

Professional models and compatibility with private life (work/life balance) in different European countries

Claudine Hermann

claudine.hermann@polytechnique.edu

Honorary professor of Physics, Ecole Polytechnique (Palaiseau, France)

Honor president of the association Femmes et Sciences

www.int-evry.fr/femmes_et_sciences/

Member of the Board of Administration
of the European Platform of Women scientists www.epws.org



Marseille, 30/3/2007



Professional models and compatibility with private life in different European countries

- Women physicists from the past
- A few European data (*ETAN report* and *She Figures 2006*)
- Common facts in functioning rules of the research world
- Some examples of national situations
- General perspectives

Women physicists from the past

- Nobel prizes :

1903 and 1911 : Marie Curie, France

1935 : Irène Joliot-Curie, France

1963 : Maria Goeppert-Mayer, Germany

Marie SKLODOWSKA-CURIE (1867-1934)

Nobel Physics 1903 and Chemistry 1911

Pierre CURIE (1859-1906)

First woman
professor
at the Sorbonne
(Paris university)



Irène JOLIOT-CURIE (1897-1956, Nobel Physics 1935)
France

and her husband Frédéric
JOLIOT (1900-1958)
discovered artificial
radioactivity.

She was Deputy-State
secretary for research in the
Popular Front government
(1936), at a time where
French women were not
allowed to vote.



Maria GOEPPERT-MAYER (1906-1972, Nobel 1963)
Germany and USA

« Her work on the shell model, in
collaboration with Professor Jensen, has
shed new light on the structure of atomic
nuclei. It constitutes a most striking
advance in the correlation of nuclear
properties. It has inspired an ever
increasing number of new investigations
and has been indispensable for the later
work, both experimental and theoretical,
on atomic nuclei. »

Nobel citation



Women physicists from the past

- Forgotten by the Nobel committees :
Lise Meitner (Austria, Germany, Sweden)
Rosalind Franklin (Great Britain)

Lise MEITNER (1878-1968), Austria, Germany, Sweden

discovered the process of nuclear fission with Otto Hahn (Nobel prize Chemistry 1944) and Fritz Strassmann.

She named the process « fission » and gave its physical explanation with Otto Robert Frisch, her nephew.

She discovered element 91, protactinium, with Otto Hahn.

She was proposed 18 times for the Nobel prize...



Rosalind FRANKLIN (1920-1958), Great Britain

She was responsible for much of the research and discovery work that led to the understanding of the structure of deoxyribonucleic acid, DNA.

James Watson, Francis Crick, and Maurice Wilkins received a Nobel Prize for the double-helix model of DNA in 1962, four years after her death.



Women physicists from the past

- **Before the 20th century :**
Sophie Germain, France
Caroline Herschell, Germany and England
Maria Gaetana Agnesi, Italy
Emilie du Châtelet, France
Anna Maria van Schurman, the Netherlands,...

Maria Gaetana AGNESI (1718-1799), Italy

published *Propositiones Philosophicae* on logics, mechanics, hydraulics, universal gravity, chemistry, zoology in 1738. Her work *Instituzioni Analitiche* was the synthesis of the most advanced mathematics of her time. She received the mathematics professorship of Bologna university.



**Gabrielle-Emilie LE TONNELIER DE BRETEUIL,
marquise DU CHÂTELET (1706-1749), France**

popularized Leibniz's theories through her book *Institutions de physique*.

Her great work was the translation into French, with comments, of Newton's *Principia*.

She was a member of the Bologna academy of sciences. She was Voltaire's lover.



**Anna Maria VAN SCHURMAN (1607-1678),
The Netherlands**

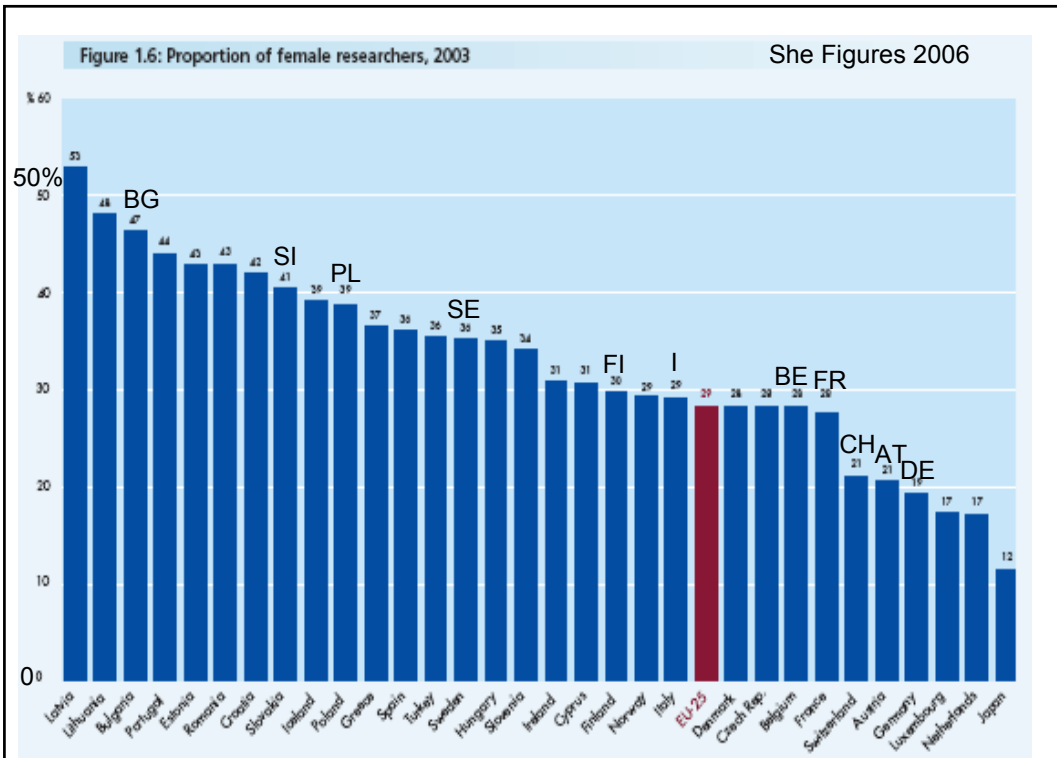
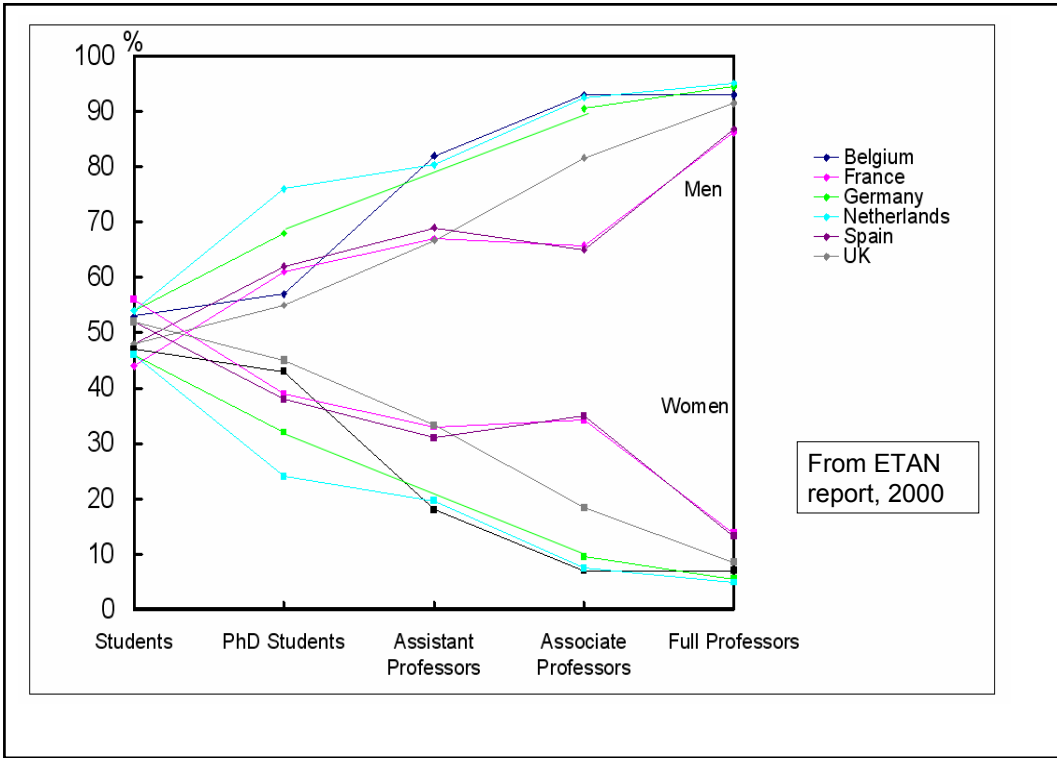
is « regarded as the first female student in the Netherlands because she participated in lectures from behind a curtain at the university of Utrecht. Her pleas for better education for women, in particular, became well known ».

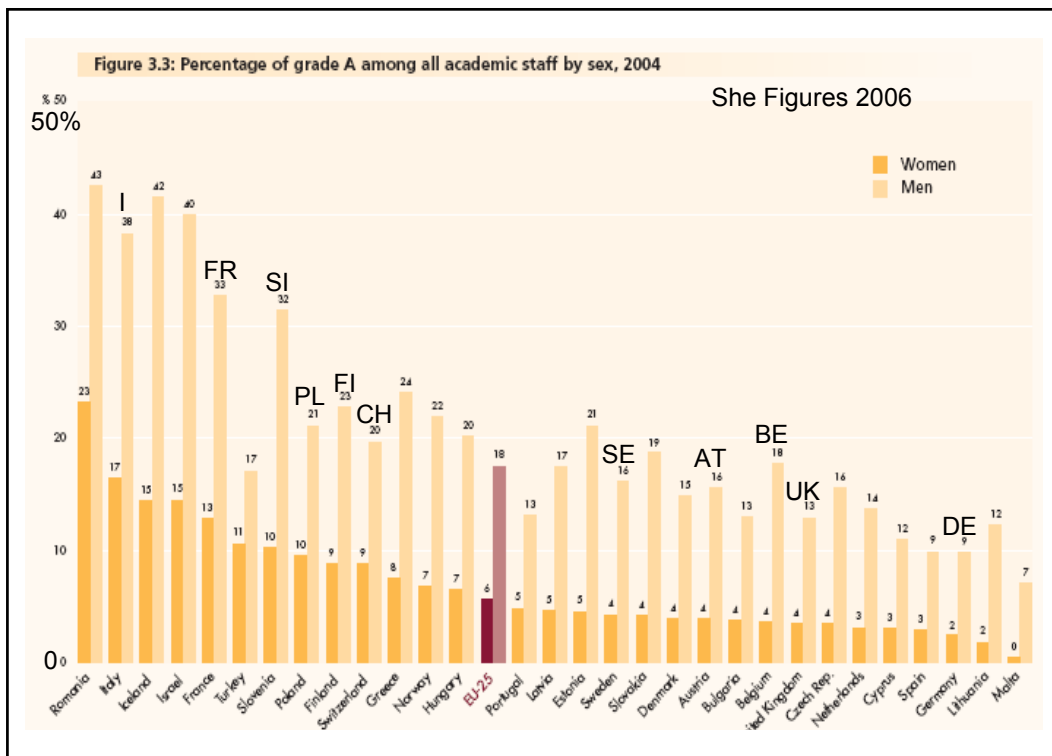
Curious Careers, An Unexpected History of Women in Science and Technology, Editors Mineke Bosch and Ruth Oldenziel, Foundation for the History of Technology



**Some current EU data
(all disciplines)**

- Women professors « hit-parade » (*ETAN report*)
- « Scissors diagramme » (*ETAN report*)
- Proportion of female researchers (from *She Figures 2006*)
- Percentage of grade A among all academic staff by sex (from *She Figures 2006*)





Common facts in functioning rules of the research world

- Model for **excellence in research**, inspired from the US situation
- Researchers are judged from their **publication list** : what **assessment for other tasks** (teaching, administration, popularization of science...)?
- **Similar national problems in hiring or promoting women scientists** (« **biological clock** », « leaky pipeline », « glass ceiling »..)
- Lack of **gender balance** in decision-making positions about science policy

Some examples of national situations

- Germany
- Austria
- Portugal
- France
- Bulgaria
- United Kingdom

Germany

1. Historical background :

- Bismarck and the 3K « Kinder, Küche, Kirche » (Children, Kitchen, Church);
- the 3rd Reich time

2. Science functioning :

- Slow studies process until Doktorarbeit
- Compulsory geographical mobility until habilitation
- New regulation in university with part of salary linked to performances

Germany

3. Women's situation

- Previous status quo in **West and East** Germany
- Lack of **childcare systems**, half-day primary school
=>Dilemma between family or career
- **Recent attitudes** « Rabensmutter » (Crow mother)
+ low fertility rate
=>Angela Merkel : modified parental leave
additional child care facilities

Germany

- **modified parental leave**
*since 1/1/2007 : a **14-months parental leave**,
paid 67% of the previous salary (with a maximum permissible),
2 months of which have to be taken by the **other parent**
(the one who takes the shorter leave, usually the father).
As for the « traditional » 3-years leave,
*since 2001, incitation to take a **shorter (1-year) leave** with a
higher allowance.
- **creation of additional child care facilities**
« Gebärmaschinen » (Birthing machines) !

DW-WORLD.DE
DEUTSCHE WELLE

About us
Press
Business & Sales
DW-Akademie

Contact
Help
Partner

Site map
Archive

Search >> Ext...

Choose from 30 languages

YOUR LINK TO GERMANY

27.02.2007

Specials Service

Home

NEWS

At a Glance

Germany

Germany Divided

Europe

Business

Culture & Lifestyle

German Soccer

GERMANY INFO

Visit Germany

Study in Germany

German Courses

Map

Weather

DW-RADIO

What's On?

Highlights

Reception

Audio on Demand

DW-TV

What's On?

Program Guide

Reception

Video on Demand

INTERACTIVE

Reader Response

Newsletter

RSS Feeds


Podcasting

Mobile

About DW-WORLD.DE

SOCIETY | 23.02.2007

German Bishop Slammed For Calling Women "Birthing Machines"



There aren't enough places at German daycare centers for young kids

A German bishop has sharply criticized government plans to improve childcare facilities, saying they reduce women to "birthing machines" who quickly have to return to work. The remarks even have conservatives up in arms.

The Catholic Bishop of Augsburg, Walter Mixa called government proposals to expand childcare facilities in Germany "harmful for children and families." Mixa said the plans enticed women with federal aid to entrust their children to state care shortly after birth, degrading women to "birthing machines."

Germany's Minister for Family and Youth, Ursula von der Leyen from the conservative Christian Democratic Union (CDU) wants to significantly increase to 750,000 the number of places available at day-care centers for children under the age of three by 2013. It is the latest step in an attempt to boost the German birthrate, which at 1.36 children per woman is one of the lowest in Europe.

Mixa said von der Leyen's plans gave "top priority to recruiting young women as labor reserve for private industry."

"We need to create family-oriented jobs, not job-friendly families," Mixa told German breakfast television on Friday.

The minister's family policies elevated double-income marriages to a downright "ideological fetish," Mixa said.

Germany

Scotland

UK

International

Sport

Business

Politics

Sci-Tech

Health

Education

Entertainment

Opinion

Games

Article Index

Other Sections

Features

NewsStand

Back Issues

Other Sites

News

Sport

Business

Scotland on Sunday

Evening News

Heritage & Culture

Living

Money

THE SCOTSMAN

Mon 29 Jan 2007

Printer friendly

Send to friend

Comments (20)

Women 'birthing machines' says Japan's health minister

CARL FREIRE

IN TOKYO

JAPAN'S health minister has provoked a storm of protest after he described women as "birth-giving machines" in a speech he gave on the country's falling birthrate.

Hakuo Yanagisawa made the remarks in a speech he gave on Saturday as the government announced a council to draw up new strategies to tackle the country's shrinking population.

Japan's population of 127 million fell for the first time on record in 2005, mostly because of a drop in births.

The decline has raised the prospect of severe labour shortages in the future, coupled with difficulties in paying health bills and pensions for large numbers of elderly.

In the speech, Mr Yanagisawa, the health, labour and welfare minister, said: "The number of women between the ages of 15 and 50 is fixed."

"The number of birth-giving machines [and] devices is fixed, so all we can ask is that they do their best per head."

He reportedly apologised even as he made the remarks and later further backtracked, admitting that the language he had used was "too uncivil". However the Democratic Party leader, Yukio Hatoyama, was unmoved by his expression of regret.

"It was extremely rude to women," he said.

"Having children or not having children is naturally a matter that women and households are free [to decide themselves]," Mr Hatoyama said.

The Japanese birthrate was 1.26 babies per woman in her lifetime in 2005, a record low figure.

Japan too...

Germany

4. Specific structures or measures for women scientists:

- Strong legal background in gender equality laws
- actions since the 1990's
- Women in university recruitment committees
- More recently : CEWS www.cews.org
support to women scientists from all disciplines through :
 - *application training,
 - *Femconsult data base of Women scientists,
 - *peer mentoring pilot project,
 - *European Platform of Women Scientists...
- Christiane Nüsslein-Volhard Foundation

Germany



The TOTAL E-QUALITY Award

is presented to universities and scientific institutions whose Human Resource-management and institutional policies are designed to achieve equal opportunities.

The Award underlines the significance assigned to equal opportunities within an institution; it can therefore be used for advertising and marketing purposes. Institutions apply for this Award by filling out a self-assessment checklist.

This pilot project was funded by the German Ministry for Education and Research.

Since 10 years : 100 winners, from private or higher education sector.

Austria

- Strong legal basis :

Federal Equal Treatment Act (1993)

Federal Act on the universities organisation (1993 and 1998)

+ decrees (1995, 1998, 2001) : goal of 40% female employees

- Financial supports for individuals to raise the rate of women scientists
- Mentoring and coaching programmes

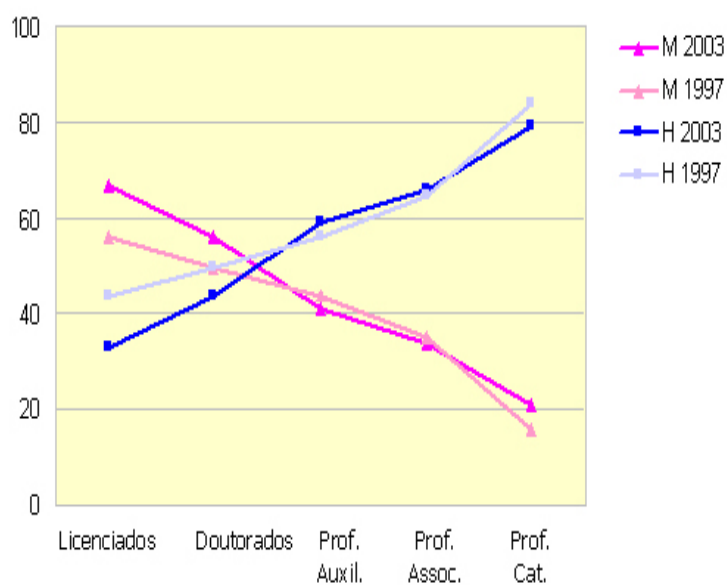
Austria

- Good situation of gender studies
- International evaluation of the promotion of women in science and research in 2005
(larger universities autonomy since 2002)
More gender sensitizing, gender impact analyses, transparency, top-down and down-up commitment needed

Portugal

- Not many state **child care** facilities, family solutions
- **Scissors diagram**, very high score of **women** in academia
- Yet they are not satisfied by their **relative career stagnation**

Data from Portugal, sent by Ana Maria Lobo, professor, president of the Amonet association



The gendered merit hypothesis: (from AMONET study)

Data collected in 2005 by questionnaire

- 126 researchers with doctoral degree
- 69 women; 57 men
- Mean age: 46; Std Dv: 8,51
- 66,7% were married
- 49,6% had 2-3 children
- Scientific areas: Economics (16%), Chemistry (13,7%) & Mathematics (12,7%)

This is a convenience sample, which **is not representative of the universe**. However it highlights particular processes that might be illustrative of gender effects in career.

The gendered merit hypothesis: Our study (Amonet)

→ **3rd evidence** - women stagnation in the careers: specific scientific domains

Overall number of PhD holders, concluded or acknowledged by portuguese universities

From 1970 to 2004	Men	Women
Chemistry	333	430
Economics	374	145

Source: OCES, 2005

Career progression, by sex, in our study

N=42	Assistant Prof.		Associate Prof.		Full Prof.	
	Men	Women	Men	Women	Men	Women
Chemistry	50%	50%	100%	0%	100%	0%
Economics	33,3%	66,7%	66,7%	33,3%	75%	25%

France

- **Dual education system :**
Grandes écoles and universities
- **Research structure :**
Public research (civil servants hired in their early 30's) and private R&D
- **Situation of French women**
Reasonable fertility rate,
crèches,
parity law in politics...
but quotas are unpopular (universalism)

France

- **% women in French academia**
Slow progress at university, disappointing stability at CNRS
- **Recent structures in favour of women scientists**
 - *Missions for parity at the ministry of research, at CNRS since 2001
 - *European Social Funds financing until 2006...
 - *Committee for professional equality in higher education and research (attractivity, glass ceiling, parentality)
- **Gender studies**
 - *difficult situation
 - *creation of the Institut Emilie du Châtelet (2006)

France

Mission for parity in research
and higher education



*White books

*Prix Irène Joliot-Curie
(2006 Award ceremony)



France

Mission for the place
of Women at CNRS

Many gender training
sessions...



Bulgaria

(data from ENWISE report)

- History :

- *Girls' and boys' compulsory education : 1878

- *Women voting right : 1937

- *Communist period : independent nation

- *Post-communist period

- Scientific system :

- *Academy of science : 1993 : 12 842=> 6387 in 2001

- *participation to CERN

- *37 public, 5 private universities

- *R&D expenditure as % of the Gross Domestic Product :

- 1992 :1.64% ; 2001 : 0.47% => low amount/researcher

Bulgaria

(data from ENWISE report)

- National situation of women scientists

- *47% of the researchers (4781persons) :

- Business enterprises 606, Higher educ. 875, Gov. 3301

- *in universities (1999) : 16% full prof, 31% assoc., 44% assist., 56% lecturers

- Good presence in European data bases as experts, evaluators

United Kingdom

- No tax credit for childcare costs for scientists
- childcare services targeted to 3-4 years old children, mostly part time... and very expensive
- a "Working Tax Credit" exists only for low income parents, which includes a childcare aspect but
 - 1/ only concerns parents with a low salary job (« making work pay »)
 - 2/ only compensates a minor part of the service effective cost
- a parental leave exists, without any allowance

United Kingdom

- Emphasis on Human Resources aspects
- « Carrots and sticks » policy
- « Opportunity 2000 » campaign from enterprises
- Several government reports :
 - *« The Rising Tide » (1994)
 - *« SET Fair », a report on Women in Science, Engineering and Technology from the Baroness Greenfield (2002) to the Secretary of State for Trade and Industry
 - *« A strategy for women in science, engineering and technology », Government response (2003)

United Kingdom

- Creation of specific structures :
www.setwomenresource.org.uk

The UK Resource Centre (UKRC) for Women in Science, Engineering and Technology (SET) was established in 2004 to deliver a substantial part of the Government's Strategy for Women in SET (2003).

The aim of the UKRC is to increase the participation and position of women in science, engineering and technology.

*supporting women entering, returning and progressing in SET careers

*mentoring, networking

Perspectives

- Differences between the framework of legal measures, the official discourse and the field experience...
- The example of the « returners » problem (D, UK)...