



SCHOOL OF AVIATION
Lund University

A man's world
The sex and gender of pilots

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Abstract

This report concerns the unequal sex distribution among pilots. The purpose was to find an explanation to why this is, and come up with suggestions for a change. It has been done by studying literature on female pilots and women in non-traditional occupations, and by applying gender theories to their findings and conclusions. To be able to examine the role of the pilot the report starts by introducing some important aspects of gender theories. This was done to include the social and cultural aspects of the sexes and explain how gender specific occupational roles are being established. The sex distribution among pilots was also introduced to the reader to show that women seldom make up to more than 10% of the staff in aviation companies. The conclusion that was made, was that the perception of occupations as either male or female is established early and that this is difficult to change. This perception makes it less likely for the underrepresented sex to apply for that kind of work. It was also established that the gender identity is separated from the biological sex. Throughout this work it was found that the pilot role is traditionally masculine. When establishing the biological sex, a presumption about the gender identity is being made. This has to change for women to get equal access to the pilot occupation. The most important change for a less masculine occupation role was found to be an increase of female pilots.

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1. Introduction

It doesn't take long for a female pilot to realize that she is surrounded by men. In the cockpit, on the radio and in the crew rooms at airports, the voice or sight of a woman is unusual. At the School of Aviation, Lund University, the number of female students is 3 out of a total of 38 students¹. In the senior class, 03:2 there are 2 out of 12. And this is not at all uncommon.

When discussing gender studies this aspect of the pilot occupation is especially interesting. Why are there so few female pilots, and is it changing at all? What could be done to get more women interested in flying? These are all interesting questions, not all of which will be answered here.

Existing research connecting gender with the pilot occupation specifically is quite rare. Caroline Davey is the most prominent writer on the subject with two articles on women in commercial aviation². Davey and Marilyn Davidson have together written one article where they examined the problems faced by female pilots in a commercial airline.

2. Purpose

The purpose of this essay is to make a connection between gender theories and the uneven distribution between the sexes in the pilot occupation. The aim is to answer two questions, first of all why are there so few female pilots? And secondly what can be done to change this?

3. Method and limitations

The content of this report is based on a literature study. When discussing gender theories literature from previous studies was used. The most useful was a compilation of different gender political writings *Kvinnopolitiska Nyckeltexter* (Female Political keywritings) and *Politikens Paradoxer* (the Paradoxes of Politics). The references from the Swedish Equal Opportunities Act came from *JämOs handok om aktivt*

¹ This was dated on February 1 2005

² Davey, Caroline L. *The Impact of Human Factors on Ab Initio Pilot Training and The Right of Passage? The Experience of Female Pilots in Commercial Aviation*

jämställdhetsarbete (The Equal Opportunities Ombudsman's handbook on active equality work).

As for the part on pilots statistics have been gathered from Luftfartsstyrelsen (Swedish Civil Aviation Authority) and from some articles on pilots³. To connect gender studies with the pilot role the few articles available through different search engines online has been used. The most important for this report being Davey and Davidson's article *The Right of Passage? The Experiences of Female Pilots in Commercial Aviation*, Davey's article *The Impact of Human Factors on Ab Initio Pilot Training*. Barbara Bagilhole's book *Women in Non-Traditional Occupations Challenging Men* has been very useful as it describes other occupations were women are under represented and discusses the reasons for this.

What could be noted about the sources used is that they are very limited. With a larger amount of sources, the credibility could have been larger. It is interesting to note though, that there are so few writings and studies discussing female pilots and the masculine tradition of the pilot role.

The most limiting part of this work is the confined existing literature. This report has been made as a literature study, but for further research interviews could have increased the work and perhaps verify the conclusion.

4. Results

4.1. Gender theories

4.1.1. Feminism

Feminism can be tracked back to the eighteenth and nineteenth century with writers like John Stuart Mills and Mary Wollstonecraft⁴. It originates from the claim for womens right and priviliges but was then commonly known as the women's rights movement. Since the second world war the word feminism has been seen as a derogatory term.⁵ Now it commonly stands for the knowledge of men's superiour position, a willingness to change that, and an adaption to equality between the sexes. According to

³ Gilmartin, Davey and Davidson.

⁴ Nationalencyklopedin. "Feminism" part 6, 175.

⁵ Millet, Kate. *Sexual Politics* (New York: Simon & Schuster, First Illinois paperback 2000) , 83.

the Meriam-Websters dictionary feminism is "the theory of the political, economic and social equality of the sexes."⁶ Germaine Greer argues that it is impossible for women to fight the injustice and claim their rights, if they are not aware of the injustice and don't question the historically established assumptions about women and their biological inferiority.⁷ One fundamental part of feminist theory is that the meaning of the gender identity is socially constructed. To what extent is being discussed, but the essential meaning is that sex or gender cannot be totally separated from power relations⁸.

4.1.2. Gender/sex

The Meriam-Webster dictionary defines gender as "the behavioral, cultural, or psychological traits typically associated with one sex."⁹ In discussions about feminism or gender this is what is focused on, trying to disregard the biological distinction to some extent. The biological differences are in these discussions limited to the actual sex organs. The fact that only women are able to give birth is not being questioned, but that this would mean that women possess specific biological characteristics is. These characteristics could be qualities like caring or sensitivity. To further distinguish what is meant by gender, the expression gender identity may be used:

gender identity: an individual's self-conception as being male or female, as distinguished from actual biological sex. For most persons, **gender** identity and biological characteristics are the same. There are, however, circumstances in which an individual experiences little or no connection between sex and **gender**¹⁰

⁶"Feminism" Meriam-Webster <http://www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=feminism> 050224

⁷Greer, Germaine. *Kvinnopolitiska Nyckeltexter* (Lund: Studentlitteratur),197.

⁸Höjer, M W, Åse, C. *Politikens Paradoxer* (Lund Academia Adacta), 21.

⁹"gender" Meriam-Webster online <http://www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=gender> 050220

¹⁰"gender identity." *Encyclopædia Britannica*. 2005. Encyclopædia Britannica Premium Service 15 Feb. 2005 <<http://www.britannica.com/eb/article?tocId=9036351>>.

Sex on the other hand is defined as "either of the two major forms of individuals that occur in many species and that are distinguished respectively as female or male."¹¹ Gender is the expression feminists created to be able to include the social or public aspects of sex.¹² So it is possible to distinguish a difference between sex and gender, sex would be a biological definition whereas gender would be the social, behavioral and cultural identity. One's sex could still be distinguished based on the actual physical organs, but the gender identity doesn't have to be based upon the same two categorizations. One might physically be a man, that is having a penis, but not possess the characteristics connected to the image of a man.

Margaret Mead questioned the differences between the sexes that we find so crucial as to divide humans into only two categories based on these specific characteristics.

Through arbitrary assignment of specific clothes, specific manners, specific social reactions to individuals from a certain class, of a certain sex or a certain color, for those who are born on a certain day of the week or with a certain look, one violates the individuals specific talent.¹³

Mead proposes the abandonment of the distinctions on which we base our division of the sexes.

4.1.3. Equality

The discussion of womens lower position in the social and political hierarchy arose as early as in the nineteenth century. John Stuart Mill wrote 1869 that "the principle that regulates the existing social relationship between the sexes - the one sex`s lawful superiority over the other - is wrong in itself and does now constitute one of the largest obstacles for the improvement of humanity, and should be replaced by a principle of total equality that does not accept power or priviliges for one side and lack of legal rights for

¹¹ "sex" Meriam-Webster Online <http://www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=sex>
050223

¹²Höjer, 18.

¹³ Mead, Margaret. Kvinnopolitiska nyckeltexter (Lund: Studentlitteratur), 131.

the other.”¹⁴ In 1949, one of the pioneer feminists Simone de Beauvoir referred to women as the other sex, saying that women always are defined on the basis of a man, and also arguing that gender is more of a social structure than something you are born to be.¹⁵ The normative description of man as the general person, makes the woman deviant up to the point where only the woman seems to have a sex. This puts women in a strange paradox, to become individuals (instead of women) they must cease to be women.¹⁶

The inequality between the sexes has given the women’s rights movement and gender theorists many different injustices to argue and deal with during history. The right to vote, to work, and more recently the demand for equal pay in the workplace are a few examples. But as women claimed these rights and privileges, new demands and discussions arise. So as equality becomes natural, the discussion moves on. When it is established that women and men are of equal value, the differences and similarities are more thoroughly examined, both biologically and socially. Now the discussion has come to deal with typical male and female constructed characteristics and their importance (or non-importance) in different jobs and tasks.

Jämställdhetslagen (Equal Opportunities Act) in Sweden has the purpose to promote equal rights in work relating matters for women and men, mostly working to improve women’s conditions in the workplace. Concerning recruitment, the act states that “the employer shall, through training, skills development and other suitable measures, promote an equal distribution between women and men in various types of work and within different categories of employees.”¹⁷ It also states that in a workplace where the distribution of the sexes is unequal, the employer should take actions as to seek to recruit people of the underrepresented sex and continue to do so. It does state exceptions, if “there exists special cause not to implement such measures or where such measures cannot reasonably be demanded taking into consideration the employer’s resources and

¹⁴ Mill, John Stuart. *Kvinnopolitiska nyckeltexter* (Lund: Studentlitteratur), 43.

¹⁵ De Beauvoir, Simone. *Kvinnopolitiska nyckeltexter* (Lund: Studentlitteratur), 158.

¹⁶ Höjer, 13.

¹⁷ JämOs handbok om aktivt jämställdhetsarbete §7, 79.

the circumstances in general.”¹⁸ But even with the introduction of sex equality legislation women have not to any larger extent moved into traditional male occupations.¹⁹

4.2. The pilot occupation

4.2.1. The pilot role

Despite women’s increased presence in the workplace, women and men still seem to have different roles, with men generally on top, and women on the bottom of the hierarchy.²⁰

The role of the flight attendant is a caring role, generally associated with women. The pilot on the other hand, is a male dominated top of the hierarchy occupation. The pilot role is generally associated with a man. Bagilhole states that there is a belief that women by nature are unsuitable for certain type of jobs, especially those involving leadership, managerial or technical skills.²¹ Another aspect according to Bagilhole is that female professions in almost all communities tend to be those with less prestige, and male professions being the ones with high status.²²

4.2.2. Statistics

By 1992, Gilmartin wrote that approximately 3% of the U.S. pilots were women, and that this was significantly higher than worldwide numbers²³. British Airways had in 1995 3000 pilots; only 40 of these were female. And in 2004-12-31 there were 4100 certified airline traffic pilots²⁴ in Sweden. Out of these, only 250, just over 6% were women²⁵. According to equal opportunities legislation in Sweden, an occupation is said to have an even distribution in terms of sex if both sexes are represented by at least 40%. Clearly, this is not the case when it comes to pilots.

¹⁸ JämOs handbok om aktivt jämställdhetsarbete §9, 89.

¹⁹ Bagilhole, Barbara. *Women in Non-Traditional Occupations challenging Men* (New York: Palgrave Macmillan 2002), 24

²⁰ Bagilhole, 13.

²¹ Bagilhole, 48.

²² Bagilhole, 53

²³ Gilmartin, P. “Women pilot’s performance in Desert Storm helps lift barriers in military, civilian market.” *Aviation Week and Space Technology*. 13 Jan 1992.

²⁴ These are pilots holding a Commercial Pilot License(CPL) or an Airline Traffic Pilot License(ATPL).

²⁵ Luftfartsstyrelsen. Information from Eva Mari Löfqvist at Luftfartsstyrelsen.

At Lund University School of Aviation, there are presently 3 women out of 38 students²⁶. Normally there is about one female student in each class of twelve. During the time period 1998-2004 a total of 2852 applied for the School of Aviation, out of these 518, about 18% were women. In the same period 114 male students were accepted, whereas only 12 females²⁷. This makes a percentage of 9,5% a lot less than the applicants, but still higher than the number of airline traffic license holders.

4.2.3. Women among men

In Davey and Davidson's article on the experiences of female pilots in commercial aviation they interviewed both male and female pilots in a European commercial aviation company.²⁸ The purpose was to investigate the experiences and problems faced by female pilots. As flying is not and has not been a traditional career choice for women, the number of female pilots remains small. This, according to Davey and Davidson's article leads to some difficulties as everything any of the female pilots does, gives room for general assumptions. Therefore, the performance of the female pilots seemed more important, since if they perform poorly, it will never be forgotten. "The first female pilots to join the airline were made acutely aware of being different from the norm and thus the focus of attention."²⁹ The article relates to the limited literature on female pilots, and summarizes what does exist; it confirms that female pilots possess the same skills and qualities as the male pilots. But also, the literature assures that the female pilots, even though they possess the "male qualities", remain feminine, and one of the authors even provided pictures of female pilots who were attractive and glamorous.

In an article on cockpit design, Rachel Weber discusses how women are discriminated in another sense, not only that they are physically different than men, but that this difference brings barriers to career advancement and a feeling of being

²⁶ Students counted date 20050225.

²⁷ Appendix 1

²⁸ Davey, Caroline L and Davidson, Marilyn J."The Right of Passage? The Experiences of Female Pilots in Commercial Aviation." *Feminism and Psychology*. London 2000 Vol 10(2) 195-225.

²⁹ Davey and Davidson 204

abnormal.³⁰ Another reason for the low number of female pilots could be as Davey (2004) states, that the commercial aviation industry recruited a lot of pilots from the military, and therefore also adapted to their culture and their manners.³¹

In another article Davey (2004) suggest that the former `macho pilot` role is outdated. That now with the modern flight decks, pilots mostly monitor computers instead of manually handling the aircraft.³²

4.3. Summary

To make some kind of conclusion, two important aspects can be seen:

- Women are underrepresented among pilots
- The traditional role of the pilot is male

It is no coincidence that these two conclusions are made, since an occupation that has once been associated with one sex, seldom changes. Bagilhole states that it is difficult for the under represented sex to see that kind of job as a potential employment. She means that once it is constructed as masculine or feminine, it is hard to cross that gender boundary. In this case, the pilots are male, and the stewardess female. The scenario that female pilots describe according to Davey is not one where the cockpit atmosphere is changing, but one where they have to change: “rather than changing the culture, women have very much had to conform to the masculine and military values and practices.”³³. This is the case, even though a lot of the male pilots or chief pilots describe a positive approach towards females in the cockpit. Also, she states that there seems to be a difference of how managers apprehend the cockpit climate and how the female pilots themselves feel. When the female pilots describes a masculine environment and difficulties of recognition from their male colleagues the managers say that integration has worked well.³⁴

³⁰ Weber, Rachel N. "Manufacturing Gender in Commercial and Military Cockpit Design." *Science, Technology and Human Values*. Spring 1997, 14

³¹ Davey, Caroline L. "The Impact Of Human Factors on Ab Initio Pilot Training" *Gender, Work and Organization*. Vol. 11 (6) 2004, 632.

³² Davey, 632.

³³ Davey and Davidson, 210.

³⁴ Davey and Davidson, 196.

5. Discussion

Why are there so few female pilots in commercial aviation? The answer could be divided into different parts:

- The military history of pilots
- The typically male occupation role
- Difficulties in changing that role and making it more gender neutral
- Strengthening of gender roles by defining *female* pilots in contrast to pilots
- The gender perspective and the non-importance of dividing people into sexes

The theory of military pilots going civil is definitely one large reason, but this is mostly history. The military did lose a lot of pilots to the civil high salary market, but as they did, new instances of pilot education opened up to prepare pilots directly for the civil market. So even though the military historically have produced a lot of pilots, civil schools and education instances has now taken over. Therefore, as the military pilots retire the share of civil educated pilots should rise.

It is quite clear that being a pilot is a traditional male role. This could be seen through statistics and also by just asking oneself, what do I think of when I hear of a pilot? Is it the macho heroic man, or as states earlier a glamorous woman? Of course there is much in between, but if there is a need of showing off glamorous female pilots, the attempts to separate sex from gender identity is being opposed. Leadership has been correlated with masculinity and management has been historically and culturally associated with men. And what proves leadership, management and masculinity more than controlling and leading a big machine like an airplane?

Davey and Davidson's article summary reads: "the findings of this study seem to suggest that women in aviation have had to adapt to the male culture in order to survive and have much to lose by challenging the system."³⁵ As long as this is the case, the quest for cockpit equality will be slow.

Female pilots are very aware of their abnormality, and it seems that they are reminded of it constantly. As long as the men (and women) in cockpit are making the female pilots feel abnormal a change in gender roles is far away. Even when commenting

³⁵ Davey and Davidson, 222.

a woman's sex in a positive way, the notion of her being something besides normal is being established.

According to Davey and Davidson's study male captains agreed that they observed the female pilots a little more closely, not only when it came to flying, but to observe differences between them and their male colleagues. In gender theories, it is stated that women are not a homogeneous group. They have "identities formed in gendered processes that vary according to various factors including class, age, marital and parental status, whether they are white or black, lesbian or heterosexual, and whether or not they experience disabilities."³⁶ As is the case for men. Generally there are larger differences between individuals of the same sex, than between the category of women and the category of men.³⁷ Therefore, it is dangerous to divide people into groups according to sex, and not consider these internal differences. Even if we wish to continue this categorization, it should be noted that men and women possess these specific skills and qualities because the socialization process whereby they actually learn different competencies.³⁸ As boys grow up, we dress them in blue and give them cars and maybe even airplanes to play with. Girls on the other hand, are preferably dressed in pink, and get a toy stove and a teapot. This is where we start to strengthen the gender role and make it equal to their biological sex. This is where we plant the seed to put males in the cockpit, and females serving them coffee.

What could be done to change the uneven sex distribution?

- Pressure to follow legislation, put a larger effort on employing and educating women.
- Continue recruiting women.
- Deconstruct the genderspecific pilot role.

When looking at the Swedish Equal opportunities Act, one can see a good effort. What seems troubling is the exception stated. When does it exist special cause not to implement such measures? Maybe in some sensitive occupations, it might for example be good with a female therapist for abused women. But it is hard to see anything similar in the

³⁶ Bagilhole, 10.

³⁷ JämOs handbok om aktivt jämställdhetsarbete §9, 93.

³⁸ Bagilhole, 44.

commercial aviation business. All airlines should be able to seek to recruit people of the underrepresented sex and continue to do so to change the uneven distribution. This has to apply to education facilities too, since there has to be enough women to recruit for the airlines.

Davey and Davidson's conclusion of their study was that the only possible way to change the gender specific role of the pilot and the abnormality of female pilots, would be a larger number of female pilots.³⁹ They suggested for the airline to further encourage female applicants through reducing the masculine/military approach in brochures, and to a larger extent show female pilots as a part of their employees.⁴⁰ They also made a point to the airline to look over their selection criteria and procedures, since they might discriminate against women. This could be an explanation to why the admission percentage is a lot lower than the application percentage at the School of Aviation as well.

The final part of a possible solution is to try to desexualize the pilot role. In the Swedish act of equality one attempt to change sex-specific occupations is to early inform students in schools before they choose any direction. Eventually this would lead to a change in presumptions about what is considered male and female.⁴¹ As women (and men) are compelled to conform to the traditional masculine culture in the cockpit, the number of women applying or considering working as pilots might be limited.⁴² If this were to change, maybe more women would be drawn to the occupation.

It does take more than just a willingness to change for something to actually happen. If we are to change the perception of pilots as male, we need to really question our picture of the heroic pilot. As Bagilhole puts it: "how can man's work serve as a rugged test of manhood if women are able to do it?" Maybe the heroic picture is outdated. Women are able to do the pilots job, but as long as this is a statement that has to be made, and not an obvious truth the prejudice against women will continue. As long as people will comment about someone being a *female* pilot and not just a pilot, the female pilot will continue to be abnormal, and this limits the possibility for a change.

³⁹ Davey and Davidson, 220.

⁴⁰ Davey and Davidson, 220.

⁴¹ JämOs handbok om aktivt jämställdhetsarbete, 93.

⁴² Davey and Davidson, 219.

6. References

- Bagilhole, Barbara. *Women in Non-Traditional Occupations Challenging Men*. New York: Palgrave Macmillan 2002.
- Davey, C L. "The Impact of Human Factors on Ab Initio Pilot Training", *Gender, Work and Organization* Vol. 11 2004.
- Davey, C L and Davidson, M J. "The Right of Passage? The Experience of Female Pilots in Commercial Aviation", *Feminism and Psychology* Vol. 10(2) 2000.
- Gilmartin, P. "Women pilot's performance in Desert Storm helps lift barriers in military, civilian market." *Aviation Week and Space Technology*, 13 January 1992. Reference from Weber, R N.
- Höjer, Maria Wendth & Åse, Cecilia. *Politikens paradoxer : en introduktion till feministisk politisk teori. Upplaga 2:1* Bjärred: Academia Adacta, 1999.
- JämOs handbok om aktivt jämställdhetsarbete* Stockholm: Jakobsbergs Tryckeri AB 1999
- Löfqvist, Eva Mari. Luftfartsstyrelsen eva-mari.Lofqvist@luftfartsstyrelsen.se
- Millett, Kate. *Sexual Politics*. New York: Simon & Schuster, First Illinois paperback 2000
- red. Esseveld, Johanna & Larsson, Lisbeth. *Kvinnopolitiska nyckeltexter*, Lund: Studentlitteratur, 1996.
- Weber, R N. "Manufacturing gender in commercial and military cockpit design" *Science, Technology and Human Values* Spring 1997
- Merriam-Webster Dictionary online <http://www.m-w.com>
- Encyklopaedia Britannica online <http://www.britannica.com/>

7. Appendix

Appendix 1

Antal sökande och antagna till Trafikflygarprogrammet

1998	575 sökande 93 kvinnor Antal antagna studenter: 12 Varav kvinnor: 0	16 %
1999	547 sökande 96 kvinnor Antal antagna studenter: 18 Varav kvinnor: 1	17,5 %
2000	69 sökande (1/1-1/4) 16 kvinnor Antal antagna studenter: 0 Varav kvinnor: 0	23 %
2001	477 sökande (30/6 – 31/12) 96 kvinnor Antal antagna studenter: 24 Varav kvinnor: 3	20 %
2002	397 sökande 75 kvinnor Antal antagna studenter: 24 Varav kvinnor: 4	19 %
2003	407 sökande 66 kvinnor Antal antagna studenter: 24 Varav kvinnor: 3	16 %
2004	380 sökande 76 kvinnor Antal antagna studenter: 24 Varav kvinnor: 1	20 %