deliberately avoided moral and chauvinistic arguments about whether or not women should operate military aircraft. I refer to the law which allows them to do so and, I assume they have so far proved their abilities to perform effectively in these positions.

My concern will be to determine how an Air Force can cope with these sometime conflicting requirements:

- provide equal opportunity and treatment to any individual based on merit and skill, not on gender.

- maintain the Air Force at the same high level of readiness and quality training.

Eventually, my ultimate criterion to assess if the integration of female in aircrews is successful is to determine whether or not the Air Force still gets the job done.

Finally, although most of this study deals with pilots, I will also discuss other cockpit specialties such as navigators, flight engineers, loadmasters, boom operators, and flight nurses.

CHAPTER II

THE INTEGRATION OF WOMEN IN FRENCH AIR FORCE AIRCREWS

France is a modern Western European country. It is also a country of Latin-Catholic cultural background in which women were formerly confined to household related roles or traditional and ancillary functions. But as a result of the dynamics of the society and the general process of women's emancipation, the utilization of women in the military naturally increased. Today, the state of the integration of women into the French Armed Forces is well advanced and it doesn't seem there is a great variance with the more "liberated" Protestant-Anglo Saxon systems. Let us first review the historical evolution and focus of the Air Force.

Historical Review

After World War II, all women serving in the FAF were part of a special corps, the "Forces Féminines de l'Air" (FFA). They were not really integrated into the Air Force due to:

- separate systems of recruitment and administration
- different ranks and discipline rules

- specific activities, limited to nurse, clerk, and headquarters positions.

In July 1946, 35 flight nurses were recruited for a special need of bringing back home by airlift all the POWs from Germany and Central Europe. Recruited from a group of welfare workers and Air Force nurses, they were considered AF civilian personal. (4)

In 1951, the FFA became the "Personnel Militaire Féminin de l'Armée de l'air," but their statute still remained segregationist. Although women were more integrated in the military community, they had few opportunities to rise to senior levels due to a rather restrictive promotion system.

In 1970, Mr. Debré, Ministry of National Defense gave some precise guidances in order to broaden the integration of women into the military. He called for increasing female recruitment, opening new career fields to them, eliminating discrimination between male and female careers, and creating a female joint training school. (5)

A reform of the 1951 statute occurred in 1973. The hierarchy, administration, and promotion system became the same for both male and female. However, the only flying specialty opened to females at that time was flight nurse (convoyeuse de l'air). According to their new status,

flight nurses became flying officers in the corps of "officers de réserve en situation d' activité" (ORSA), equivalent of activated reserve officers.

As a result of these measures, the number of women in the military increased significantly during the 70's. As for the Air Force, the female strength went from 2513 in 1970 to 4342 in 1979 (out of a total of about 100,000). (5)

The most recent move towards women's integration was given in 1982 by the then Minister of Defense, Mr. Charles Hernu. He initiated a 30 objective program, 7 of which impacted directly on the Air Force. Thus, the basic military and technical training became the same for both male and female. Also and for the first time, women could apply to fly as pilots under certain conditions:

- the recruitment of female pilots concerns only ORSA. (ORSA are usually specialists but do not compete for leadership positions.) Female officers graduating from the "Ecole de l'Air" (French Air Force Academy) are not eligible for this program.

- the recruitment is limited to 10 percent of the female officers who get their transport pilot wings each year.

- the positions opened are restricted to the COTAM (Commandement du Transport aérien militaire: French MAC). (6)

In addition, female pilots who receive their wings may apply for the "Ecole Militaire de l'Air" (bootstrap), a one-year school which allows them to have more responsibilities and hold leadership positions in the future. (7)

As a result of these new measures, the Air Force recruited 4 to 6 female pilots each year from 1983 to 1988. January 28, 1985 was a milestone, as Cadet Isabelle Boussaert was the first female to get her pilot wings. The goals set by the Minister of Defense in 1982 and consequently by the Air Force Chief of Staff have been reached. Twenty percent of the officers recruited annually are female and women now comprise about three percent of the officer corps. (8) As for the enlisted, about 10 percent of them are females. However, in spite of the significant openings in women's utilization in the military during the last decade, there is still not equal opportunity in line positions and careers. Women integrated quite easily into ground and support functions, but it appears that aircrew positions are still a male bastion. Yet, flying is the soul of an Air Force and that makes it a sensitive issue. With this background in mind, let us have a look on the present situation.

The Situation Today

Pilots. The recruitment criteria are the same for both male and female as far as academics and psychomotor skills tests are concerned. However in sports tests, there are different events with different rating scales for each gender. Also, medical requirements are different. (9) Females need to be "transport pilot fit," whereas males must be "fighter pilot fit" (additional ejection seat constraint).

By law, female pilots are assigned to transport pilot positions within the COTAM. (7) Besides, the "combat exclusion rule" has been expressed in a sibylline manner:

The Air Force Chief of Staff has opened all specialties to female personnel, but he respects the idea that positions calling for significant physical strength and those subject to the toughest demands of fighting life should be filled only by males. Hence, he does not open to women the speciality of combat pilot . . . (8)

By the end of 1988, a total of 35 female pilots had been recruited. Out of them, 28 completed UPT, 16 got their transport pilot wings, 1 received helicopter pilot wings, and 13 successfully finished technical school at Toulouse. (10) Except for the helicopter pilot, all of them were assigned to one of the four liaison units stationed at Villacoublay (near Paris), Bordeaux, Metz, and Aix-en-Provence where they fly Nord 262 aircraft.

So far, the first French female pilots have proved to be quality people. Each year, 150 to 200 apply to be military pilots. Only 4 or 5 then are selected (10 percent of an annual recruitment of 40 to 50 pilots). Even if a decreasing retention rate results in the short term recruitment of 10 or more pilots a year, a maximum of 6 females would be selected. Nevertheless, this limited quota is a quality token.

Seven female pilots have so far failed basic pilot training, but none of them have been eliminated during advanced pilot training at the "Groupement Ecole 319" at Avord.

All of them successfully completed technical school on Nord 262 (as the male students did on that type of aircraft). As for the male students oriented to C160 (tactical airlift), five to ten percent of them usually fail at this level, taking 1 year with another. However, the C160 is known as more demanding than the Nord 262.

Two out of twelve women failed their checkride for copilot qualification but completed it two months later after additional training in their unit (same rate as for males). (11)

Six female pilots are now aircraft commanders. As soon as they got this qualification, they followed a training

program to be qualified on another aircraft assigned to their unit, i.e., MS760 "Paris" or DHC6 "Twin Otter." There is no official guidance about this policy. Usually the requirement is initiated at the squadron commander level. As a matter of fact, these small units with only 10 to 15 pilots have a busy schedule and everybody must share the burden. This is particularly true for the "Escadron de Transport 1/65" at Villacoublay whose pilots operate two DHC6 within the "Multinational Force and Observers" (MFO) in Sinai. This implies at least two two-month deployments a year in the Middle East for each pilot. Hence, there is a real need of qualified pilots on this type of aircraft. All pilots, including females must share the workload with equity.

Last summer, two female pilots from the first group were assigned to Avord in order to become instructor pilots on "Xingu" for advanced pilot training. They were not really enthusiastic about this assignment which is not perceived as "first class" (also for males). Nevertheless, the Air Force policy is to provide equal opportunity but also equal treatment whatever the gender is, and there was no reason they could have avoided this assignment.

Finally, one brilliant female pilot entered the "Ecole Militaire de l'air" in August 1988 after succeeding the competitive examination. This is the first time a women

pilot has been selected for this school and her case is being followed closely by the Air Force. When she graduates from the "Ecole Militaire de l'Air," it means that she will be eligible for a leadership career and so far nothing has been foreseen in this case.

Other Specialties. Air Force regulations concerning female crewmembers make only provisions for pilots, not for navigators. However, the law is ambiguous on this matter because it allows women to apply for "flying personnel positions" not specifically "pilots." (6) But no female has been sent to navigation school at this point. The specialties of flight engineers, loadmaster, and boom operator are not open to female enlisted.

Flight Nurses. The case of the flight nurses is quite peculiar. It is an all female unit, directly subordinated to the COTAM Headquarters. They are sent-on-request on any type of mission where their skills are needed: Medevac, humanitarian missions (for relief after earthquakes, floods, etc.), operational detachments with aircrews (in Sinai, Chad, Lebanon), passengers assistance on DC8 or crewmember on Presidential flights during official trips.

The history of the "convoyeuses de l'air" goes back to the aftermath of World War II. During the Indochina

War (1947-1954), they did a remarkable job and showed courage and gallantry in a difficult combat environment. One of them, Geneviève de Galard, was taken prisoner with her crew at the Battle of Dien Bien Phu, as their airplane was damaged and they couldn't take off. As a woman, she was offered to be freed by the Vietminh but she showed an outstanding crew spirit and preferred not to separate from the crew and remained a POW. On other occasions, the "convoyeuses de l'air" proved their ability to share the bad moments with crews in rough conditions and hostile environments.

For all these reasons, the flight nurses are very well integrated in the COTAM and are definitely part of the flying family. Until 1972, they were not allowed to be married or to have dependents. (4) This restriction does not apply anymore but their lifestyle is not compatible with a normal family life. Consequently, they are not encouraged to get married or to be single parents. In 1986, out of 24 nurses, 2 were married (1 had a child) and 2 were single parents. (12)

All the "convoyeuses de l'air" are officers with ORSA status. The recruitment is two to three each year. Their commander is their senior officer, a major, nicknamed "Mother Queen." (4)

The problem with the nurses, when implementing an equal opportunity policy is that the thrust should be reversed and that the specialty should also be opened to males. This would obviously shatter the equilibrium of the unit and the nurses, for sentimental and psychological reasons are not too enthusiastic about it. It is exactly the opposite of the tendency which seems to slow the integration of female in aircrews into the French Air Force. This brings us to the specific issues the Air Force is concerned with.

Issues

General Remarks. First of all, it must be noted that the increase of women in the French military resulted from a political decision. It was not a request from the Armed Forces in order to enhance their combat capability. While France relies on male draft to provide the reserve manpower in case of mobilization, there is, in fact, no operational need to draft women for a total force. It is difficult to envision a reform such as the integration of women into the military society which is otherwise rather conservative. Yet, the FAF has reached the integration goals set by the government. It should be noted, however, that some reluctance is still perceived among selected senior officers especially when dealing with females in combat positions.

Assignment Policy. The assignment policy is still restrictive: all female pilots are oriented initially to liaison units. This practice produces a bottleneck effect in some units like the Transport Squadron 1/65 of Villacoublay. Out of 15 pilots assigned in July 1988, 4 were female. Until now, the COTAM has been the only major command which supports the female aircrews integration program. Except the two females who were assigned to the "Groupement Ecole 319" (a French ATC unit), and the one flying helicopters (which are part of the COTAM) all women pilots are presently restricted to liaison aircraft.

This may be frustrating for some motivated women who volunteered to fly Cl60s in tactical transport units. However, Cl60s are likely to be deployed for contingencies in Africa and part of their mission is airdropping. The AF considers them as combat aircraft and, hence, females are excluded from flying them.

Impact on Unit Readiness and Mission Accomplishment.

An increased number of females in a unit could adversely affect both the unit readiness and performance. Several factors must be considered accurately:

Military couples. Until now, only one French female pilot is married. Her husband was a Cl60 pilot and after

transition on N262, he had a joint spouse assignment. The operation officer mentioned no impact on readiness.

Pregnancies. So far only one female pilot had a child. According to the regulation, she was grounded as soon as the flight surgeon established she was pregnant. She did not fly for approximately one year. However, she could maintain a low level of training during this forced grounded period by flying in the simulator. Also, the unit minimized the impact of this situation by assigning her as assistant to the operation officer where there is always a significant amount of administrative and operational work to carry out. At this point, it must be mentioned that the French social legislation is very protective for mothers. As a matter of fact, after delivering, a mother is entitled to request a special two-year leave in order to raise the baby and the employer (in this case, the FAF) has no right to refuse it. After the two years, the employer must take her on again, at her request, in the closest position from her home, even in excess in the unit. (13) Although until now, none had taken advantage of this provision, it may significantly affect the AF resource in the future.

Deployment considerations. They may impact on the unit's readiness if a couple of pilots are assigned to the same squadron. In case of a recall, one of the couple,

usually the female, would have to take care of possible dependents.

Workload. The pilot retention rate has slightly decreased these last two years as a result of the appeal of civilian airlines. The COTAM has maintained the manpower of its tactical wings, whereas the liaison units (the very units with women pilots) don't have the number of pilots they need. As a result, these units have a busy flying schedule, each pilot flying an average of 600 hours a year. At the same time, non flying additional duties have not diminished. This might be a key dissatisfier for the females confined in these units who do not perceive a fair and equal share of the burden.

With an increasing number of women in flying units, all the issues I have just mentioned may have a negative impact on the overall readiness. Whatever the gender, a pilot is an investment. The Air Force pays for a long and costly training program to qualify a pilot. In return, he or she is expected to be profitable and hold line positions between age 25 and 35 minimum. On the other hand, this is precisely the period of time during which women are most likely to have children. Hence, women pilots may well have to make a choice between having children or having a career.

The problem is not easy to cope with and the perception in the FAF is that a decision would be made in favor of family. In terms of cost-effectiveness, it means a loss for the Air Force and no wonder the Direction of Personnel has some reasons to be worried and be reluctant to increase the number of female pilots. That also explains that the Air Force expects only a short career for females and does not plan a genuine leadership career for them. As a matter of fact, here lies the core of the problem and the controversy. That is why the experiences is so far cautious and limited.

Five years after the recruitment of its first female pilots, the FAF is at a crossroad. The limited assignment policy may result in a saturation of liaison units and at the same time, some openings are being reduced because of the possible impact on unit readiness and performance.

The FAF is very concerned about the issues I have raised previously. However, it has relatively little experience in these areas. As the FAF still deals with few individuals, the USAF manages a population of hundreds of female crewmembers, both officers and enlisted. It would now be interesting to see how the USAF copes with these challenges. Consequently, a survey of the integration of females into USAF aircrews may show some significant trends.

CHAPTER III

THE INTEGRATION OF WOMEN INTO U.S. AIR FORCE AIRCREWS

Historical Review

The history of integration of women into U.S. military aircrews goes back to World War II. A thousand women, led by Jacquelin Cochran and known as the WASPs (Women's Airforce Service Pilots) were hired as pilots in civilian status to ferry military aircraft, tow air gunnery targets and teach instrument flying to male pilots. Their primary role in flying these support missions was to release male pilots for combat duty in Europe and in the Pacific. Although the Army Air Force recognized they did an outstanding job, the WASPs were never allowed to fly combat missions. They were disbanded by the end of the war. (14)

In the aftermath of WW II, women comprised less than one percent of the AF, all in non-flying positions. In the 50's and early 60's, the military as a career "came off as supermasculine." The military was not considered as a proper place for a "nice girl." (15)

The story of the flight nurses is a little bit different. The first nurses, all females, graduated in 1943.

They participated in flying missions at the end of World War II.

They subsequently used their skills in peacetime, in world wide medical support and in natural disaster relief operations. They were deeply involved in the Vietnam War where they showed "dedication, patience, and courage." They performed very well in taking care of patients and boosting morale. Although they were non-combatants, many of them were killed or wounded during medical evacuations under enemy fire. (16)

During the post Vietnam era, a legislative process was initiated to open new positions to women. It was mainly due to:

- new cultural attitudes concerning the role of women in the society and a growing sensitivity to equal opportunity and treatment, whatever the gender.
- the elimination of the draft for the all-volunteer force and the need for the Armed Forces to capitalize on women resources.

As a result, the Navy was the first service to recruit female pilots. In 1973, 6 Navy women became the first to win their wings and be designated as Naval Aviators.

The Air Force made its move in 1976, as females were allowed to enter the Air Force Academy. In September 1976,

the first 20 women entered Undergraduate Pilot Training. In March 1977, six additional women were scheduled into navigator training. These programs were successful and the Air Force decided to enter about a hundred women in flying training annually. (17)

The graduates were assigned to as many as 20 types of aircraft the USAF declared as "female acceptable" due to their low risk to be potential targets (cargo transports, aerial refueling tankers, weather reconnaissance, medical evacuation, training planes).*

All women pilots and navigators are commissioned officers. As for the enlisted flying specialties, SAC and MAC included females as boom operators, flight engineers, and loadmasters in 1979. (19)

During the 80's, new openings were made as the recruitment of women increased. Meanwhile, an evolution in the doctrine of using women resulted in opening new positions for females, especially in the flying business. Namely, women were allowed to fly the E-3 in 1982 (20), the KC-10 in 1984 (21), the C-23 and the EC-130H in 1985 (22).

* These aircraft were the T-33, T-37, T-38, T-39, T-41, T-43, U-4, UH-1, C-5, VC/C-9, C-12, EC-121, C/VC 140, WC-130, WC-131H, C-141, C/WC/EC/NC/NKC-135, KC-135, and the E-4. (18)

The last significant step happened in July 1988 when they were allowed to fly strategic reconnaissance, calibration, and special missions on TR-1, U2, TU2, C-29, and EC-130 aircraft. (23)

Thus, over the last decade, a significant number of new positions were opened to women in aircrews. The increase in the types of aircraft they were allowed to fly was a result of an evolving interpretation of the law concerning the use of women in combat. It is worth looking at the evolution of the combat exclusion policy in more details.

Evolution of the Combat Exclusion Policy

The basic legislative framework concerning women in the military is the 1948 Integration Act. According to the law, 10 USC 8549 states that "female members of the Air Force may not be assigned to duty in aircraft engaged in combat missions." (24)

This law does not define precisely what a "combat mission" is. This task has been left to the Department of Defense, and in fact, to each military Service. Also, the law uses the terms "may not" and not "should not," which suggests that the door is open. However, the USAF ignored these possible openings. As the Equal Rights Amendment (ERA) passed by the House in 1971 and the Senate in 1972,

women were moving into numerous areas which had previously been male domains. (25) The question of female pilots surfaced in 1972 in the context of equal opportunity, not of military need. The AF was then unable to answer the Congress why there were no female pilots in spite of quite large possibilities for non-combat flying.

The DOD issued broad guidance regarding combat exclusion. However, the Air Force is responsible for the interpretation and application of the law within the service. In 1976, AF regulations prohibit "assignment to aircraft where there is a high risk of injury or capture due to hostile fire." (18) Even if the "risk" interpretation remains unclear, the AF subsequently issued the first list of suitable aircraft for women.

Meanwhile, the first assessments with female pilots and navigators showed there was no significant difference between male and female professional skill. Thus, the list of aircraft was expanded successively in 1982, 1984, and 1985, as seen previously.

The Air Force interpretation of law was then expressed in AFR 35-60 which precluded assignment of women to the following:

- a. Aircraft whose principal mission involves aerial combat defined as:

- delivery of munitions or other destructive material against an enemy or,

- aerial activity over hostile territory where enemy fire is expected and where risk of capture is substantial

b. Duties or units where there is a probability of exposure to hostile fire and substantial risk of capture

c. Instructor or staff positions where training or experience in combat aircraft is a prerequisite. (26)

The line between what is and is not combat has become difficult to draw and the implementation of the rule is often ambiguous. Females are allowed to fly C 141s, but not to perform airdropping, which is combat related. Hence, they fly strategic airlift missions and are not airdrop qualified. During the Grenada contingency in October 1983, some C 141s with female landed at the Grenada airport to bring reinforcement troops. . . under mortar fire. Also in April 1986, women served on the KC 135 tanker crews during the raid on Lybia. In both cases, they performed well and the job was done. Thousands of American military women would be exposed to enemy action in the event of a conflict involving forces in Europe or other areas of the world.

On the other hand, some feel that public opinion is not ready to accept women taking such risks and dying in combat. But the same public opinion is very proud this

nation has female astronauts who also take great risks, as the Challenger accident tragically proved.

Increasing opportunities and equal treatment means also increasing responsibilities and an equal share of risks. As an illustration of the evolving perception of women's place in the military, the Assistant Secretary of Defense for Manpower declared in 1984 that:

Women have not been allowed into the military to fill peacetime needs. They are in the military to stay.[...] The laws that exclude women from being assigned to direct combat roles do not guarantee that women will not become casualties. In any future war, there will be women in combat and there will be women casualties . . ."
(27)

The Secretary of Defense reemphasized the DOD policy concerning military women in the event of a mobilization or a crisis in 1988:

The women will remain with their units and continue to do the same job in wartime that they are doing today. There will be no plans or instructions to remove or evacuate them. (28)

Still, the "risk rule" remains controversial. Particularly since the reference in AFR 35-60 involving aerial activity over hostile territory, and the general exclusion of entire units where "there is a probability of exposure to hostile fire and substantial risk of capture" are unlike the other Services definitions.

In January 1988, a DOD appointed Task Force on Women in the Military highlighted these inconsistencies and made

some recommendations for common definitions and guidance to the Services. The Secretary of Defense approved them and stated that:

. . . risks of direct combat, exposure to hostile fire or capture are proper criteria for closing noncombat positions or units to women, providing that the type, degree and duration of such risks are equal to or greater than the combats units with which they are normally associated within a given theater of operations. (29)

In July 1988, the AF regulation changed to be in accordance with this guidance and as a result, female pilots were authorized to fly strategic reconnaissance aircraft. At the end of FY 88, the only types of aircraft women are excluded from are fighters, bombers, tactical reconnaissance, attack, and observation aircraft and tactical airlift. There are still some pressures, especially in Congress to expand the spectrum of "suitable aircraft" and allow female pilots to fly fighters. (30) But the law cannot now be interpreted in a more liberal manner. Any move forward would mean a modification of the law and, hence, congressional and public debate. And this might require a longer period of time. All authorized aircraft and missions in March 1989, are listed in Attachment 1. (31)

The softening of the combat exclusion rules during the past decade directly impacted on the assignment policy,

allowing more combat positions and expanded career growth for women.

Another important issue directly concerns the recruitment which also made some significant moves these last years. The question is should men and women be recruited on an equal basis for pilot and navigator or should a separate quota be applied for recruiting women?

Quota or Not Quota?

Beginning in the last 70's, the Congress set quota goals for women's recruitment. From an active duty level of 9 percent in 1979, the goals went to 14 percent for FY 85, to 25 percent for FY 88, then were reduced to a less ambitious 22 percent. (32) As for the aircrews specifically, the AF stated in 1982 a goal of 10 percent women in rated position. (33)

However, the quota system imposed artificial criteria for manning the force. Some argued that under that system the AF had to accept less qualified women at the expense of more qualified men. (34) That argument could also be reversed, saying that highly qualified women could not join the AF because their numbers were limited by the quota. Seeing this, the AF convinced the Congress that the recruitment system should bring people into the service based on quality and skill needs, not gender. In 1986, the AF imple-

mented a gender-free recruitment program and no more female percentage was officially stated. (31)

Today the AFMPC uses a complex formula to determine an optimum male/female mix for each career field. It includes factors such as the vacancy in a specialty, the propensity of women to enter that specialty, academic and physical aptitude required to do the job, and combat-related restrictions. The numbers fluctuate every year but roughly 2.5 men vs. 1 woman apply to compete for pilot or navigator positions. (35)

This recruitment system seems complicated but it provides more fairness and the USAF is satisfied with it. Having seen the evolution of the legal and administrative framework of women integration into USAF aircrews, let us now have an overview of the present situation.

The Situation Today

The career fields with large numbers of women are the traditional ones in which integration began early. Females are usually less interested in technical specialties, as supported by the following statistics concerning female rates:

	<u>Career Field</u>	<u>Percentage of Women</u>
At end of FY 88 (36)	Medical careers	32%
	Administration	31%
	Account and Finance	29%
	Supply	23%
	Maintenance	6%

As for the flying positions, the figures are significantly lower, reflecting the combat exclusion policy for certain types of airplanes and also the fact that the integration process started later (figures for December 88).

(37)

<u>Flying Specialty</u>	<u>Total Strength</u>	<u>Number of Women</u>	<u>Percentage of Women</u>
Pilots	23,328	315	1.3%
Navigators	9,552	118	1.2%
Flight engineers	2,767	44	1.6%
Loadmasters	2,250	61	2.7%
Boom operators	1,169	54	4.6%
Flight nurses	170	118	60%

The allocation of the 315 female pilots is as follows:

Air Training Command	78
USAF Europe	2
Pacific AF	2
Military Airlift Command	106
Strategic Air Command	97
Tactical Air Command	7
AF Systems Command	7
AF Logistics Command	1
Air University	2
Miscellaneous Elements (JCS, AF HQ . . .)	13

These figures include line and staff positions.

(38) They show that the bulk of the female contingent is

shared by MAC (34 percent), SAC (31 percent), and ATC (24 percent). A few helicopter pilots are dispersed among several commands (two in MAC and at least one in USAFE, PACAF, and AFSC). (39)

In order to be recruited as a pilot, candidates must comply with medical requirements. In the USAF, there is no difference between fighter and transport standards. They also must meet academic and physical fitness test (PFT) standards.

The PFT consists of 5 events (pullups, situps, pushups, long jump, and a 600-yard run) to be completed in a 15-minute time period. (40) Unlike what is believed on that topic in France, there are different performance goals for males and females in these events which take into account the fact that female upper body strength is lower, for physiological reasons.

A total of 1575 pilots were recruited in FY 88 and of that group 103 were females. There were 1086 combat positions to be filled (736 fighters and 350 bombers), all by male pilots. Based on attrition rate in UPT, 1472 male student pilots were recruited to fill these positions. The differences ($1575 - 1472 = 103$) were allocated to females. The attrition rate during UPT is slightly higher for women (30 percent, as it is 23 percent for men). (38)

In general, everybody agrees that there is no difference between male and female, as far as professional skills are concerned. Female pilots and navigators are considered "just as good as males if not superior." They are "superb technician," "excellent aviators" and their professionalism brings them easily to instructors qualifications and Stan-Eval positions. "They work harder to be professional because they know they're being watched." In overall, they have an excellent sense of flight safety, which may sometimes be perceived as lack of aggressiveness.

A lot of them also have good leadership capabilities. Former squadron commanders think it is in the same proportion as for men. They are serious, "good citizens," reliable, and "all-Americans." (41) I was personally impressed by the motivation and dedication of some of them I had the opportunity to meet.

The first women who got their wings in 1977 are now majors and lieutenant colonels. It is likely that one of them will be a squadron commander within the next two years (n.b., a USAF squadron has the size of a FAF wing).

Still, all women pilots are not entirely pleased with their situation. They fly C 141s but are excluded from air drop missions. They are allowed to fly the C 130 but only for flying phases of instruction, which is highly

frustrating. They don't like to be seen as "half-pilots" and would like to share equally the unit workload.

As for the enlisted flying specialties, it must be mentioned that unlike the French system, flight engineer and loadmaster are two separate career fields. Also, having been previously a maintenance specialist on an aircraft is not a prerequisite to apply for these specialties. There was no problem for females enlisted to follow the transition programs and their professional skills were quite similar to the male ones.

The flight nurses are recruited among ground nurses who are qualified after a five-and-a-half month program. All of them are officers. It is no more an all-female specialty and males comprise approximately one third of its strength. They are divided into three separate units, each of which is attached to a numbered Air Force: one for CONUS, one for Europe, and one for the Pacific. Like in the French system, they fly on request missions.

As the number of women increases in the service, the Air Force is very concerned about adverse factors which may jeopardize its combat readiness on mission accomplishment. As flying is the *raison d'être* of the AF, these factors may be exacerbated when integrating too many women into aircrews. Some key issues must now be discussed, in order to evaluate

the impact on unit readiness of such problems as grounded time for medical reasons, joint spouse assignments, pregnancies, deployment consideration, pilot retention, and unit morale.

Specific Issues

Grounded time for medical reasons. The perception is that usually women have a higher absentee rate than men. A study was conducted within the MAC in 1986 to compare the grounded time for medical reasons between a study group of 96 female pilots and a random sample of 288 male pilots. Even by taking into account that pregnancy may be a common cause for a higher grounded time for women, the study showed that there was no significant difference between the two groups. As a matter of fact, the study showed that females pilots are generally highly motivated, healthy, athletic, and physically superior women. (42)

I assume the results of this study can be extended to other major commands and consequently, this factor appears to have no impact on unit readiness.

Joint spouse assignment. Generally, military women are more likely to have a military spouse. In 1988, the Air Force had 22,180 married couples and statistics show an increase of officer-to-officer marriages since 1983: 32 percent of all female officers and 3 percent of all male

officers are married to service members. (43) Very often female pilots are married to male pilots. The AF policy is to keep military couples assigned together to the maximum extent possible. As the number of dual-career military families increases, it will be more difficult to obtain joint location over an extended period of time. This is particularly true when there are limited billets for highly specialized jobs--such as crewmembers--and when couples progress in rank. Hence, co-location is only possible for roughly 8 out of 10 couples (co-location is defined as any joint duty within a radius of 50 miles).

Thus, the decrease in the number of joint spouse assignments may have an impact on family stability and one of the partners (and not necessarily the female) may choose to separate from the Air Force rather than to endure a period of family separation. For example, one of the female pilots I interviewed and who was married to an AF pilot, elected to separate from the AF and joined the Air National Guard , because after a two and a half year period of separation, they found their next assignment would have kept them apart for six additional years.

Usually if a couple is assigned to the same location, they normally are not under the same chain of command. Thus, they are often assigned to separate squadrons. But

this is not always possible, particularly in some small units or detachments.

Pregnancy. Ten percent of the female force is pregnant at any time and this reflects the American norm. However, a 1984 SAC study found a rather conservative 3 percent pregnancy rate. (44) In fact, it can reasonably be assumed that a highly motivated, select group of females that choose to become pilots or navigators may opt to avoid pregnancy, or to plan it in order to satisfy career requirements.

In fact, the number of females per squadron is still relatively limited and occasional pregnancies would not jeopardize the unit performance. "Even if all my four female pilots would have been pregnant at the same time, I could have done the job," a C-141 squadron commander told me. (41) In the past, once pregnancy was diagnosed by the flight surgeon, the female crewmember was grounded. That long period of duty not involving flying was used for administrative tasks or in assisting the operations officer. Training was still possible in the simulator. The pregnant crewmember was placed on leave from two weeks before expected delivery to six weeks after delivery. Then after medical check, she would be ready for retraining. One female pilot told me her first pregnancy was not a blank year. During her forced grounded time, she did a lot of administrative and

staff work useful for the unit and the Air Force. Her pregnancy had no impact on her career and she was still promoted to major below-the-zone.

The Air Force made a significant move recently in allowing pregnant crewmembers to fly under certain conditions through their sixth month. This policy, which is also in effect in civilian airlines provides easier management of the resource and decreased costs associated with retraining. (See Attachment II)

Deployment considerations. In order to meet contingency requirements or emergency situations, AF crewmembers must be able to take off anytime and anywhere. Availability for deployment may be limited in case of single parent required to deploy. In these cases, the likelihood to respond quickly in emergency or crisis situations might decrease. The Air Force felt enough concerned to issue a special regulation in August 1986.

Through AFR 35-59 concerning Dependent Care Responsibilities, the AF requires any member to provide the name of a designee who will take care of his dependents in case of emergency, so as to be able to perform his military duties.

If unable to comply with this regulation, the AF member may be assigned to another position less demanding or

even may be forced to resign. Attachment III shows a copy of this Dependent Care Certification.

Pilot Retention. This is a key issue for the Air Force, which is experiencing the worst pilot retention rate since 1979. Dissatisfaction with the Air Force and increased opportunities with the airlines have significant influence on career decisions. It would be interesting to see if female pilots are more or less affected by this trend.

As far as the former squadron commanders are concerned their impression is that women pilots are more likely to separate from the Air Force for the following reasons:

- they have a tendency to seek more personal stability, especially after 30 years of age, than an AF pilot's life usually provides

- they separate from the AF to join the AF Reserve or the Air National Guard where the schedule makes it easier to have a family life.

- the airlines prefer to hire female pilots to enhance their public image and improve their business appeal. (41)

Apart from these subjective assignments, let us have a look at data from two point papers concerning pilot retention. The first one concerns an AF retention analysis between 1 October 1987 and 30 September 1988. (45)

For the 6-11 year group

<u>Rate</u>	<u>Eligible Population</u>	<u>Voluntary Loss</u>	<u>Retention Rate</u>
Male	2345	817	65.2%
Female	62	26	58%
Total	2407	843	65%

7-14 year group

Male	3369	863	74.4%
Female	67	25	62.7%
Total	3436	888	74.2%

For both of these groups, especially the 6-11 one which is the most affected by voluntary separation from the AF, the females have a slightly lower retention rate.

The second survey concerns specifically the Military Airlift Command which is the major command with the worst pilot retention rate.

Concerning the strategic airlift only (females are not concerned with tactical airlift), the separations for the 6-11 year group are shown in the following chart. (46)

	<u>Total Population</u>	<u>Voluntary Loss</u>	<u>Retention Rate</u>
Male	688	171	75%
Female	56	8	86%
Total	744	179	76%

It appears that retention rate for females is slightly higher than for males.

The results of these two surveys seem contradictory, but it must be mentioned that in both surveys, the populations of male and female groups do not have the same size and hence statistics must be read with caution. The additional separation of one female results in a percentage variation which corresponds to the separation of 20 males in the first survey and 12 males in the second one. Hence, both populations cannot be equally compared and since the differences between them is within plus and minus 10 percent, I assume that no definite trend can be highlighted. Figures do not significantly support the subjective impressions about the phenomenon. Early voluntary separation unfortunately affects the entire pilot population, whatever the gender.

Impact on unit morale. Integration of women into military aircrews has a genuine impact on unit morale. But opinions are divided on the way it impacts. Senior officers who were squadron commanders in the late 70s state that "women disturb men from doing their job and have a negative effect on unit cohesion and performance." They also noticed "it is no more possible to manage people like previously" and they miss the "good old time." (41)

Performance of women under deployed field conditions has been studied by two sociologists who evaluated their impact on unit combat readiness during two exercises:

- Joint Chief of Staff, a two week exercise held in 1982 in the Southwestern US under austere conditions
- Granadero I, a 6 month deployment of Army units in Honduras in 1984, with poor living conditions, longer duty hours and inclement weather.

Their conclusion in both cases was that "women performed as well as the males, were respected for their individual contributions and indeed enhanced the units' combat effectiveness." (47)

The problem of separate billeting for aircrew members has been often mentioned as a serious concern. Some bases like in South East Asia doesn't seem to have adequate facilities for female crewmembers and result in discipline problem for the aircraft commander. However, such trivial considerations should not become an excuse to jeopardize the implementation of a policy. Goodwill and good judgement can provide adequate solutions.

One issue impacting unit morale which has been raised is that in some units, women cannot fly all missions. For example, female crewmembers were not allowed to deploy to the Middle East during the 1979 crisis situation and the

1980 Iranian hostage crisis. (48) Likewise, due to the combat exclusion policy, they cannot fly airdrop missions on C-130 and C-141. This results in a triple frustration:

- ° for the individual who feels overprotected without requesting it

- ° for the squadron commander, who cannot use the full potential of a crewmember

- ° and finally, for the squadron male population, because they do not perceive an equal share of the burden and might express some kind of resentment.

However, during the last decade a significant shift can be pointed out, as far as the perception of women in aircrews is concerned. Officers who were squadron commander during the last three years, consider that female integration is not a problem. As soon as the unit commander makes sure there is no special treatment and no favoritism for females resentment from the male population has a tendency to disappear. It becomes a leadership issue. In many cases, the integration of women into aircrews has been reported as positive. The bearing and behaviour of men have improved, people are less vulgar in their manners than a few years ago. Also, the male population is challenged in professionalism in an area which was previously an all-male bastion and as a result, the overall professional skills and

unit performance are enhanced. In addition, military women were reported to be better educated than military men and to have fewer disciplinary problems. (27)

Nowadays, female crewmembers seem to be well integrated into aircrews. They are respected for their contributions and their presence does not impact negatively on the unit combat readiness. On the contrary, according to the former assistant secretary of Defense for Manpower, "As the number of women has gone up in the last couple of years, so has readiness." (27)

General Assessment

The USAF has successfully integrated women into aircrews. Statistics show their increasing number in all cockpit specialties. The AF has coped in a pragmatic and objective manner with the possible impact on combat readiness and unit performance. Specific women's issues are followed closely at each hierarchy level: base, Air Force, DOD. Directly descending from the ERA, the USAF Equal Opportunity and Treatment Program sets four standards:

- Equal opportunity
- Equal treatment
- Equal representation
- Equal selection

The Air Force supports this program with special training for all its members throughout all phases of professional and military education. This training is designed to minimize problems in interpersonal relationships (sexual harassment, unequal performance ratings, etc.) and optimize mission capability in the unit. Like other minorities (blacks, hispanics, etc.) women are now able to compete fairly for assignment and promotion. (49)

A key factor in the success of female integration lies in the quality of leadership and the strong commitment at all command levels for its implementation.

Today, in spite of an overall 13 percent female accession rate for the Air Force, the flying units have a lower rate of women in their personnel resources, usually from 5 to 10 percent. Finally, the total number of females in USAF aircrews is rather important especially when seen from a French point of view. Since they are shared among a large number of units, women represent only a small percentage of each unit's strength.

Several areas which might indirectly affect the overall combat readiness have been discussed: grounded time for medical reasons, joint spouse assignment, pregnancy, deployment consideration, pilot retention, and unit morale.

It has been shown that the overall Air Force performance was not downgraded by women's integration.

In 1984, a survey pointed out that the Strategic Air Command would have to review its integral crew concept policy with increasing crewmembers. (50) In fact, even with more females on their crews, SAC still flies with integral crews and nothing has changed as far as its combat readiness is concerned.

Beyond the realm of figures and statistics, there is another trend I perceived and which has much more to do with sociological behaviour. Women are no more considered as individuals from another gender, merely pilots or flight engineers and eventually as specialists or soldiers. They are definitely part of the flying family.

There is no doubt the routine of flying units has changed during the last decade but there is no indication the combat readiness has dropped. As stated by a former Air Force Secretary, "Women make substantial contributions to today's high-quality, capable Air Force." (51)

The large experience of the U.S. Air Force and the way some key issues were approached may be used to determine expanding roles for women in FAF aircrews. With this in mind, I am now able to cross the Atlantic in order to elabo-

rate some recommendations which could broaden the French experience without affecting its mission capability. This is the purpose of my next section.

MISSIONS ALLOWED TO WOMEN IN THE USAF
Attachment 1

- TR-1/U-2--strategic reconnaissance for long periods at high altitudes.
- EC-130--airborne battlefield command-and-control center.
- RC/EC-135--strategic reconnaissance/airborne command and control.
- E-3--command-and-control center to support quick reaction deployment and tactical operations by Tactical Air Command units, and an early-warning command-and-control center for identification, surveillance and tracking of airborne enemy forces and for the command and control of North American Air Defense Command forces over the continental United States.
- E-4--airborne command post to support the National Emergency Airborne Command Post.
- WC-130--weather reconnaissance platform.
- C-5--long-range, air-refuelable, heavy logistics transport.
- C-9--aeromedical airlift transport.
- C-12--attache support and military assistance adviser group support.
- C-21--operational airlift support for time-sensitive movements of people and cargo.
- C-22--operational airlift support for Southern Command.
- C-23--ferry aircraft parts and complete engines to bases throughout Europe.
- VC-23--primary transport for the president of the United States.
- C-29/C-140/T-39--(flight check) flight inspection mission provides for worldwide, all-weather, certified instrument approaches and traffic control and landing system equipment.
- C-130--performs initial and requalification training in the C-130. Includes academic, simulator and flying phases of instruction.
- KC-135--conducts air-to-air refueling requirements for all Air Force, Navy and Marine Corps aircraft.
- C-135--passenger/cargo transport.
- C-137--VIP transport, operated by the 89th Military Airlift Wing at Andrews AFB, MD.
- C-141--(all missions except airdrop) heavy-lift passenger/cargo transport.

◦ KC-10--combined tanker/cargo aircraft; able to simulataneously refuel fighters and carry fighters' support equipment on overseas missions.

◦ T-37--two-seat, twin-engine jet primary trainer.

◦ T-38--two-seat, twin-engine jet advanced trainer.

◦ T-41--two-seat, piston-engine trainer used in preliminary flight training.

◦ T-43--navigation training aircraft.

◦ UV-18--parachute jump training aircraft used at the Air Force Academy.

◦ H-1--utility helicopter.

◦ TG-7--powered glider used at the Air Force Academy.

Source: U.S. Air Force

ATTACHMENT II



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
BOLLING AFB, D.C. 20332

REPLY TO
ATTN OF SG

08 APR 1997

SUBJECT: Pregnant Aircrew Members Flying Status

TO: ALMAJCOM/SG HQ AFISC/SG HQ AFMPC/SG HQ AFOMS/SG HQ ARPC/SG

1. The increasing number of female aircrew members and the costs associated with retraining them after a long period of duty not involving flying (DNIF) has prompted HQ USAF/SG to readress the policy regarding immediate grounding at the time of pregnancy diagnosis. As a result, waivers may be granted to fly through their twenty-fourth week under the following guidelines:

a. The request for waiver is entirely voluntary and must be initiated by the crewmember with squadron commander indorsement.

b. The crewmember's flight surgeon and obstetrician must concur.

c. The waiver request is to be forwarded through medical channels to HQ USAF/SCPA for action.

d. Crewmembers who are granted waivers must be followed at least monthly by OB and flight medicine.

e. Physiological training is waived during pregnancy.

f. Flying is restricted to pressurized multi-crew, multi-engine, non-ejection seat aircraft.

g. Waivers will be granted only for CONUS flying and crewmembers will be released from all mobility commitments.

2. Questions regarding this policy should be directed to my POC, Col Tilton, AV 297-1852.


MURPHY A. CHESNEY
Lieutenant General, USAF, MC
The Surgeon General

cc: HQ USAF/SG
HSD/CC
HQ USEUCOM/SG
(Attn: Maj Gen Miller)

ATTACHMENT III

DEPENDENT CARE CERTIFICATION

AUTHORITY: 10 USC 8012, Secretary of the Air Force, powers and duties, delegation by.
PRINCIPAL PURPOSE: To identify and insure that military members covered by AFR 35-59 have made adequate dependent care arrangements to insure he or she will be worldwide available.
WHY THIS SSS: To contact persons designated by the member as accepting dependent care responsibility, to verify their willingness to act for the member in this capacity, to advise the designee when they are expected to discharge these responsibilities and to insure member's compliance with the regulation.
DISCLOSURE IS VOLUNTARY: Use of the SSS is required to establish positive identification. Other information is required to insure members have met their dependent care responsibilities. Failure to complete the form may subject member to action under the Uniform Code of Military Justice. It includes, but not limited to, disciplinary action and separation from the Air Force.

MEMBER'S CERTIFICATION

- I have been counseled and fully understand Air Force policy on dependent care responsibilities pertaining to the performance of military duties. I have read and understand AFR 35-59, and that I must arrange for dependent care so that I will remain worldwide available as defined in AFR 35-59, and that I must report for duty as required without my dependents.
- I affirm that I have made and will maintain arrangements for the care of my dependents to permit me to be worldwide available, during all the following circumstances: a. Duty Hours; b. Exercises; c. Unaccompanied Tours; d. Alerts; e. TDY; f. Extended Duty Hours; g. PCS or PCA; and h. Similar Military Obligations.
- I understand that I am subject to deployment on short notice and that I will not be guaranteed special privileges because I have dependents.
- I understand that failure to make and maintain adequate dependent care arrangements so that I am worldwide available may be grounds for disciplinary action or separation from the Air Force, or both.
- I understand that if these arrangements for the care of my dependents fail, I must still report for duty.
- I understand that I must revise or verify this plan at least yearly or on reassignment, reenlistment, extension of enlistment, or if circumstances for dependent care change.
- I understand that I may be subject to action under the Uniform Code of Military Justice if this statement is not accurate.
- All my dependents are 18 or older and capable of self care. (Initials) _____
- I have made all necessary arrangements (legal, educational, monetary, religious, etc.) to effect a smooth, rapid turnover of dependent care responsibilities.
- I have arranged to complete travel that may be required to transfer my dependents to the designated person. If my primary long-term dependent care designee is not in the local area, I understand I must arrange with a nonmilitary person in the local area to assume temporary custody of my dependents until that responsibility is transferred to my primary long-term dependent care designee.
- I understand that while serving in an overseas area, I must arrange for the escort and care of my dependents if a Noncombatant Evacuation Operation (NEO) is implemented. I know that I will be required to remain in place and perform my military duties.

DATE	TYPED OR PRINTED NAME, GRADE, AND SSN	SIGNATURE
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DESIGNEE CERTIFICATION

(The following statements may be signed by as many as three different individuals or as few as one.)

- PRIMARY SHORT TERM DESIGNEE:** I have agreed to accept responsibility for the dependent(s) of _____ (name) or the member report for duty for extended work hours, recall or TDY for a duration of less than _____ days. I also certify that the financial and travel arrangements made by the legal guardian are adequate for the care of their dependent(s) while in my custody. I ☐ will ☐ will not be authorized use of commissary and BX facilities.

A. TYPED OR PRINTED NAME	SIGNATURE	DATE
ADDRESS MUST BE IN LOCAL AREA (Include Zip Code)		HOME PHONE WORK PHONE
B. TYPED OR PRINTED NAME	SIGNATURE	DATE
ADDRESS MUST BE IN LOCAL AREA (Include Zip Code)		HOME PHONE WORK PHONE

- PRIMARY LONG TERM DESIGNEE:** I have agreed to accept responsibility for the dependent(s) of _____ (name) or she is assigned in an unaccompanied status or deployed TDY for a duration to exceed the responsibilities of the short term designee. I also certify that the financial and travel arrangements made by the legal guardian are adequate for the care of their dependent(s) while in my custody. I ☐ will ☐ will not be authorized use of commissary and BX facilities.

TYPED OR PRINTED NAME	SIGNATURE	DATE
ADDRESS (Include Zip Code)		HOME PHONE WORK PHONE

- ALTERNATE DESIGNEE:** In the event the designee in item _____ (item 12 and/or 13) is unavailable, I have agreed to accept responsibility for the dependent(s) of _____. I also certify that the financial and travel arrangements made by the legal guardian are adequate for the care of their dependent(s) while in my custody. I ☐ will ☐ will not be authorized use of commissary and BX facilities.

A. TYPED OR PRINTED NAME	SIGNATURE	DATE
ADDRESS (Include Zip Code)		HOME PHONE WORK PHONE
B. TYPED OR PRINTED NAME	SIGNATURE	DATE
ADDRESS (Include Zip Code)		HOME PHONE WORK PHONE

CHAPTER IV

RECOMMENDATIONS FOR THE FRENCH AIR FORCE

Considering that women's integration into the military is in constant evolution, the following recommendations are valid for the next five years. Due to the constant sociological and political changes, especially in the context of an integrated Europe, the present views of women serving on aircrews will likely also be upgraded.

Nevertheless, the recommendations to change the status quo will have to comply with two demands which sometimes might be conflicting:

- Provide equal opportunity and treatment, whatever the gender. This principle applies in France like in every modern democracy. It figures in full in the national motto "Liberté, Égalité, Fraternité." As an illustration, a recent law considers sexism as a form of racism.

- Maintain combat readiness, particularly at a time when the Air Force is involved in contingencies like the Chadian conflict, the MFO peacekeeping force in Sinai and turmoil in New Caledonia.

Combat Exclusion Policy

The present "combat exclusion" policy is ambiguous, and not really consistent. In fact, women pilots are not excluded from combat units, they are assigned to a sole major command. Still, there are other non-combat positions where female pilots could successfully be employed, for instance within the "Commandement des Ecoles de l' Armée de l'Air (CEAA, equivalent of Air Training Command).

The appropriate forum to debate this issue is the "Conseil Supérieur de la Fonction Militaire," a council chaired by the Minister of Defense and representing all services and all categories of personnel. However, I suggest the combat exclusion rule be rewritten as follows: "Females are excluded from flying positions in fighter, bomber, and reconnaissance units." This clear definition would avoid the constant changes, different interpretations, and intellectual contorsions encountered in previous years by the USAF. In my mind, the door would be open for flying positions on C 135 F tankers, E3, and strategic airlift (DC 8) like in the USAF. Also, there is no reason why females could not be assigned to the C 160 unit stationed at Metz. The missions of this unit is similar to that of the EC 130 and its aircraft fly on a daily basis along the Warsaw Pact

border. Female linguists have flown on these aircraft for years.

Moreover, I suggest female crewmembers be assigned to tactical airlift squadrons, flying C 130 or C 160s. Our flight nurses have shown their ability to deploy quickly and live in austere conditions, and in a hostile environment during extended periods of time. A woman pilot has already been "legally" deployed twice to the MFO peacekeeping force, as a Twin Otter pilot with no problem. The type of missions she flew fell into the category of "overflight of hostile territory." I think that the military begins to be acquainted with females performing in such combat-related environments and the new wording I suggest takes this in account.

Quota

The quota as it exists today (10 percent of transport pilots, but approximately 3 percent of the total pilot strength) seems acceptable. Like the USAF a few years ago, the FAF is still in a transition phase. Within the next five years, the impact of women's integration into aircrews must still be accurately surveyed. Hence, it is too early to either alter or remove the present quota.

Recruitment

Female cadets should be allowed to graduate from the "Ecole de l'air" as pilots. The Ecole de l'air is the "royal track" for leadership and is mostly dedicated to provide the fighter pilot officers of the FAF. This was the rationale to prevent female pilots from entering the Ecole de l'Air. However, from a legal standpoint, there is inconsistency in forbidding the "Ecole de l'Air" to women pilots while allowing them another source of commission thru the "Ecole Militaire de l'Air." This is an obvious case of non-equal opportunity which would be difficult to justify before the Council of State in a court of appeal.

In any case and due to the 10 percent quota, the number of young women pilots graduating from the "Ecole de l'Air" would be one or two maximum per year. It might be less due to the medical requirements and to the "in flight prognostication program" which, if failed, is redhibitory for a pilot's career. Consequently, new career paths and leadership positions should be studied. The first units which appear adequate to be commanded by female pilot officers should be the Transport and Training Squadron of Bordeaux or Aix-en-Provence.

Assignment Policy

The assignment policy should be expanded in order to avoid the present bottleneck effect in liaison units. Like in the USAF, a similar allocation between major commands could be implemented. Within the COTAM, assignments should be expanded to units flying Mystere 20, 50 and 900, Caravelle and DC 8, C 130, and C 160, and also helicopters.

Within the CEAA every year, there is a need for instructor pilots at the Basic Pilot Training School of Cognac the Advanced Pilot Training School at Avord, the "Ecole de l'Air" Flying Squadron at Salon de Provence. The possibility of being assigned at the Toulouse Navigator School also has merit, since female pilots already are qualified on the aircraft, the Nord 262 AEN.

In my mind, these openings should not bring any problems. On the other hand, openings to positions on C-135 tankers, or later on E-3s must be carefully implemented, because the current all-male environment is likely to be psychologically hostile. However, the system works very well in the United States and it could be successfully applied in France.

Other Specialties

The present regulation actually does not prevent females from being navigators, but none of them have been

sent to Navigator School until now. Usually this career field is opened to someone who fails during UPT. It is worth offering a navigator career to someone who maybe lacks pilot skills but has a significant aeronautical background and knowledge. In order to be consistent with the pilot combat exclusion policy, female navigators would be excluded from positions on combat aircrafts such as the Mirage IV and the Mirage 2000 N.

Other units which also seem appropriate for female navigators are the Transport Squadron 3/60 at Villacoublay (on DC8) and the Electronic Squadron 1/54 at Metz (on Cl60). Those who show high professional skills in that specialty might be assigned to the Toulouse Navigator School as instructor navigators.

The specialty of flight engineer/loadmaster (it is the same branch in France) should be opened to female maintenance enlisted. As for the pilots, the first ones should be assigned on Nord 262 during a transition phase before expanding to other possible aircraft.

The flight nurses must expect to have some men in the unit. The rationale for equal opportunity and no discrimination due to gender must work both ways. Also the designation of "convoyeuse de l'air" (feminine form in French) is likely to become "convoyeur de l'air" (masculine).

In this case, the psychological barrier might be as much on the female side (for parochialistic reasons) as on the male side (who would perceive it as "downgrading" to join a traditional female specialty).

When opening these specialties to the opposite gender the same basic quota of 10 percent should be applied, as for the pilots.

Joint Spouse Assignment

The FAF policy in this area is the same as the USAF's. The Direction of Personnel endeavors to assign military couples together and it actually gets harder as the number of couples increase and as they get promoted to higher positions.

I don't foresee any significant improvement for the future, regarding joint spouse assignment. Still, the characteristics for the French Air Force are:

- Due to the smaller size of the country, some bases are located at a relatively close distance from one another and there are some good possibilities to assign a fighter pilot and his spouse transport pilot within 50 miles, i.e., Metz (transport and helicopter)/ Nancy or Toul (Tactical Force), or Bordeaux (liaison)/ Cazaux (fighter school or bombardment), and Orange (air defense)/ Aix en Provence (liaison) or Salon de Provence (light aircraft).

- The number of military couples in the FAF is far below the level existing in the USAF. Thus, each one is studied more on an individual basis rather than as an automatic process.

Pregnancy

The "pregnant aircrew members flying status" is an interesting opening which I recommend. Women are not biologically different on both sides of the Atlantic and changing policy to allow female crewmembers to still fly through six months of pregnancy would result in:

- minimizing the shortage of crewmembers and hence the adverse impact on squadron readiness.

- making the female population more involved in the unit routine and more "equally treated," and hence decrease the resentment that the male population could feel.

However, such a measure would be of less use if the overprotective legislation concerning child care leave still exists. Due to the cost of retraining, the AF cannot afford to have female crewmembers taking a two year leave after delivery. The problem is that it is national legislation and in this country, it is almost impossible to go back on such social programs. France has actually been criticized by the European Commission for this legislation which is sexist . . . against males. The only way to reform it would

be to come through a common European legislation. The European process is a good opportunity to debate about the role of women in our western democratic societies and to take advantage of the past experience to implement an up-to-date legislation.

Deployments

One of the arguments against the assignment of women to "glamorous" weapon systems like the C 160 is concerned with their ability to deploy. However, no fact or experience has so far been able to support this contention.

Still, it can be reasonably assumed that some female crewmembers with dependents would prefer to be assigned on "less adventurous" weapon systems in order to have more personal stability. For them, there are plenty of flying positions in the FAF with fewer operational constraints but which are still necessary for the air Force. Particularly instructor pilot (IP) in the CEAA have a very important role because they mold the future generation of pilots. The experience of the USAF shows that females usually succeed faster to these IP positions due to their patience and professionalism. Like in the US Air Training Command, there is no doubt they would perform very well in these jobs within the CEAA. An assignment in this major command is traditionally considered as less glamorous, but it offers

genuine responsibility, equal promotion opportunity, and a more stable lifestyle.

Pilot Retention

Although it does not have the dramatic scale encountered in the USAF, pilot retention is a phenomenon the FAF is more and more concerned with. Nevertheless, the female population is not yet affected because, due to the eight year active duty service commitment for the ORSA officers, the first female pilots will not be eligible for separation until 1992. Early requests for voluntary separation must be carefully studied and anyway the same criteria must be applied for both males and females.

Unit Morale

The unit morale will not be affected by increased female crewmembers if the workload is equally shared. According to the American Squadron commanders, "there is no problem as soon as equal treatment is provided to everybody, whatever the gender." So far women pilots have been "injected" into French aircrews without any specific preparation, for either the male or female population. Women are expected to act and react just like men, even though they are biologically and psychologically different. In the same way, males have sometimes a hard time abandoning their tradi-

tional latin attentiveness. In these conditions the graft may not always be successful. A positive approach like the USAF "Equal Opportunity and Treatment Program" may significantly contribute to a better understanding between genders and improved working relations. Eventually, the key is quality of leadership. Relationship problems must be viewed in individual terms, not in relation to gender. Once this lesson is learned, there won't be any significant difference than with an all-male population.

French crewmembers will find that like in MAC and SAC, even with women in the cockpit, "the crew spirit is still alive."

CHAPTER V

CONCLUSION

The USAF has successfully integrated women into all aircrew positions. The achievements appear both in quantity and in quality:

- ° in quantity, as the number of female crewmembers slowly but constantly increased

- ° in quality, as the Air Force recognizes that women make a substantial contribution to its state of readiness and are accepted as full members of the force. This has even been substantiated by Soviet Marshal Akhromeyev during his visit to the USAF in July 1988.

On the other hand, the French Air Force is still in a transition phase. Due to a difference in mentality and the fact that women are not needed to make up for manpower shortages, the opening of flying positions to women remain limited. None the less, the experience of the USAF shows that the use of women on aircrews can be further expanded without reducing combat readiness nor mission accomplishment.

Some of the recommendations I suggest for the FAF are relatively easy to implement, particularly the

broadening to new aircraft opportunities and the opening of navigator, flight engineer and boom operators specialties to females. Rather than increasing their number, I suggest diversifying their positions. On the other hand, the legislative changes cannot be initiated at the Air Force's level and require a more general consensus. As a matter of fact, the success of integration of females into FAF aircrews depends on many variables:

- political and parliamentary perception, representing sociological changes
- Air Force guidances
- leadership attitude
- and last, but not least, individual relations between males and females at the basic unit level.

Expanding cockpit opportunities for women is perceived as a symbol, for aircrews are the spearhead of the Air Force. In order to be successfully implemented, my recommendations must be in keeping with the general pattern of this evolution. The "Conseil Supérieur de la Fonction Militaire" must be definitely associated in any further debate concerning the future role of women in the French Armed Forces. One of its main concerns will be to shortly define a clear and consistent combat exclusion policy, because it is the cornerstone which governs the assignment

policy and any possible expansion of female positions on aircrews. I don't think that women are likely to soon become fighter pilots in the FAF, as they are today in Denmark or Canada. But no doubt they will have increased responsibilities on French aircrews in the future. .

Cultural changes are usually slow to implement, but the experience of the USAF shows that over one decade, the attitude of the male population has significantly changed. Women are nowadays more integrated than previously and they can feel the difference. Beyond the gender difference, people see themselves as specialists on Air Force members, not as males or females.

Interesting lessons can be learned from the USAF experience in order to implement a similar successful policy in the FAF. The Air Force is the Air Force of the Nation and hence, must reflect the whole spectrum of the Nation. With this in mind, women definitely have a role to play in the service. They have already proved they represent a valuable and highly professional resource. With more cockpit opportunities in the future, they are expected to demonstrate efficiency, availability, and reliability for the benefit of the entire Air Force.

LIST OF REFERENCES

CHAPTER I

1. Fiche 307 relative a la féminisation dans l'Armée de l'air (8 Jul 87). Direction du Personnel Militaire de l'Armée de l'air/Bureau d'études générale, p. 4.
2. Holm, Major General Jeanne, USAF, Retired. Women in the Military: an Unfinished Revolution, p. 342. Presidio Press 31, Pamaron Way, Novato, CA 94947, 1983. (Quotation of the Director of Moral Majority).
3. Bloom, Anne R. "Women Are Not Another Species," article in USA Today, January 22, 1988.

CHAPTER II

4. "Les convoyeuses de l'air: infirmieres du ciel," in Air Actualités n°416, December 1988, p. 17.
5. Fiche 0153/DPMAA/BEG/AG (February 28, 1986), "Déroutement de l'intégration du personnel féminin dans l'Armée de l'air."
6. Décret 83187 du 10 Mars, 1983, portant statut particulier des sous-officiers de carrière de l'Armée de l'air in Journal officiel de la République Française.
7. Décret 83184 du 10 Mars, 1983, portant statut particulier des Corps des officiers de l'air, des officiers mécaniciens de l'air et des officiers des bases de l'air in Journal officiel de la République Française.
8. Fiche relative a la féminisation dans l'Armée de l'air, May 1986, Direction du Personnel Militaire de l'Armée de l'air/Bureau d'études générale.
9. Instruction 15000/DEF/DPMAA/4/INS relative au recrutement d'élèves officiers du personnel navigant a vocation d'ORSA (8 July 1986).
10. Atlas recrutement du personnel officier, Année 1988, Direction de la Fonction Militaire et des relations sociales 2°. Boulevard Victor PARIS.

11. Statistics provided by the "Centre d' instruction des équipages de transport" Toulouse AFB, France, January 1989.

12. Fiche 3174 relative a la répartition par spécialité du personnel féminin dans le COTAM (29 August, 1985)
Commandement du Transport aerien militaire/Division
Personnel.

13. Décret 74-338 relatif aux positions statutaires des militaires de carrière, modifié par le décret 77-1259 du 14 Novembre 1988, et le décret 79-601 du 5 Juillet 1979 in Journal officiel de la Republique Francaise.

CHAPTER III

14. Samuelson, Lieutenant Colonel Nancy B. "Equality in the Cockpit: a Brief History of Women in Aviation," Air University Review 35, May-June 1984, pp. 41-44.

15. Trimeloni, Colonel B. D. "The Role of Women in the Air Force," in Air Force Policy Letters for Commanders, suppl. #9, 10 July 1975, p. 8-12.

16. Holm, pp. 224-229.

17. Holm, p. 320-323.

18. Famiglietti, Len. "Planes Listed for Women Pilots," Air Force Times 36, 12 April 1976, p. 11.

19. Iskra, Lieutenant Colonel Thomas W., USAF. "Do We Need a Quota on the Accession of Females into the Air Force," Air War College Research Report, Maxwell AFB AL, March 1986, p. 6.

20. Famiglietti, Leonard. "Pilot, Mission Crew Positions Open to Women on AWACs," Air Force Times 42, 29 March 1982, p. 1.

21. "Air Command Will Let Women Fly Newest Tanker-Cargo Jet," Current News, Part 2, 16 January 1984, p. 1.

22. "Air Force Expects to Recruit More Women," Equal Opportunity Current News, July 1985, p. 7.

23. Ginovsky, John. "More Than 27000 Jobs Opened to Women," Air Force Times, 18 July 1988, p. 1.

24. U.S. Code 1976 edition, Vol 2 (Washington D.C., U.S. Government Printing Office, 1977) Title 10, Section 8549.
25. Heinzman, Colonel Richard R., USAF. "A Policy Analysis of the Admission of Women by the U.S. Military Academics," Air War College Research Report, Maxwell AFB AL, March 1986, p. 4.
26. AF Regulation 35-60. "Military Personnel. Combat Exclusions for Women," Department of the Air Force, Headquarters, USAF, Washington DC 20330-5000, 20 January 1986.
27. Korb, Lawrence J., Former Assistant Secretary of Defense for Manpower cited in "Korb: Women Needed to Maintain Readiness," in Air Force Times 44, 14 May 1984, p. 9.
28. Willis, Grand. "Women Won't be Pulled From War," in Air Force Times, 17 October 1988.
29. Report "Task Force on Women in the Military," Department of Defense, January 1988.
30. Dalton, Pat. "Senator Urges Fighter Training for Women," in Air Force Times 47, 13 July 1987, p. 1.
31. Ginovsky, John. "AF Urged to Expand Cockpit Careers for Women," Air Force Times, 17 October 1988, pp. 8 and 22.
32. Ginovsky, John. "AF Reluctantly Accepts Quota on Women," Air Force Times 45, 15 October 1984, p. 6.
33. Air Force Fact Sheet, 82-30, Office of Public Affairs, Washington DC quoted in Collson, Major Patrick J., USAF, "Impact of Female Crewmembers on SAC Readiness," Air Command and Staff College report, Maxwell AFB AL, March 1984, p. 1.
34. Garamore, Jim. "Quotas on Recruiting Women to Continue," Air Force Times 45, 3 June 1985, p. 11.
35. Tencze, Lieutenant Colonel Joseph J., Jr., USAF. "Women in the Air Force: Should the Numbers Continue to Increase?" Air War College Research Report, Maxwell AFB AL, May 1986, p. 16.

36. Statistics provided by AFMPC/Public Affairs, January 1989.
37. Statistics Provided by AFMPC, MAC, and SAC, February 1989.
38. Telecon with AFMPC/Officer Accession Branch, February 1989.
39. Telecon with HQ MAC/DOTM, 23 March 1989.
40. AFROTC Regulation 35-2, "Weight and Fitness Programs," February 1, 1989, Headquarters, Air Force ROTC, Maxwell AFB AL. (A similar regulation exists for other sources of commission.)
41. Non-Attributable interviews of AWC Class of 1989 students, former squadron commanders.
42. Holl, Judith Ann. "Comparison of the Air Force Female and Male Pilot Grounded Time in the Air Force Military Airlift Command." Thesis proposal. University of Texas Health Science Center at Houston TX, June 1985.
43. Adde, Nick. "Married and in Uniform," Air Force Times, 24 July 1988, p. 53.
44. Collson, p. 9.
45. Pilot retention analysis, HQ AFMPC/DPMYOS, November 1988.
46. Point paper on pilot retention demographic statistics, HQ MAC/DPXA, 13 February 1989.
47. Iskra, pp. 31-34.
48. Collson, p. 1
49. USAF Fact Sheet 86-32, US Air Force Equal Opportunity and Treatment Program, September 1986, Secretary of the Air Force, Office of Public Affairs, Washington DC 20330.
50. Collson, pp. 38-40.
51. Orr, Verne, former Air Force Secretary, cited in "Air Force Expects to Recruit More Women," Equal Opportunity Current News, July 1985.

GLOSSARY

AF	Air Force
AFMPC	Air Force Military Personal Center
AFR	Air Force Regulation
ATC	Air Training Command
AWC	Air War College
CEAA	Commandement des Ecoles de l'Armée de l'air (French ATC)
COTAM	Commandement du Transport Aérien Militaire (French MAC)
DOD	Department of Defense
ERA	Equal Rights Amendment
FAF	French Air Force
FFA	Forces Féminines de l'Air
FY	Fiscal Year
IP	Instructor Pilot
MAC	Military Airlift Command
MFO	Multinational Force and Observers
ORSA	Officier de réserve en situation d'activité (reserve officer activated)
PFT	Physical Fitness Text
POW	Prisoner of War
ROTC	Reserve Officer Training Corps
SAC	Strategic Air Command
UPT	Undergraduate Pilot Training
USAF	United States Air Force
WASP	Women's Airforce Service Pilots