

Equal opportunity - Equal success ?

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Physics in Denmark has traditionally been a male dominated field. But in the last 30 years more and more women have become a part of the physics society in Denmark, even though there still is a long way to go before a female physics student will be as common as a male physics student. In the last 10 years about 20% of the master degrees obtained in physics in Denmark were obtained by women [1]. This is somewhat better than the 20 years prior to this, where only one out of ten of the masters was female [2]. Figure 1 shows how the percentage of female masters in physics has increased over the last 30 years. The total number of physics masters in this period is shown in figure 2.

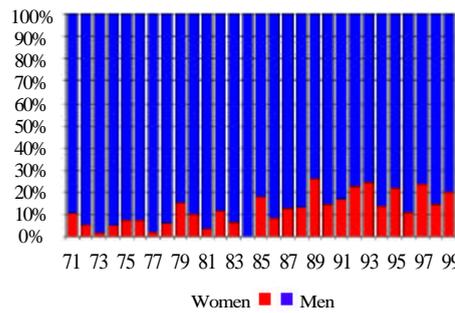


Figure 1: The division of male and females masters of the master degrees obtained in physics in Denmark in the last 30 years.

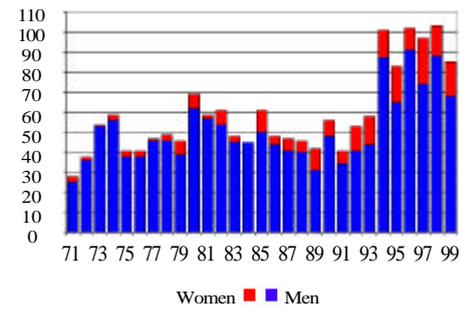


Figure 2: The total production of master degrees in physics in Denmark in the last 30 years.

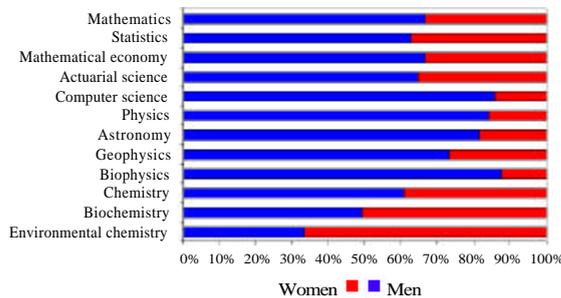


Figure 3: The share of female masters in the mathematical, chemical and physical sciences in the last 15 years in Denmark.

The general tendency for the traditional science subjects mathematics, physics and chemistry is that the amount of female masters has increased slowly but steadily during the last 30 years. In the 5 year period from 1995-1999, almost a third of the masters in these subjects were women. There are however clear differences in the amount of women in the different subjects. Chemistry seems to be the most popular subject among women, especially environmental chemistry and biochemistry. In these subjects 40-65% of the masters in the last 15 years were female. In the mathematical sciences about 30-35% of the masters were female, whereas the number for the physical sciences only amounts to about 20%. The only subject which has a lower percentage of women than physics is computer science where only 14% of the masters were female, figure 3.

A recent analysis regarding the career pattern of the masters in physics [1] has shown that there are only minor differences between the jobs that men and women choose. All the persons that obtained a masters degree in physics in the period 1985-1999 (977 persons) were contacted in order to map the first employments of the masters after finishing their degree. The different employments were divided into 10 categories; teachers at high school level (high school), private sector (private), public sector (public), universities (university), other high level education institutions (HLEI), Ph.D. and post doc positions (Ph.D.), people working abroad (abroad), other kinds of work (other), unemployed (unemployed), and finally there were some people, whom it was impossible to find and who's employment is unknown (unknown). The result of the analysis is shown in figure 4, which also shows the employment spectra for the male and female masters.

Of the different disciplines within physics, geophysics is the field which attracts most women, about one out of four master degrees in geophysics was given to women. The second most popular discipline among women is astronomy where almost one out of five masters was female, as shown in figure 3.

Figure 4 shows the first employments of the masters in the period 1985-1999 divided into five year subintervals in order to show the time evolution. In the last 5 year period, 1995-1999, more women than men found employment in public institutions, whereas more men than women found jobs in the private sector. Slightly more women than men got employed as high school teachers. About a third of the graduates got a Ph.D. in Denmark regardless of their gender, and about 13% found work abroad, primarily as Ph.D.s, also regardless of gender. The large percentage of unemployed in the spectra are primarily due to a timelag of more than 3 months between obtaining the master degree and getting a job, there is no real unemployment within physics in Denmark.

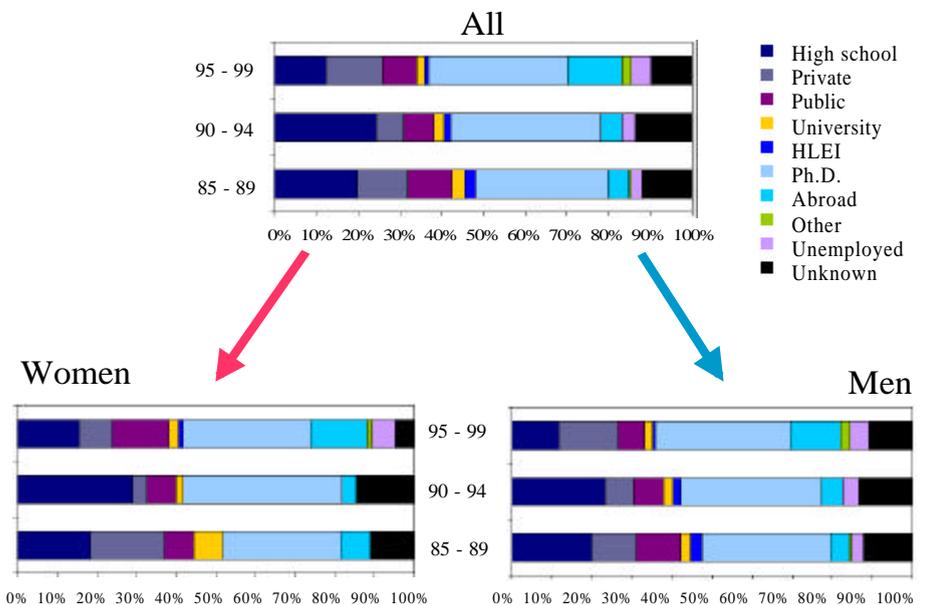


Figure 4: The employment spectra for the 977 persons obtaining a masters degree in physics in the period 1985-1999. The employment spectra of female (166 persons) and male (811 persons) masters show no significant differences. Thus it appears that the masters obtain jobs without any bias of their gender.

References

- [1] Nils O. Andersen, John Renner Hansen, Kjeld Bagger Laursen, Svend Erik Nielsen, Kandidater i Matematik-, Fysik- og Kemifagene: Hvor gik de hen? En kortlægning af produktion og beskæftigelse for perioden 1985-1999. Niels Bohr Institutet, 2001.
- [2] Nils O. Andersen, Dorte Olesen og Svend Erik Nielsen, Kandidater i matematik-, fysik- og kemifagene: Hvor gik de hen? En kortlægning af produktion og beskæftigelse for perioden 1971-85. Det fysiske Institut, Aarhus Universitet 1987.

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