#### APPENDIX A

#### WOMEN'S ARMY CORPS (WAC) BILL

57 STAT.] 78rh CONG., 1st SESS.-CH. 187-JULY 1, 1943

ICHAPTER 1871

#### AN ACT

To establish a Women's Army Corps for service in the Army of the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby established in the Army of the United States, for the period of the present war and for six months thereafter or for such shorter period as the Congress by concurrent resolution or the President by procla-mation shall prescribe, a component to be known as the "Women's Army Corps". The total number of women enlisted or appointed in the Women's Army Corps shall not exceed the number authorized from time to time by the President.

SEC. 2. The enlisted personnel of such corps shall consist of women of excellent character in good physical health, who are enlisted in the Army of the United States under the provisions of the last para-graph of section 127a of the National Defense Act, as amended (54 Stat. 213), and who are on the date of such enlistment citizens of the United States between the ages of twenty and fifty years. All laws and regulations now or hereafter applicable to enlisted men or former enlisted men of the Army of the United States and their dependents and beneficiaries shall, in like cases and except where otherwise expressly provided, be applicable respectively to enlisted personnel and former enlisted personnel of such corps and their dependents and beneficiaries

SEC. 8. The commissioned officers of such corps shall consist of women appointed as officers in the Army of the United States under the provisions of the joint resolution of September 22, 1941 (55 Stat. 728), and ordered into the active military service of the United States. The commanding officer of such corps shall be a colonel and such officers of lower rank shall be appointed as the Secretary of War may prescribe: *Provided*, That physicians and nurses shall not be enlisted in this corps: And provided further, That commissioned officers and noncommissioned officers of the Women's Army Corps shall exercise command only over women of the Women's Army Corps and other members of the Army of the United States specifically placed under their command. They and their dependents and beneficiaries shall have all of the rights, privileges, and benefits accorded in like cases to other persons under that Act, except where otherwise expressly provided.

SEC. 4. Notwithstanding any other provision of law, no woman appointed as an officer in the Army of the United States under the provisions hereof who has previously held an appointment as an officer of the Women's Army Auxiliary Corps established pursuant to the provisions of the Act of May 14, 1942 (Public Law 554, Seventy-seventh Congress), shall be entitled to any uniform allowance payable to officers of the Army of the United States. Such officers who have not received a complete issue of uniforms, insignia, accessories, and of May 14, 1942, may be issued the remainder of such prescribed 0.475,  $\frac{56}{10}$ ,  $\frac{56}{10}$ ,  $\frac{56}{10}$ ,  $\frac{50}{10}$ ,  $\frac{50}{10$ articles, and all such officers who have heretofore received, or may hereafter receive such complete issue, or any part thereof, may retain such articles as their personal property.

such articles as their personal property. SEC. 5. Effective on the last day of the second calendar month following the date of the approval of this Act, the Act of May 14, 1942, as amended, except section 11 thereof, is hereby repealed. Sec-tion 11 of such Act of May 14, 1942, shall not be applicable to enlisted personnel or commissioned officers of the corps established by this Act one of the sector of the corps established by this Act except in cases in which its applicability is based upon the status benefits. of such enlisted personnel or commissioned officers as former members n, 4 m.

July 1, 1943 [S. 495] [Public Law 110]

Women's Army Corps. Establishment as comparately of Army of U. S.

Maximum strength.

Enlisted personnel.

11 Stat. 785. 10 U. S. C. 1 634.

Commissione4 officers.

U. S. C., Supp.
II, § 484 note.
Post, p. 380.

Physicians and

Excusion of comman-1

Rights, privileges, and benefits.

Officers' uniforms, ete

56 Stat. 278.
10 U. S. C., Supp.
II, §§ 1393, 1501-1718;
50 U. S. C., Supp. II,
app. § 511.

Repeat of existing law, exception. 56 Stat. 258. 10 U. S. C., Supp. 11, § 1203, 1504–1718; 50 U. S. C., Supp. II, app. § 511, Tujury or death benefits.

# **APPENDIX B**

# **CORNELIA FORT ARTICLE – July 1942**

Excerpts from 'At the Twilight's Last Gleaming,' an article she wrote for **Women's Home Companion** (July 1942).

I knew I was going to join the Women's Auxiliary Ferrying Squadron before the organization was a reality, before it had a name, before it was anything but a radical idea in the minds of the few men who believed that women could fly airplanes.

Shortly after six-thirty I began landing and take-off practice with my regular student. Coming in just before the last landing, I looked casually around and saw a military plane coming directly toward me. I jerked the controls away from y student and jammed the throttle wide open to pull above the oncoming plane. He passed so close under us that our celluloid windows rattled violently and I looked down to see what kind of plane it was.

The painted red balls on the tops of the wings shone brightly in the sun... I looked quickly at Pearl Harbor and my spine tingled when I saw billowing black smoke.

...I knew the air was not the place for my little baby airplane and I set about landing as quickly as ever I could. A few seconds later a shadow passed over me and simultaneously bullets spattered all around me.

I remained on the island until three months later when I returned by convoy to the United States. None of the pilots wanted to leave but there was no civilian flying in the islands after the attack.

...Then...came a telegram from the War Department announcing the organization of the WAFS (Women's Auxiliary Ferrying Squadron) and the order to report within twenty-four hours if I was interested. I left at once.

Mrs. Nancy Love was appointed Senior Squadron Leader of the WAFS by the Secretary of War. No better choice could have been made.

...Because there were and are so many disbelievers in women pilots...officials wanted the best possible qualifications to go with the first experimental group. All of us realized what a spot we were one. We had to deliver the goods or else. Or else there wouldn't ever be another chance for women pilots in any part of the service.

...They chatter about the glamour of flying. Well, any pilot can tell you how glamorous it is. We get up in the cold dark in order to get to the airport by daylight. We wear heavy cumbersome flying clothes and a thirty-pound parachute. You are either cold or hot. If you are female your lipstick wears off and your hair gets straighter and straighter. You look forward all afternoon to the bath you will have and the steak. Well, we get the bath but seldom the steak. Sometimes we are too tired to eat and fall wearily into bed.

None of us can put into words why we fly. It is something different for each of us. I can't **say** exactly why I fly but I **know** why as I've never known anything in my life. [as emphasized in original article].

...I know it in dignity and self-sufficiency and in the pride of skill. I know it in the satisfaction of usefulness...

I, for one, am profoundly grateful that my one talent, my only knowledge, flying happens to be of use to my country when it is needed. That's all the luck I ever hope to have.

# **APPENDIX C**

# WOMEN'S AIRFORCE SERVICE PILOT (WASP) WINGS



Women pilots originally flying for <u>Nancy Love</u> and the Ferry Command wore these regulation ACT Civilian Pilot Wings. These WAFS were later incorporated into the WASP.



Wings worn by the first classes to graduate from the Army Air Corps training programme, paid for by director, Jacqueline Cochran. These WASP wings WFTD (Women's Flying Training Detachment) for the first classes remained the same design with slight variations from 43 -W-1 to43 - W-7.



Official WASP wings from 43 W-8 to 44 W-10 - there were 2 versions of these wings used. The difference was in the cut of the feathers, but the main <u>diamond in the centre</u> was the same for both designs.





# **Detailed Information on the Official Wings**

from WASP Florence Shutsy Reynolds:

The regulation WASP (Women Airforce Service Pilots) are smaller than the standard AAF or the USAF pilot wings and the lozenge replaced the shield rather than being superimposed. The lozenge is satin finish rather than the high polished lozenge on the 43-W-8 wings.

Metal:Sterling silverWeight:16.0 to 17.8 gramsManufacturer:Josten (name changed to JOSTENS after WWII.)Length:2.75"Width:0.875"

The **Diamond-Shaped Shield** in the center of the WASP wings represents the shield carried by Athena, Goddess of War.

Finish Wing is oxidized; lozenge is satin finished. Fasteners Two clutch backs spaced 2" apart.

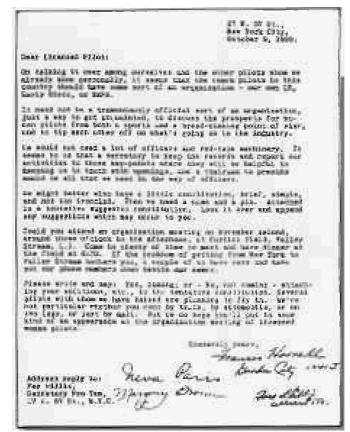
The back of the WASP wing contains the clues for determining authenticity of this item. Lozenge area is indented 1/32"; indentation is 11/16" high and 11/32" wide. Manufacturer information is stamped, indented and located right of the center line near the bottom edge.

JOSTEN is 1/32" high x 3/16" length; STERLING is 1/32" high x 15/64" length.

WASP wing badge was copyrighted by the Order of Fifinella (OOF) 6 December 1978. Copyright was later registered with the WASP WWII when the OOF was dissolved.

# **APPENDIX D**

#### THE NINETY-NINES, INC. LETTER OF INVITATION



Invitation Letter

Dear Licensed Pilot;

On talking it over among ourselves and the other pilots whom we already know personally, it seems that the women pilots in this country should have some sort of an organization- our own QB, Early Birds or NAPA.

It need not be a tremendously official sort of an organization, just a way to get acquainted, to discuss the prospects for women pilots from both a sports and breadwinning point of view, and to tip each other off on what's going on in the industry.

We would not need a lot of officers and red tape machinery. It seems to us that a secretary to keep the records and report our activities to those key points where they will be helpful in keeping us in touch with openings, and a chairman to preside would be all that we need in the way of officers.

We might better also have a little constitution, brief, simple, and not to ironclad. Then we need a name and a pin. Attached is a tentative suggested constitution. Look it over and append any suggestion which may occur to you.

Could you attend an organization meeting on November second around three o'clock in the afternoon at Curtiss Field, Valley Stream, L. I.? Come in plenty of time to meet and have dinner at the field at 6:30. If the problem of getting from New York to Valley Stream bothers you, a couple of us have cars and have put our phone numbers down beside our names.

Please write and say: Yes, coming ; or No, not coming - attaching your modifications, etc., to the tentative constitution. Several pilots with whom we have talked are planning to fly in. We're not particular whether you come by train, by automobile, or on two legs or just by mail. But we do hope you'll put in some kind of an appearance at the organization meeting of licensed women pilots.

Sincerely yours,

Fay Gillis Margorie Brown Frances Harrell Neva Paris

Address reply to: Fay Gillis, Secretary Pro Tem, 27 W 57 St, NYC

# **APPENDIX E**

# **GENDER-BIAS FORUM DISCUSSION**

#### Text from Neil Krey's CRM Developers Forum

(http://groups.yahoo.com/group/crm-devel/)

**Date:** Wed Mar 17, 1999 08:37 am **Subject:** [crm-devel] All-female crews

It has come to my attention that one of the C-130 flying units had an interesting decision recently. As the schedulers of the different departments sent names to the central scheduler, it became apparent that a particular mission was to be flown by a crew of women. All five crew positions would have been female. The commander chose to not authorize this roster, and requested that a male replace one of the women. His rationale, as I am told, is that had the crew become involved in a 'mishap,' the investigation might

have asked him why he authorized an 'all-female' crew, even though each were current and qualified in their respective positions.

This begs me to ask, are any other flying organizations concerned about an 'all-female' flight crew? Does this ever happen, without any intrepidation?

Has there been any research into the 'effectiveness and efficiency' of an all-female crew, compared to the traditional all-male, compared to a mixed-gender crew?

Greg Deen Raytheon

**Date:** Wed Mar 17, 1999 12:39 am **Subject:** [crm-devel] Re: All-female crews

This issue had come up for discussion among flight schedulers for transport crews. The dates of the menstrual periods come under part of private information. Since it is known that women may not be at their best just prior to menstruation, will it be safe to fly an all women crew who are all premenstrual? Who should check that? How? These are the problems faced, and the simple solution is to have a male member in the crew.

Any comments? Pooshan

Wg Cdr Pooshan D Navathe B Ed, MBBS, M D (Aerospace Med), DipAvMed (USA), FaeMS Associate Professor (Aerospace Medicine) Field Aerospace Medical Research and Indoctrination Cell (FAMRIC) Air Force Station, Lohegaon, Pune, 411 032 India Tele 91 20 685312 Extn 2315 (O) Extn 2393 (H) 91 20 691256 (H) Date: Wed Mar 17, 1999 12:11 pm Subject: [crm-devel] Re: All-female crews

Greg,

I don't know about any research on the subject, but Southwest Airlines (and I'd suspect most other major airlines) does fly all-female crews with some frequency, although it is not common because of the limited number of female pilots.

The bidding process for monthly flying schedules assumes that all qualified pilots are eligible to fly all lines - and makes no other distinction by gender, race, etc. I suspect that the major airlines are well past the point of being concerned about this sort of crew pairing issue.

Pete

**Date:** Wed Mar 17, 1999 6:31 pm **Subject:** [crm-devel] Re: All-female crews

Just out of curiosity, what kind of a mission would require an all women crew??????

**Date:** Wed Mar 17, 1999 7:32 pm **Subject:** [crm-devel] Re: All-female crews

The same kind of mission that would require an all male crew! Each is as qualified as the other and should not make a difference!

James L. Gosnell, RN Anesthesia Department Anesthesia Clinical Research Brigham & Women's Hospital Lab # (617) 732-5196 75 Francis St. CWN L1 Fax # (617) 277-2192 Boston, MA 02115 Pager (617) 732-6987 Harvard Medical School Beeper # 11217

**Date:** Wed Mar 17, 1999 8:18 pm **Subject:** [crm-devel] Re: All-female crews

Some Ostriches will never get their heads out of the sand. I guess I should laugh at the stupidity of the Commander's decision, but it really isn't funny. If the certification requirements for men and woman of the USAF are the same this decision is idiotic. If the standards are different (woman's standard less than men's standard) then the decision is sound.

Which is correct?

Just as a matter of anecdotal evidence for the gender neutrality of the cockpit in our study of CC-130 crews a year or two ago, a female captain stood at the top of my rating scale (and in the top tercile of all raters) until the last couple of video tapes were analysed (23 crews in all). One male Captain scored very slightly higher at the end of my ratings...partly

because he dealt with a slightly more difficult situation and had a chance to shine even more brightly.

A little while later one of our scientists was at CFB Trenton trying to demonstrate the use of eye-tracking technology for teaching and assessing instrument scanning patterns. Three pilots participated in this demo. One was new to the aircraft and coming from essentially a daytime-only single seat jet, was expected to be rather stale in instrument scanning discipline. Another was picked as a reasonably experienced and competent instrument pilot and a third was picked as the expert subject. The task was an instrument approach to Trenton. Unknown to the subject was a scheduled engine problem somewhere in the approach (can't remember which parameter was failed but the symptoms were to be first seen in the engine instrument cluster. Pilot 1 had an undisciplined scan, with no apparent

pattern, long dwells on certain instruments, long absences from others. The failure took a long time to notice. Pilot 2 had a rather by the book pattern AI-ASI-AI-ALT-AI-HSI etc. with a more rapid detection of the impending engine/prop failure. Both Pilot 1 and 2 scanned the engine instruments from time to time. Pilot 3 had by far the best flying performance, but no detectable scanning pattern. The fixation point was generally located in the center of the primary flight cluster, not even centred on a particular instrument, but at some neutral point on the panel. There were almost no excursions to the engine instruments. When the

failure came, it was detected almost instantly as noted by a deliberate saccade to the relevant instrument, detection, diagnosis and clean up followed, and the approach completed. Those familiar with the eye movement literature of pilots will recognise this as a marker of expert performance where the pilot is taking in the panel as a pattern. Deliberate eye movements are a response to the detection that something has changed in the pattern. Of course Pilot 3 was my female AC from the first study.

Then of course there is Patti Wagstaff...as Ginger Rogers once said of Fred Astair...'I did everything that Fred did but backwards and in high heels'...not that I think Patti wore high heels while winning National Aerobatic championships (more than one from memory).

Cheers

Keith Hendy

**Date:** Wed Mar 17, 1999 5:35 pm **Subject:** [crm-devel] Re: All-female crews

The commander's response to an all female crew says more about the command structure than the abilities of females to fly airplanes. How much second guessing is going on in that outfit?

**Date:** Wed Mar 17, 1999 8:14 pm **Subject:** [crm-devel] Re: All-female crews

Or the converse, 'What mission would require an all male crew?' This is a frivolous argument.

**Date:** Thu Mar 18, 1999 1:29 pm **Subject:** [crm-devel] Re: All-female crews

I there any evidence that menstruation cycles effect flying skills? If it does, to what degree? If there is any corralation, it is bound to be large individual variations like for any other issue that is measured?

Two stereotyped matters regarding menstruation cycles is mood swings and cognitive performance. Is the concern the same for male pilots regarding known monthly and dayly variation in mood and cognitive abilities? Has an all-male crew ever been rescheduled because of this?

Tor Anders Eide Psychologystudent University of Oslo

**Date:** Thu Mar 18, 1999 3:01 pm **Subject:** [crm-devel] Re: All-female crews

#### Greg,

I hope the Commander has gotten a 'welcome to this century' call from someone above him in the chain of command. If the crew members are current and qualified, how can this possibly be a question?

There is a woman (Linda Goldenhar) at NIOSH who has done a considerable amount of work on the integration of women into the workforce.

**Date:** Thu Mar 18, 1999 4:30 pm **Subject:** [crm-devel] Re: All-female crews

To all,

As I understand it, there is an Air Mobility Command policy on unique crew composition. Units need AMC approval for any crew selected to highlight something not usually noticed. You cannot have an all Hispanic crew for Hispanic Month, an all Irish crew for St. Patrick's Day, etc. The fact that these women were set up on the crew was by chance, they certainly must have been qualified. I'd say the commander just wanted to avoid some nonsense from outsiders.

Charlie Russell

Date: Thu Mar 18, 1999 7:34 pm Subject: [crm-devel] Re: All-female crews

Good Afternoon CRMers -

I have followed the various aspects of this discussion with interest, and have to admit that my first reaction was that the topic had significant potential for degenerating below our usual high standard of discussion. All of you have happily proven me wrong. The various reactions (including the commander whose concerns Greg relates) show a great variation in the cultural acceptability of women in an industry which is historically dominated by males. Would it be possible for some of our experts to comment on this aspect of industry culture?

Best regards, Neil Krey Date: Fri Mar 19, 1999 3:27 pm Subject: [crm-devel] Female crew

Good Morning,

I recently joined your group and have been following the dialogue for a couple of weeks.

As a US Marine Helicopter pilot and Aviation Safety Officer, I'd like to offer my perspective on the All Female Crew issue. My job requires me to review proposed flight schedules and screen them for human factors issues. I look at the task not only from the accident prevention perspective, but also screening for any issue that might have been overlooked by compartmentalized schedulers. My job is to bring up <u>any</u> issues, offer recommendations, and allow the commanding officer to make his own decision before authorizing the flight schedule. In this case, I would have advised against the flight. My rationale is not intended to question the qualifications of the female crew, but rather to protect them from being questioned later. If this plane had gone down, the mission, and every decision or non-decision involved, would have been instantly world-famous. The investigation would have centered upon the 'female-ness' of the crew. There is more at issue than the gender of the crew. Try to look at this from the CO's perspective. Operational Risk Management dictates that if you can make a mission more 'normal' by removing unusual aspects that make it unique, you should.

Craig Kopel Capt USMC

Date: Fri Mar 19, 1999 5:04 pm Subject: [crm-devel] Re: Female crew

You are still talking about a gender issue. There will always be a first. There will always be the question, 'What if'. I have been privileged to be part of an all male group of ICU nurses one shift. We looked around, shrugged our shoulders and went about our business of saving and preserving lives in just the same caring compassionate way it is always done, even though we were a bunch of guys!

None of the Nursing Supervisors felt that they needed to add a woman to the staff to keep us in line! I was also in the back of the C-130 during an Aeromedical flight as the Medical Crew Coordinator and noticed an all female Aeromedical crew. We looked around, they realized that this was different, shrugged their shoulders and went about their business. As a private pilot, some of my best instructors have been females. They were patient, intuitive and really knew the business of teaching me to fly. (I actually think I learned more from them than some of their male counterparts) I think that in reality an all female crew would look around, shrug their shoulder and fly the airplane without incidence. If someone was to witch hunt from a CO or Risk Management position, because this may be a new idea, untried, is this the risk? If you are qualified to fly, you should be able to fly. If there is a problem with your ability to do the job, now this is a different story. Then you should change the crew There is truly your risk! Normalcy is two-fold. There is always going to be

a 'what if', but if you are not willing to give qualified people the chance to do their job. You will never know what if they could fly, well, together!

James L. Gosnell, RN Anesthesia Department Anesthesia Clinical Research Brigham & Women's Hospital Lab # (617) 732-5196 75 Francis St. CWN L1 Fax # (617) 277-2192 Boston, MA 02115 Pager (617) 732-6987 Harvard Medical School Beeper # 11217

Date: Fri Mar 19, 1999 4:05 pm Subject: [crm-devel] Re: Female crew

I will believe this response when a squadron exists that is higher than 50% female. One day the scheduler puts up an all male crew. The authorizing Officer pulls one of the men out of the crew and replaces them with a woman to ensure the normalcy of the crew.

Here's another one. By coincidence a crew is assembled that is all left hand dominant, another that must all wear corrective lens. Do we leap and put in a right hander or an eagle eyed aviator? If these things don't matter, why does gender? There will come a point in time when an all female military crew is to be expected rather than unexpected (this is

really just a function of ratios). The airlines have got over this hurdle, I suspect it is time for the military to bite the bullet.

I still think the issue here is the qualifications of the crew. Even if the mission runs into problems, on what grounds could the investigation center on the femaleness of the crew? A half decent advocate would barbeque anyone that tried that line.

Many years ago (mid to late 70s), in a country quite a ways from here, an airline was struggling with what to do about their first serious female applicant. The airline had good connections with the Department and someone in uniform rang me to ask if '...there was an anthropometric reason for excluding women from flying heavy aircraft' (note the way the question was framed). They were focusing on leg strength for possible asymmetric

flight conditions. I replied that we could set strength requirements that would exclude 99% of women but that would also knock out at least 30% of the men as well. Things went quite, she was accepted into conversion training, passed with flying colours and quickly rose to Captain. Now there are many women flying for that airline and no one blinks an eye when a female voice comes from the cockpit 'Guday, this is your Captain speaking...'.

**Date:** Fri Mar 19, 1999 5:08 pm **Subject:** [crm-devel] Re: All-female crews

From my time with the airline, in the military and flying in general aviation, I have come to the conclusion that flying is most good head work. I have also found that prior experience is not necessarily a good indicator of how good an aviator is going to be. I have also found that basing expectations on sex or race or anything else is not a good idea.

I have seen some female aviators who were absolutely superior and have seen some

that should have not be in the cockpit. I must admit that I have also seen some male aviators who were absolutely superior and some that should not have been in the cockpit.. at times, including ME. It happens.. some days you are dead on and sometimes you couldn't find your fanny with 3 GPSs and a augmented crew.

If the crew is qualified, they are qualified. You might as well give them numbers and if their number comes up, they go. FWIW, someone once noted that the majority of accidents have white males at the stick.. and quite a few are Americans who show a strong distain for SOPs and love to challenge authority and are very aggressive. The wag's response was simple.. you want to cut down on accidents...statistics say don't hire white males...<G>

**Date:** Fri Mar 19, 1999 5:57 pm **Subject:** [crm-devel] Re: Female crew

>There will always be the question, 'What if'.

Absolutely correct. For better or worse, safety professionals are the ones who gets paid to ask it and try to answer it. We are charged with offering those who make the decision the answers with the least consequences.

>I have been privileged to be part of an all male group of ICU nurses one shift. We looked around, shrugged our shoulders and went about our business of saving and preserving lives in just the same caring compassionate way it is always done, even though we were a bunch of guys! None of the Nursing Supervisors felt that they needed to add a woman to the staff to keep us in line!

It is sad, but a fact of life, that men are more readily accepted by the public in traditionally female fields than vice versa. Had a patient been lost on your all-male shift, it is unlikely that CNN, the AMA, and every other organization with an interest would have been questioning whether the gender of the ICU team had anything to do with the death. I don't think we could say the same about the female aircrew. We know gender is not an issue

in measuring performance. Unfortunately, the media would make it one if a 'What if' came to pass. For me this is not a gender issue at all. It is a 'protect the decision maker from unnecessary exposure' issue. The military is not the place to test 'what if's'. That's not what you pay us for.

Date: Sat Mar 20, 1999 4:12 am Subject: [crm-devel] Re: Female crew

Couldn't have said it any better Keith!!

Pam Munro Rivier College Date: Sat Mar 20, 1999 11:14 am Subject: [crm-devel] Re: Female crew

Hi CRMers!

I may have to degenerate this conversation just a bit (my apologies, Neil) I missed the original message regarding all female crews in the transition. I would love for someone to send it to me so I can assess the conversation. As a female pilot in the Air Force I am dismayed, though not entirely shocked, by Capt Kopel's assessment of the reasons to not crew females together. I, too, am involved in safety and I manage the CRM program for our operational group. I believe the reasoning to be little more than a copout. Just because one may be uncomfortable that women are members of the (military) aviation

community does not mean that the rest of us have to suffer discrimination. Personal comfort level (socially speaking) is the problem of the individual in the cockpit. It does not give anyone the right to pick and choose the make-up of the crew.

Should we also recommend to your CO that an all male African-American or Hispanic crew not fly together? Can we truly be concerned for the safety of our female crews when the media's potential interest is the driving force? Are we saying that the mistakes of male crews are not instantly questioned and potentially 'world-famous' when an aircraft and human life are lost?

I trust that our safety inestigators are more forward-thinking than to focus negligent efforts on the 'female-ness' of the crew. Operational Risk Management does NOT dictate that you should make a mission more 'normal'. It states that we should reduce risks to the effective, safe completion of the mission. Removing a current and qualified crew member from the cockpit just because of a the self-esteem problems of (I pray) select few military

officers, is ridiculous.

Let us do our job. We are paid to fly to defend the constitution, just like our male coworkers. Capt Kopel says that 'what ifs' are not what we are paid to find out. I beg to differ. We say 'what if' we try to put two or more jets near each other and refuel while flying? What if we employ a major weapon system in a way that has never been tried before? During emergency situations, we ask 'what if' quite often to facilitate CRM and the safe recovery of the aircraft(s). What if we set the example for the country we serve and let people of all types achieve the goals they desire?

Sorry to ramble, folks. This is obviously an important issue with me. From a CRM persepective, how can a crew or flight function together effectively if this type of attitude is prevelant? Rest assured the entire military institution is a bit more willing to accept others.

Thanks, Teri Poulton Capt USAF

P.S. I have had the distinct pleasure of flying on all-female crews on smaller airplanes since becoming an Air Force pilot ...we prefer to call it 'unmanned flight' :)

#### Subject: [crm-devel] Female Crew

This is going to be long, Neil. Tried to keep the last one short and caught both barrels in the face.

Perhaps the reason this topic has generated such response is because different organizations, and individuals for that matter, are at different places its evolution. The differences in opinion and lack of standardization legitimize this as a worthwhile CRM discussion topic. We should not apologize for continuing this healthy discussion. I appreciate Captain Poulton's pointed response and would be interested in her opinion on how the Air Force has been able to diversify without the upheaval that it is causing in the Navy/Marine Corps. She did not 'degenerate' the conversation, and no offense was taken except where intended.

I am not particularly proud of the fact that in my organization a woman pilot has higher hurdles than men in order to 'prove themselves'. Women are new to Marine aviation. Most of us are not the chauvinists Captain Poulton would have us be, but particularly in the Marine Corps, there is a deep social conservatism and resistance to change. The attitudes, however disagreeable they are, are not going to change overnight. They are, however, changing.

In my area of tactical aviation, we address the potential of negative media response as a risk factor. We do what we can to minimize it. Operational Risk Management encompasses more than accident potential or crew qualifications. The simple fact is that an all-female crew in my organization would make history. It would not simply be viewed as a group of qualified aviators doing their job as it might in an airline or in the Air Force. The media has covered every other 'first' for women aviators in the military and will likely continue until such stories lose their novelty. Until such a flight is not a novel event, we have to treat it as one. For the same reason that the Air Force requires higher headquarters' approval for such a flight, I would advise my commander that this flight should be scrutinized as well. If he or she chooses to authorize it fantastic. I would be remiss though if I did not give him or her all the information available on which to base that decision.

Captain Poulton - E-mail me and I will forward the original message to you - it might have helped with your assessment of my response. <u>kopel@cwix.com</u>

#### Subject: [crm-devel] Re: Female crew

I would very much like to hear more about the acceptability of women in various cultures since my current research, funded through a gender equity foundation, is a search for the factors which affect the retention of women in technical careers - particularly in the field of aviation.

Most of you are probably aware that women in aviation have received a lot of press, but the actual numbers of women in 'technical' aviation jobs are not significantly increasing. What factors make this career field undesirable for women?

Dr. Mary Ann Turney Arizona State University East 7442 East Tillman Ave. Mesa, AZ 85212 602 727-1046 Date: Sun Mar 21, 1999 7:00 pm Subject: [crm-devel] Re: Female Crew

How will change be facilitated if a person, like Capt Kopel, who is willing to have an open mind still feels that an all female crew is a social experiment?

I find it unnerving that media response is considered a risk factor in the air. I would be interested to hear from other tactical aviators if they agree with this assertion. Any media interest following an accident/incident couldn't possibly be considered a risk factor before the flight. The surest way to avoid media attention is to quit making it a big deal. The biggest risk factor in this situation would be the inevitable feeling of a female crew member, aware of these negative attitudes, that she is not truly a part of the team.

Women have been flying without male supervision for some time. The wonderful women of the WASP organization flew, as flights, to ferry planes to the men in WWII. To again bring minorities into the argument (they have been through this ordeal longer than women), the 99th 'Tuskegee Airmen' were 'allowed' to crew together and were THE most successful pursuit squadron in WWII. I have never needed any kind of higher authority to fly with an all-female crew, and I'm curious where you got the notion that higher headquarters must approve it. In the KC-135, all female, all Hispanic, all African-American and probably all

Texan crews happen on occasion. In the training environment female crews happen frequently. The only approval we need is a set of flight orders and a qualified crew.

My opinion about why the Marine Corps is slow to accept women into aviation has to do with the mission of the branch as a whole. I think you have to hold a certain set of ideals to be the ones who are sent in first. It is strictly my very unimportant and fairly ignorant opinion that accepting women into that role could cause some men to feel that the Herculean strength and limitless courage that we need and expect out of them is somehow diminished because a woman can be expected to be just as brave. By no means to I accuse you or anyone in this opinion of chauvinism. I simply feel that the notion that

women need men on a crew for normalcy is absurd.

Again, my biggest complaint is that because the institution does not view a crew of women as 'just' a crew, the women are the ones who must sacrifice. Why is it that our careers must be different from men's when the problem lies within a few men? I have never understood this notion. I hope that Dr Turney can see a little bit about why some women would shy away from technical aviation careers. I would not trade mine for the world and will not be discouraged to the point of choosing another career, but many women may wish to avoid the constant confrontation and second-guessing.

Thanks again Teri Poulton

'Let her swim, climb mountain peaks, pilot airplanes, battle agaist the elements, take risks, go out for adventure, and she will not feel before the world...timidity' Simone de Beauvoir from Girls Can't Be Pilots by Margaret J. Ringenberg

Date: Sun Mar 21, 1999 9:03 pm Subject: [crm-devel] Re: Female crew

Mary Ann:

In case you have not already done so, I suggest you contact Dr. Peggy Batey of Women in Aviation International. I am sure she would be pleased to assist you. The Association's website is: www.wiai.org.

Peggy's contact is 937 839 4647.

Tony A (the Other Tony)

**Date:** Sun Mar 21, 1999 10:03 pm **Subject:** [crm-devel] Re: Female crew

Beautifully put Teri,.....courage under fire.....

Kerry.

**Date:** Mon Mar 22, 1999 1:55 pm **Subject:** [crm-devel] Re: All-female crews

No argument intended! It was simply a question as to why anyone, military or civilian would try to designate an all female or all male crew. Just curious concerning the thought process or lack thereof. Is there a specific mission that would require this separation.

**Date:** Mon Mar 22, 1999 12:37 pm **Subject:** [crm-devel] Female crew

Capt Kopel

As a US Marine Helicopter pilot and Aviation Safety Officer, I'd like to offer my perspective on the All Female Crew issue. My job requires me to review proposed flight schedules and screen them for human factors issues. I look at the task not only from the accident prevention perspective, but also screening for any issue that might have been overlooked by compartmentalized schedulers. My job is to bring up any issues, offer recommendations, and allow the commanding officer to make his own decision before authorizing the flight schedule.

You said <<< In this case, I would have advised against the flight. My rationale is not intended to question the qualifications of the female crew, but rather to protect them from being questioned later. If this plane had gone down, the mission, and every decision or non-decision involved, would have been instantly world-famous. >>>

I have to ask if you are managing flight risk or news media risk?

You said <<< The investigation would have centered upon the 'female-ness' of the crew. There is more at issue than the gender of the crew. >>>

What would that be?

You said < Try to look at this from the CO's perspective. Operational Risk Management dictates that if you can make a mission more 'normal' by removing unusual aspects that make it unique, you should. >

I would have to ask your CO a few questions:

1. Are the women qualified?

2. Are they qualified under the same criteria as the men?

3. Do you have any evidence that putting together an all-woman crew makes them unqualified?

4. Are you prepared to answer to higher authorities why you would NOT put together this qualified crew?

As a retired military officer, I would certainly want to know if the basic crew qualifications were good enough for the ultimate test... combat...BUT, I am afraid I don't buy your arguments. Please comment.

Jeff Hill Delta Air Lines

**Date:** Mon Mar 22, 1999 12:53 pm **Subject:** [crm-devel] Re: Female crew

Capt Kopel

Once again, I must respectfully disagree with you position... I believe that you told us (previously) that you job was that of aviation safety officer. Is it you job to manage safety of media?

Let me play 'what if?' just a second. Let's imagine that the most competent combat crew in your squadron was all female. In a crisis situation, you elect to NOT use this crew. What would you tell the 'guys' in your squadron about NOT using your most competent crew?

You said <<< The military is not the place to test 'what if's'. That's not what you pay us for.>>>

What about the following what ifs:

1. What if airplanes could fly faster than the speed of sound?

2. What if we could mount a gun on an F-4?

3. What if we could fly airplanes in the black of night using only FLIR and NVGs?

4. What if we could mount an artillery piece in a C-130 and use it as a precision weapon in the dark of night?

5. What if we could refuel airplanes in the air?

We could build an extended list of 'what ifs' for the military. I suggest to you that all major advances in the military came as the result of 'what ifs.' If in combat, I want the very best crews I can get. If that means women, then so be it.

Your thoughts?

Jeff Hill Delta Air Lines (USAF, ret) **Date:** Mon Mar 22, 1999 3:14 pm **Subject:** [crm-devel] with apologies

My apologies to the group...

In my last response, I neglected to delete part of Capt Kopel's text. That made it appear as if I were a 'US Marine Helicopter pilot and Aviation Safety Officer,' which I am not.

Jeff Hill Delta Air Lines

**Date:** Mon Mar 22, 1999 10:05 pm **Subject:** [crm-devel] Re: Female crew

Capt Kopel has certainly livened up in this forum! In this case, I must take issue with my fellow-Marine, although I understand the political climate and 'zero-defects' considerations he's sensitive to when reviewing his flight schedule.

Jeff Hill's remarks are on target. Who is best qualified to go in harm's way must be the only criteria. In Vietnam, it was too often 'SOP' to crew a 'strong' pilot with a 'weak' RIO (B/N, WSO, etc.) - or vice-versa. ('Strong' and 'Weak'' could refer to experience levels, or actual

abilities.) The results were usuallythe same: compromise of the mission in some regard, and/or sometimes the death of aircrew or personnel on the ground being supported. The best squadrons-my personal experience was in F-4s-put their strongest crews together in each aircraft, section and division. If someone was not qualified, they didn't go. Some squadrons specifically designated which crewmembers could go where, based on severity

of the anticipated threat/mission difficulty. This caused some griping, but it was both the safe and most combat effective way to go.

If pilots got the wings and can do the job, put 'em on the schedule if they're not in the 'Snivel Log.' If pilots can't do the job, they must not be permitted to risk the death of others, let alone themselves.

Semper Fi'-and good luck, Captain Kopel Lt. Colonel George Sweeney USMC (Ret) Manager Human Factors Development Northwest Airlines Flight Operations

# **APPENDIX F**

# AVIATION GENDER ATTITUDE QUESTIONNAIRE (AGAQ)

The following questionnaire has been developed as part of a cross-cultural study on gender attitudes in aviation. Your cooperation in completing the questionnaire is a valuable input to the overall success of the study.

- 1. This questionnaire contains a number of questions/statements where you are requested to express your opinion on various aspects relating to male and female pilots.
- 2. No person will or can be identified, and you may express your opinions freely.
- 3. Answer each question/statement as honestly as possible. Please do not omit any items.

#### Instructions

There are no right or wrong answers. It is your *frank, expressed* view, which is of importance. Often, the first answer that comes to mind is the best. Read each statement and choose one rating that best expresses your view. Use the following scale markers:

- 1. SD = strongly disagree
- 2. D = disagree
- 3. N = neither agree nor disagree
- 4. A = agree
- 5. SA = strongly agree

Try to use the scale 'neither agree nor disagree (N)' as seldom as possible.

Thank you in advance for your time and participation.

# **AVIATION GENDER ATTITUDE QUESTIONNAIRE (AGAQ)**

# **SECTION I**

# **Biographical Information**

Please check the appropriate answer with X

1. Gender:

Male 1 Female 2

2. What is your age? \_\_\_\_\_ years.

3. Nationality:

American	1	South African	2
Australian	3	Other (Please specify)	4

#### 4. Highest Educational Qualification:

High School Certificate	1	Technical Diploma	2
Bachelors Degree	3	Graduate Degree	4

- 5. Experience as a pilot: years.
- 6. Total flying time: hours.

# 7. Pilot Certification: (which one of the following best describes your *current* status and function)

Private Pilot (no instruments)	1	Instrument Rated Pilot	2
Commercial Pilot	3	Multi-Engine Rated Pilot	4
Flight Instructor	5	Flight Instructor -	6
		Instrument	
Flight Instructor – Multi-Engine	7	Airline Transport Pilot	8

#### 8. Aircraft Category and Classification: (please choose one)

Single-Engine Land	1	Single-Engine Sea	2
Multi-Engine Land	3	Multi-Engine Sea	4
Rotorcraft	5	Glider	6
Lighter-than-air	7	Other (Please specify)	8

9. Main Area of Operation:

Private Pilot	1	National Airline Pilot	2	Corporate Pilot	3
Military Pilot	4	Government Pilot	5	Freight Pilot	6
Charter Pilot	7	Other (Please specify)			8

10. Nature of Flight Duty: (Please choose one field which best represents the majority of your flying activity)

Passenger Transportation	1	Air Freight	2
Agricultural (e.g. Crop Dusting)	3	Industrial/Construction	4
Aerial Surveying (e.g.	5	Aerial Patrol (e.g. Traffic,	6
Photography, Mapping, etc.)		Environmental, Law	
		Enforcement, Fire Control,	
		etc.)	
Pilot Training/Flight Instruction	7	Sales & Demonstration	8
Personal Flying (i.e. Sports,	9	Aerobatics	10
Recreation, etc.)			
Experimental/Test Flight	11	Combat	12
Other (Please specify)			13

#### 11. Position:

Captain: Multi-crew	1	First Officer: Multi-crew	2
Single Pilot in Command	3	Other (Please specify)	4

#### 12. Have you completed a Crew Resource Management course?

Yes	1	No	2
-----	---	----	---

## 13. Have you had the opportunity to fly with the opposite gender?

Never (not at all)	1	Rarely (about 25% of the time)	2	Sometimes (about 50% of the time	3
Often (about 75% of the time)	4	Mostly (virtually always)	5		

## SECTION II

Section II of the questionnaire is designed to express *your opinion* about male and female pilots. Please complete the following questions by checking the block that best reflects your view. There are no right or wrong answers.

	SD	Ν	Α			S	A			
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agre					
1	During pilot ti	raining, women have	lerstanding	SD	D 2	<b>N</b> 3	<b>A</b>	SA 5		
	the mechanic	al workings of an ai			~	5	-	0		
2	•	are more prone to	•	SD 1	<b>D</b> 2	<b>N</b> 3	<b>A</b> 4	SA 5		
3	•	s in command of a m	SD	D 2	<b>N</b> 3	<b>A</b>	SA 5			
	agreeable that	an male pilots.			~	0	-			
4	Female pilots	are as well respect	ted as male pilots.		SD 1	<b>D</b> 2	<b>N</b> 3	<b>A</b> 4	SA 5	
5	Female flight	students are great	'sticks' (i.e. they see	em to have a	SD	D	N	A	SA	
	natural feel fo	or flying from the sta	art).		1	2	3	4	5	
6	Male pilots a	re less prone to inci	dents than female p	ilots.	SD	D	N	A	SA	
7	Econolo niloto	in command dianla	w graatar laadarahi	a ability than	SD	2 D	3 N	4 A	5 SA	
7	-	s in <i>command</i> displa	ly greater leadership	o ability than	1	2	3	4	5	
	male pilots.									
8	Women shou		SD 1	<b>D</b> 2	<b>N</b> 3	<b>A</b> 4	SA 5			
9	Male pilots make fewer mistakes while learning to fly than female						N	Α	SA	
	pilots.				1	2	3	4	5	
10	Male pilots ha	ave a stronger inter	nal sense of directio	n than	SD	D	N	Α	SA	
	female pilots.				1	2	3	4	5	
11	Female pilots	often have difficult	y making decisions	in urgent	SD	D	Ν	Α	SA	
	situations.				1	2	3	4	5	
12	Professional	female pilots (comm	nercial and/or militar	rv) are	SD	D	Ν	Α	SA	
		quickly as male pilo			1	2	3	4	5	
10				an al a fliacht	00		NI	^	<u> </u>	
13	-	udents learn piloting	skills laster than le	male llight	SD 1	D 2	<b>N</b> 3	<b>A</b> 4	SA 5	
	students.		laura attantian ta dat	- 11	00	_	NI	_	<u> </u>	
14	remale pilots	s tend to pay meticu	ious attention to del	an.	SD 1	D 2	<b>N</b> 3	<b>A</b> 4	SA 5	
15	Male pilots te	end to 'take charge' i	in flying situations m	nore than	SD	D	N	Α	SA	
_	female pilots.	-			1	2	3	4	5	
16	Female pilots	s may become emot	ional at work/during	a flight.	SD	D	N	A	SA	
17	Women ofter	lack the endurance	e to complete flight	school.	1 SD	2 D	3 N	4 A	5 SA	
.,					1	2	3	4	5	

d	Strongly				A				
	disagree	Disagree	Neither agree nor disagree	Agree		Str	ongl	y ag	gree
18		ecome fatigued less	quickly during long	flights than	SD	D	Ν	Α	SA
	female pilots.				1	2	3	4	5
19 (	ely reason fo	r accidents involv	is poor	SD	<b>D</b> 2	N	A	SA	
	decision ma	king.		1	~	3	4	5	
20	On a comme	ercial flight, I feel	SD	D	N	Α	SA		
	do with a fer	male pilot.	1	2	3	4	5		
21	Female fligh	it students are mo	SD	<b>D</b> 2	<b>N</b> 3	<b>A</b> 4	SA		
	students.				1	~	3	4	5
22	Female pilot	ts become fatigue	d quicker during s	tressful	SD	D	N	A	SA
	flights than r	male pilots.			1	2	3	4	5
23	Female pilots	prefer to have info	rmation above the r	equired	SD	D	N	Α	SA
		ore so than male pilo			1 SD	2	3	4	5
24	Male pilots ar	Male pilots are less nervous when piloting than female pilots.						<b>A</b> 4	SA 5
25	Male flight stu	t students take greater risks in flying than female flight					3 N	A	SA
	students.				1	2	3	4	5
26	Male pilots ar	are less likely to make judgment errors in an					<b>N</b> 3	<b>A</b> 4	SA 5
	emergency th	nan female pilots.			1	2			
27	Female pilots	prefer to have com	plete resolution to a	a problem	SD 1	<b>D</b> 2	N 3	<b>A</b> 4	SA 5
	before taking	off, more so than m	nale pilots.						
28	Women who	o fly should do so	for recreation, not	as a	SD	D	N	Α	SA
	profession. I	Flying is a man's j	ob after all.		1	2	3	4	5
29	In flight scho	ool, female pilots t	end to worry abou	ut small	SD	D	N	Α	SA
	things such	as burned out lan	ding lights more s	o than male	1	2	3	4	5
	pilots.								
30	Male pilots r	nake less mistake	es when piloting th	an female	SD	D	N	Α	SA
	pilots.				1	2	3	4	5
31	Professiona	l female pilots ten	d to take on a def	ensive	SD	D	N	Α	SA
	managemer	nt style where as r	nale pilots appear	more	1	2	3	4	5
	relaxed.								
32	Amelia Earh	art got lost becau	se she was a won	nan.	SD	D	N	A	SA
33	Women tend	d to learn to fly an	d preflight 'by the	book' more	SD	D	3 N	4 A	5 SA
	so than mer	1.			1	2	3	4	5
34	Female pilot	ts tend to worry to	o much about insi	gnificant	SD	D	Ν	А	SA
	things when	flying.			1	2	3	4	5

di 35	•	Disagree	Neither agree nor disagree	Agree		Str	ممط		
35	Female pilot		noi uisayiee	3		Our	ungi	y ag	gree
1	•								
	the attitude	ts in leadership po	sitions always see	em to have	SD	D	Ν	A	SA
36		that they have sor		1	2	3	4	5	
	Women sho	uld pilot during pr		SD	D	Ν	A	SA	
		it students tend to	ulty in	1 SD	2 D	3 N	4 A	5 SA	
	U	use rudder control	•	1	2	3	4	5	
	students.		ale iligiti						
		ann far anaidanta ir	which female pilots		SD		N	Δ	SA
38		ircraft mishandling.	i which temale pilot	sale	1	D 2	3	А 4	5 5
			ssertive than fema	le nilots	SD	D	N	A	SA
					1	2	3	4	5
		-	only in the position	•	SD 1	D 2	<b>N</b> 3	<b>A</b> 4	SA 5
i	in because a	airlines want to ful	fill affirmative action	on quotas.					
41	Male flight s	tudents tend to re	spond better to a	'bounce'	SD 1	<b>D</b> 2	<b>N</b> 3	<b>A</b> 4	SA 5
1	than female	flight students.					0		Ŭ
42	Female pilot	ts are more likely	to lose control foll	owing a	SD	D	N	А	SA
	stall, than m	-		o ming a	1	2	3	4	5
		•	<i>ident</i> than female pi	lots.	SD	D	N	А	SA
					1	2	3	4	5
	professional r	-	he same level of ex	perience as	SD 1	<b>D</b> 2	<b>N</b> 3	<b>A</b> 4	SA 5
		-	ts are more safety-c	rientated	SD	D	N	A	SA
	than male pilo		is are more safety e	nontated	1	2	3	4	5
			ose control when la	anding or	SD	D	N	А	SA
	•	a crosswind than		sincen ig en	1	2	3	4	5
			iccessful at crew ma	anagement	SD	D	N	А	SA
	than male pilo			and generative.	1	2	3	4	5
	•		he same level of ex	pertise as	SD	D	Ν	А	SA
	professional r	male pilots.			1	2	3	4	5
49	Male flight s	tudents tend to be	e less fearful of lea	arning stall	SD	D	Ν	Α	SA
	procedures	than female stude	ents.		1	2	3	4	5
50	Women pos	sess the physical	strength that may	be	SD	D	Ν	A	SA
	required to f	ly and/or maintair	n (e.g. refueling) a	n aircraft.	1	2	3	4	5
51	Male pilots te	nd to be more ratio	nal in making decisi	ons than	SD	D	Ν	Α	SA
1	female pilots.				1	2	3	4	5
52	Flight progra	am standards for t	he airlines/military	have been	SD	D	N	A	SA
	relaxed in or	rder to increase th	ne number of fema	le pilots.	1	2	3	4	5

SD		D			SA				
Strongly		Disagree	Neither agree	Agree		Strongly agree			
(	disagree   Disagree   nor disagree   hgree								
53	Male flight st	udents tend to learn	navigational issues	faster than	SD	D	N	A	SA
00	Male flight students tend to learn navigational issues faster than female flight students.				1	2	3	4	5
54	Crashes involving male pilots in command are more likely to					D	N	A	SA
0.	result in serious or fatal injuries than crashes involving a female pilot in command.					2	3	4	5
55	Female pilots' decision-making ability is as good in emergency situations as it is in routine flights.					D	N	A	SA
						2	3	4	5
56	Supervisors of female pilots often let them get away with a little				SD	D	Ν	Α	SA
	more because they are afraid of being branded sexist.					2	3	4	5
57	Female flight students tend to experience more difficulty in				SD	D	Ν	Α	SA
	learning rad	learning radio communication procedures than male flight				2	3	4	5
	students.								
58		Male pilots are more likely to run out of fuel than female pilots.					N	A	SA
	•					D 2	3	4	5
59	In a given situation, male pilots will often make a decision				SD 1	D 2	<b>N</b> 3	<b>A</b> 4	SA 5
		quicker than female pilots.					NI		0.1
60	Female pilots	s possess the 'right	ne 'right stuff' to be truly successful.		SD 1	<b>D</b> 2	<b>N</b> 3	<b>A</b> 4	SA 5
61	Female flight students may feel intimidated when first learning to			SD	D	N	A	SA	
	fly more so than male flight students might.				1	2	3	4	5
62	Male pilots are more likely to land with the landing gear up than			SD 1	D 2	<b>N</b> 3	<b>A</b> 4	SA 5	
	female pilots.					~	5	4	5
63	Female pilots often lack the leadership ability required to				SD 1	<b>D</b> 2	<b>N</b> 3	<b>A</b>	SA 5
	pilot a multi-crew flight.					~	5	4	5
64	There are no differences between male and female pilots.					D	N	Α	SA
					1	2	3	4	5
65	In flight school, female flight students become frustrated more				SD 1	D	Ν	Α	SA
	quickly when they are unable to grasp a concept than male flight					2	3	4	5
	students.								
66	Female pilots often experience physical constraints in piloting				SD 1	D	N	A	SA
	aircraft, for example, they can't reach the rudders.					2	3	4	5
67	Male pilots te	ale pilots tend to take greater risks than female pilots.		ots.	SD	D	N	A	SA
68	Female pilots in the military should be limited to flying tanker,				SD	D	3 N	4 A	SA
	transport, and training aircraft.					2	3	4	5
69	Flight training standards have been relaxed so that it is easier for					D	N	A	SA
	women to ge	t their 'wings'.			1	2	3	4	5
70	Female pilots	s tend to practice m	ore situational aware	eness than	SD	D	Ν	Α	SA
	male pilots.				1	2	3	4	5

	SD	D	Ν	Α		SA			
	Strongly disagree	Disagree	Neither agree nor disagree	Agree		Strongly agree			
71	Female pilots tend to make the same decisions in a given				SD	D	Ν	Α	SA
	situation as male pilots.					2	3	4	5
72	72 Female pilots seem to have the same 'edge' as male pilots.				SD	D	Ν	Α	SA
	-				1	2	3	4	5

# **SECTION III**

# Please include any additional comment(s) you may have regarding stereotypes and/or prejudices (either positive or negative) about female pilots.

Thank you for taking the time to complete this questionnaire. Your participation is appreciated.

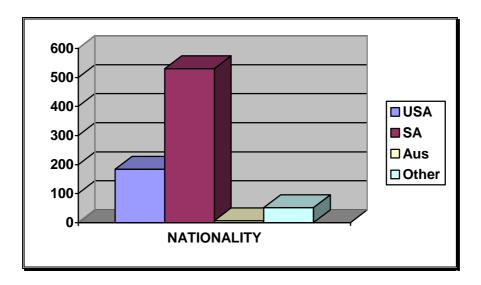
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# **APPENDIX H**

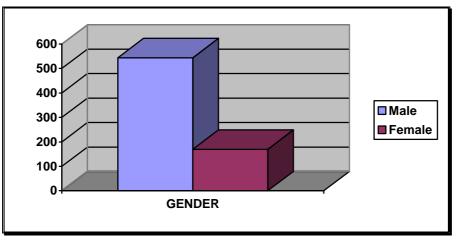
# GRAPHS

The graph numbers correspond with the numbers of sections in Chapter 6.

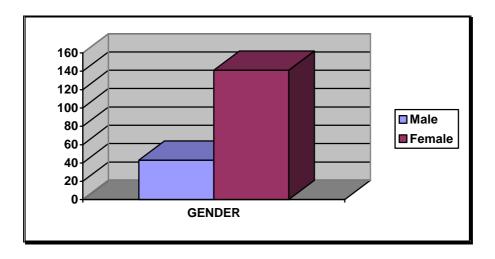
#### **GRAPH 6.1: NATIONALITY**



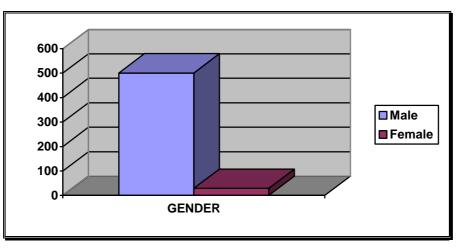




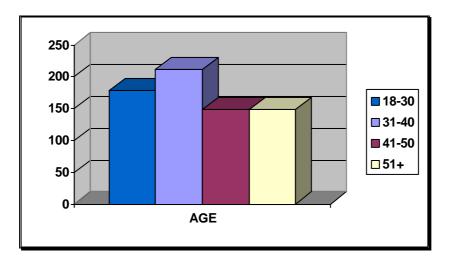
GRAPH 6.2.2: GENDER (USA)



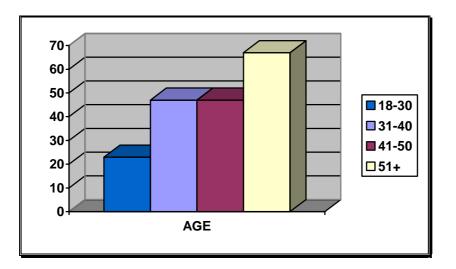




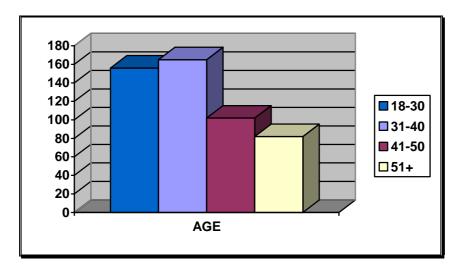
GRAPH 6.3.1: AGE (TOTAL)



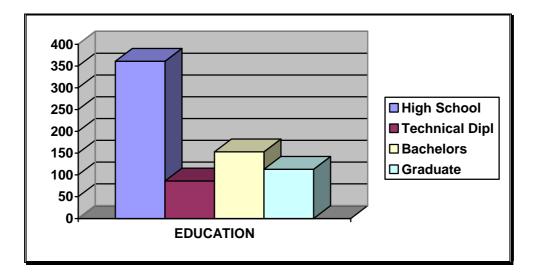
GRAPH 6.3.2: AGE (USA)



GRAPH 6.3.3: AGE (RSA)

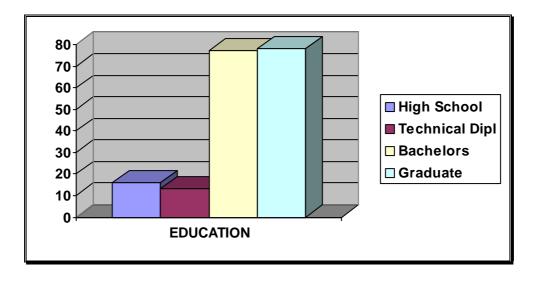


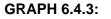
GRAPH 6.4.1: HIGHEST EDUCATIONAL LEVEL (TOTAL)



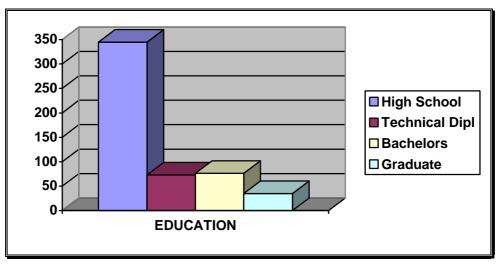
GRAPH 6.4.2:

HIGHEST EDUCATIONAL LEVEL (USA)

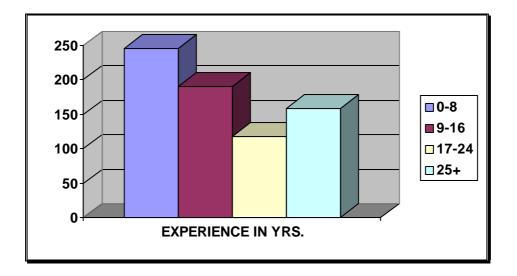




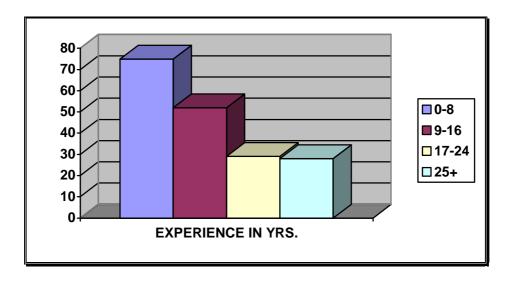
# HIGHEST EDUCATIONAL LEVEL (RSA)



GRAPH 6.5.1: YEARS OF EXPERIENCE (TOTAL)

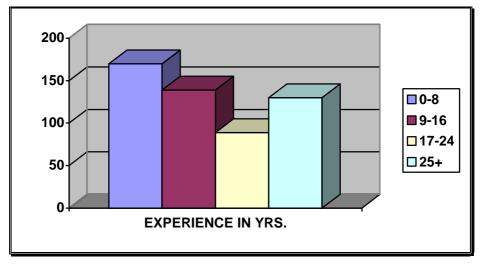




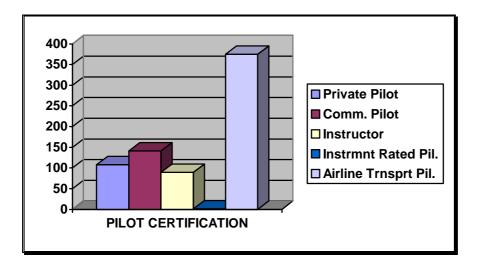




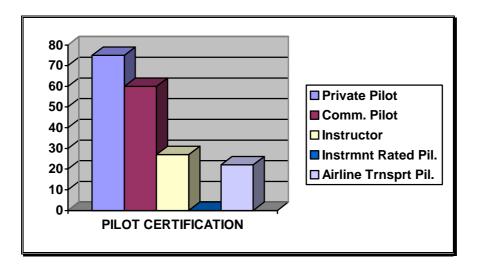
YEARS OF EXPERIENCE (RSA)



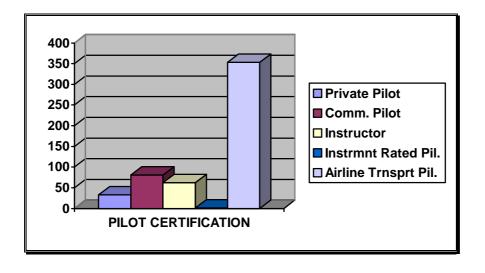
GRAPH 6.6.1: PILOT CERTIFICATION (TOTAL)



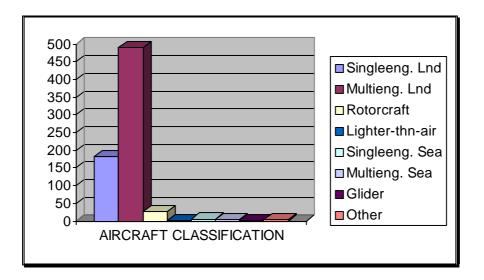


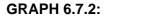




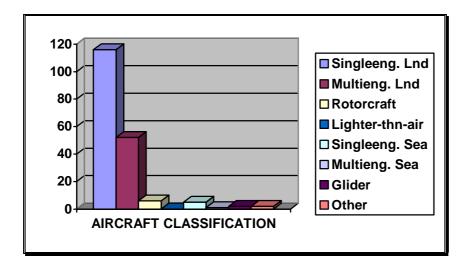


#### GRAPH 6.7.1: AIRCRAFT CLASSIFICATION (TOTAL)

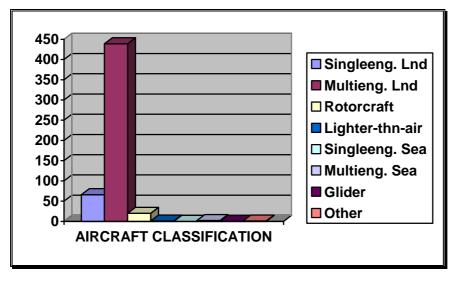




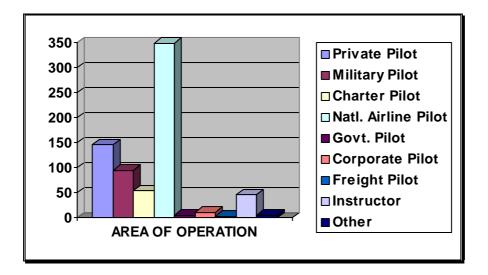
AIRCRAFT CLASSIFICATION (USA)

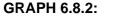




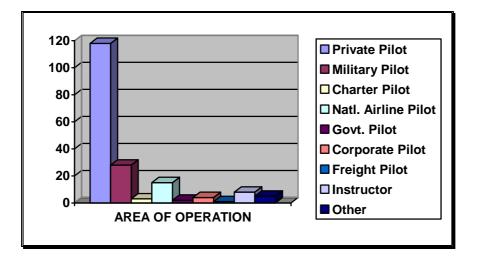


GRAPH 6.8.1: AREA OF OPERATION (TOTAL)

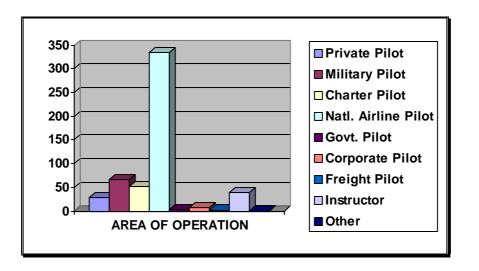




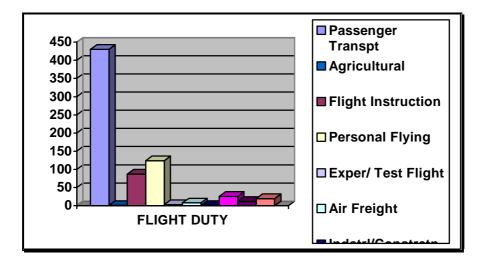
AREA OF OPERATION (USA)





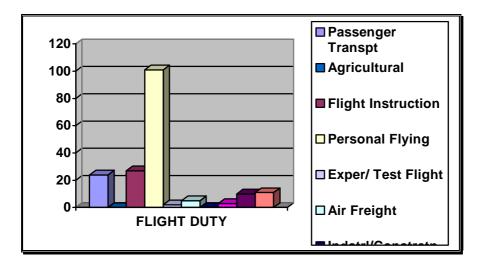


GRAPH 6.9.1: FLIGHT DUTY (TOTAL)



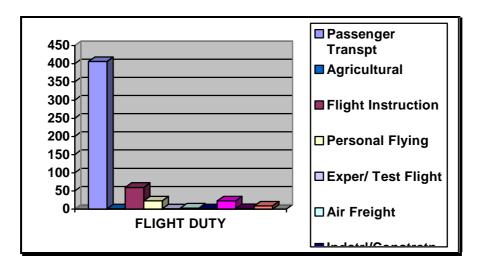


FLIGHT DUTY (USA)

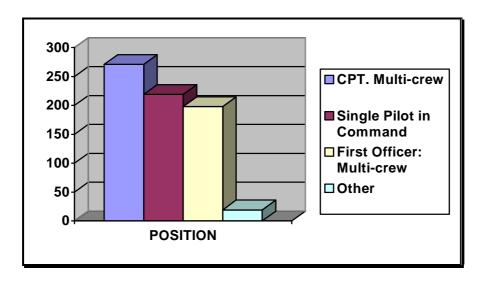




FLIGHT DUTY (RSA)

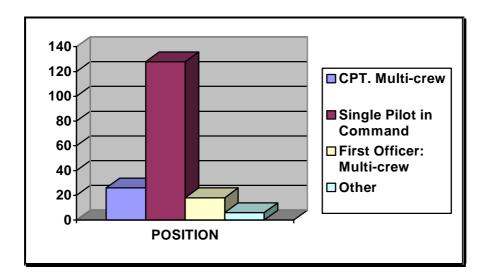


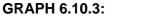
GRAPH 6.10.1: POSITION (TOTAL)



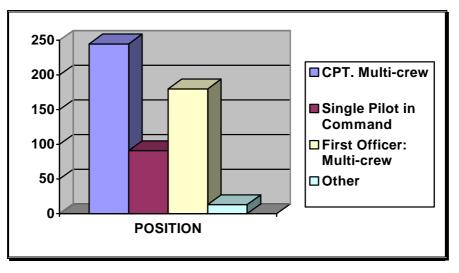
GRAPH 6.10.2:

**POSITION (USA)** 





# POSITION (RSA)



GRAPH 6.11.1: CREW RESOURCES MANAGEMENT COURSE (TOTAL)

