

Women in Physics in Belgium

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PRESENT SITUATION

Students

In Belgium, around 25% of the students in physics are women. This percentage is quite low, especially compared with the overall university student population, which is almost equally split between males and females (51% of female students in 2004). The number of physicists and the proportion of women in this field are almost constant with time during the last 10 years. The proportion of women is very low in other hard-science studies too, such as engineering and computer science. At the university, girls prefer to study social sciences, literature, or communications, for instance. In the sciences, they prefer the natural sciences, such as biology and chemistry. In some of these fields, the proportion of females is larger than that of males. The reason for the different proportions between women and men in these fields can be due to personal tastes as well as to social influences.

The success rate for women is approximately the same as for men. Among the bachelor's degree recipients in physics, less than a third become teachers in secondary schools, a third find jobs in business (sometimes working in fields quite different from physics), and a third work as research scientists or teaching assistants in universities or academic institutions. The number of students presenting a PhD thesis has increased during the last 10 years. Nevertheless, most of them have to go abroad for their postdoctorate work, with grants or nonpermanent positions in most cases.

University Staff

In universities and other scientific institutions, the proportion of women physicists on the academic staff is still lower than the percentage of female students (less than 15%). Women are almost nonexistent in scientific management positions, such as directors of scientific institutions or heads of departments in physics. Most women in physics and young physicists (women and men) have temporary jobs. The absence of future prospects and stable positions is a reason very few students (males and females) are interested in studying physics. Of course, teachers of physics in secondary schools are in great demand in Belgium, but it is not necessary to be a physicist to give lectures in physics: other diplomas in science are also eligible.

Students in physics represent a negligible part (0.57%) of the university student population. For the 11 Belgian universities together, only around 200 students are graduated in physics each year. In interviews conducted with students at various schools [1], many students said that physics appears very complicated and daunting. Moreover, most students interested in hard sciences choose engineering studies because there are more job opportunities.

PERSPECTIVES

2005 World Year of Physics

The World Year of Physics declared by the United Nations in 2005 is a good opportunity to explain the work of physicists to the larger public and try to attract more students to the field. Very few people know exactly what the work of a physicist is: they are unaware that physicists mainly work in teams and not alone in their laboratories, and

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that the results of their research are presented at specialized conferences everywhere in the world. Many activities organized in Belgium and everywhere else show that the public is interested in this science when it is presented attractively.

Astrophysics is generally the field in which the public at large is the most interested, but activities organized about physics in medicine, the problems of energy production, the fight against pollution, cosmology, and many other physics topics also receive public attention. Nevertheless, the media were generally more interested in covering Einstein and the commemoration of the 100th anniversary of his famous papers published in 1905 than in the World Year of Physics itself. The presence of a famous and successful figure is thus important to promote physics. Marie Curie is the most famous woman in physics, but other well known names of women in physics are difficult to evoke in interviews conducted with the public.

Evolution

The present status of women physicists in Belgium is not determined by quotas or other specific actions. Quotas would not be appreciated in general, because a job obtained for quota reasons would devalue a woman's position. Because no specific discrimination is apparent for women in Belgium, equality of salaries and access of women to the power structure should progress and reach a proportion reflecting more and more the demographics of the society.

The social situation for working women is rather favorable in Belgium. Most women have professional activities, but it is common that some of them stop or reduce their working time when they have children. Child care systems are well developed but it remains difficult for most women to combine professional activities and family lives. Postdoctoral contracts in foreign countries, external collaborations, and frequent travel are also obstacles for women working in research. Family lives (children, profession of the partner, house) also play an important role in the decision of physicists to remain in their country or to pursue other opportunities abroad. In Belgium, the universities offer few good positions after a PhD thesis in physics and it is a pity that such long, difficult, and very specialized studies lead to temporary and short-term positions.

The problem in Belgium, as well as in Europe in general, is not only gender equality but also the future of scientists. To increase the number of women physicists, it would be first of all necessary to increase the career opportunities for research scientists (women and men) with larger budgets for research and more possibilities for stable positions and career development.

REFERENCE

1. M. Prosser, P. Welles, and R. Miller, "Differences in Students' Perceptions of Learning Physics," *Physics Education* **31**(1): 43-48 (1996).