

# A persistent problem

Gerlind Wallon  
On the way to the top, 2 December 2013

# A persistent problem

Gerlind Wallon  
On the way to the top, 2 December 2013



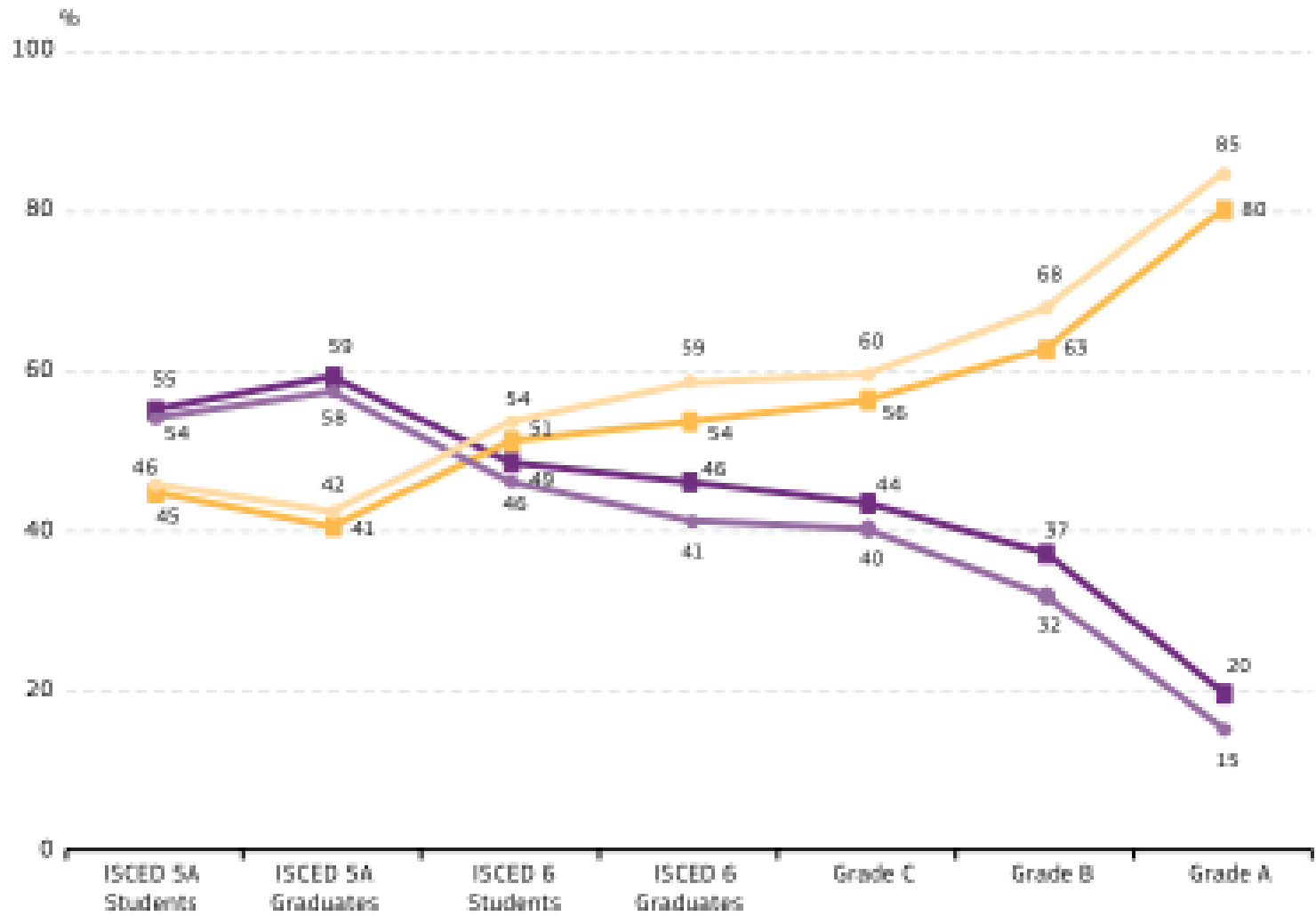
# She Figures 2012

## Gender in Research and Innovation

*Statistics and Indicators*



# Women in Science



Who's right:

optimists or pessimists?

**Demographic inertia revisited:  
An immodest proposal to achieve equitable gender  
representation among faculty in higher education.**

R. Marschke, S. Laursen, J. M. Nielsen, P. Dunn-Rankin

*Journal of Higher Education, 78, 1 (2007)*

“Change in occupational segregation is moving at a glacial speed”

Demographic constraints:

- faculty age structures
- gender composition among PhD earners
- faculty attrition/retention
- number of new faculty positions

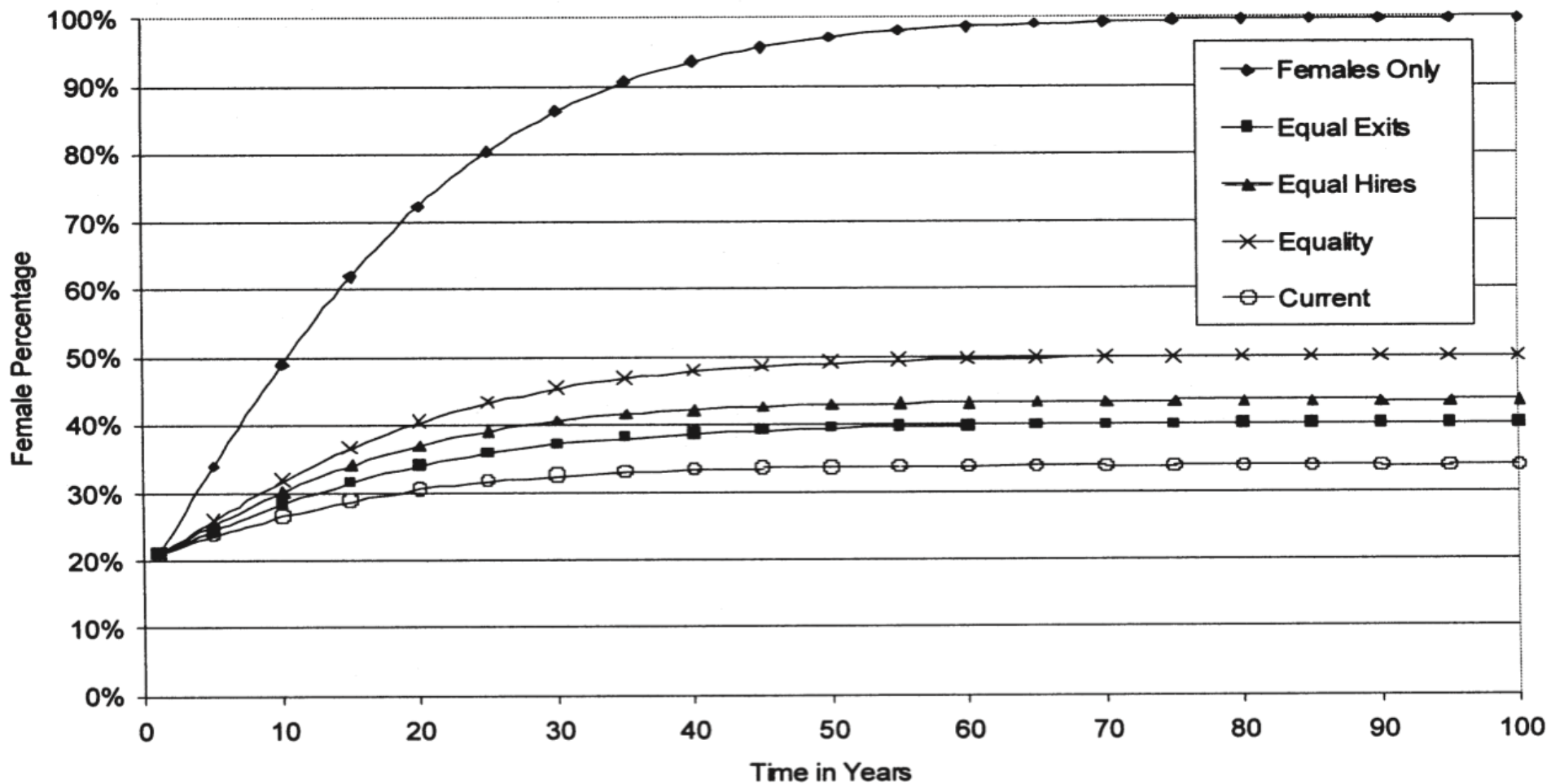


FIG. 2. Graph of female percentage of faculty per differential equations model.



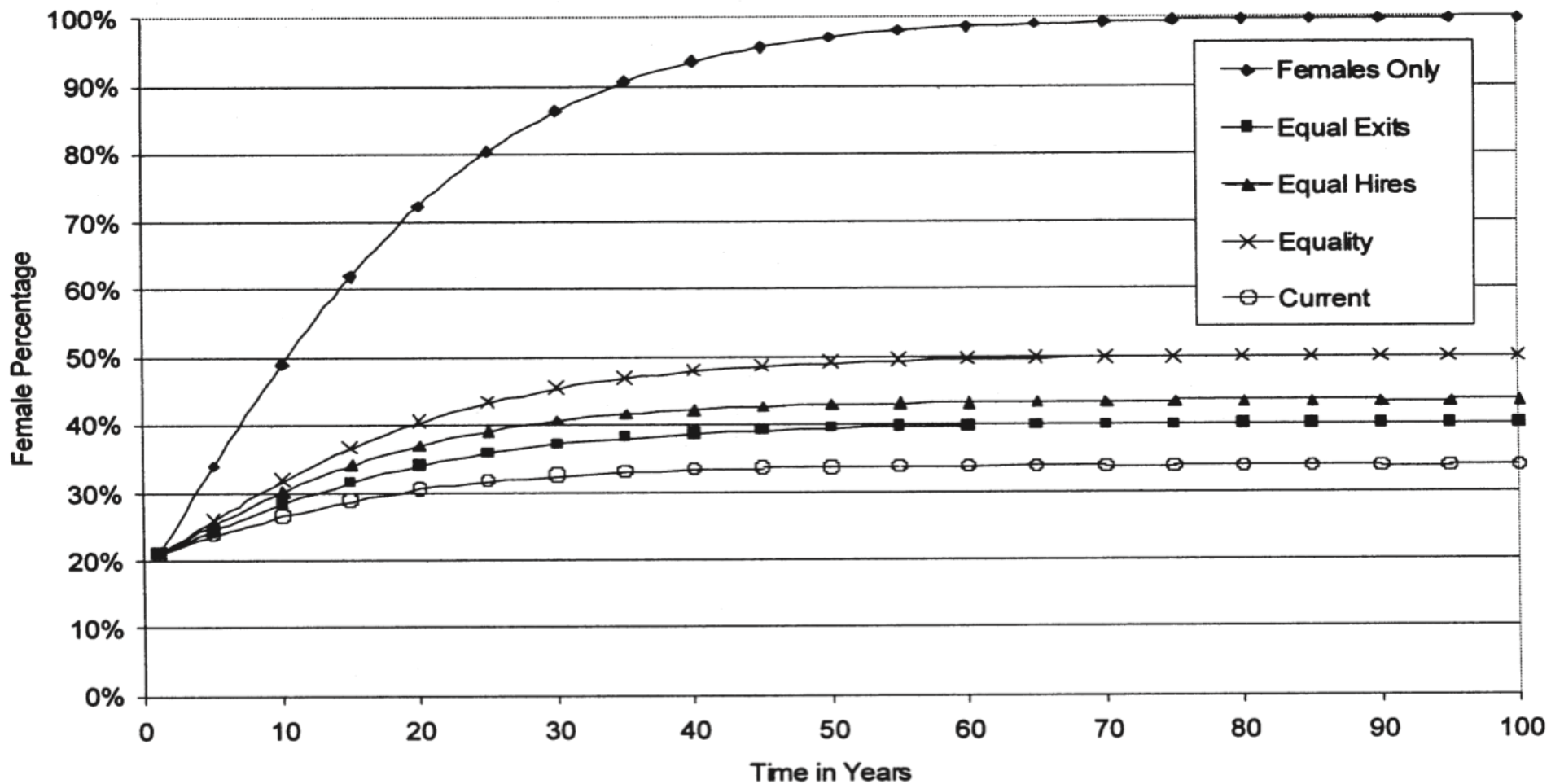


FIG. 2. Graph of female percentage of faculty per differential equations model.

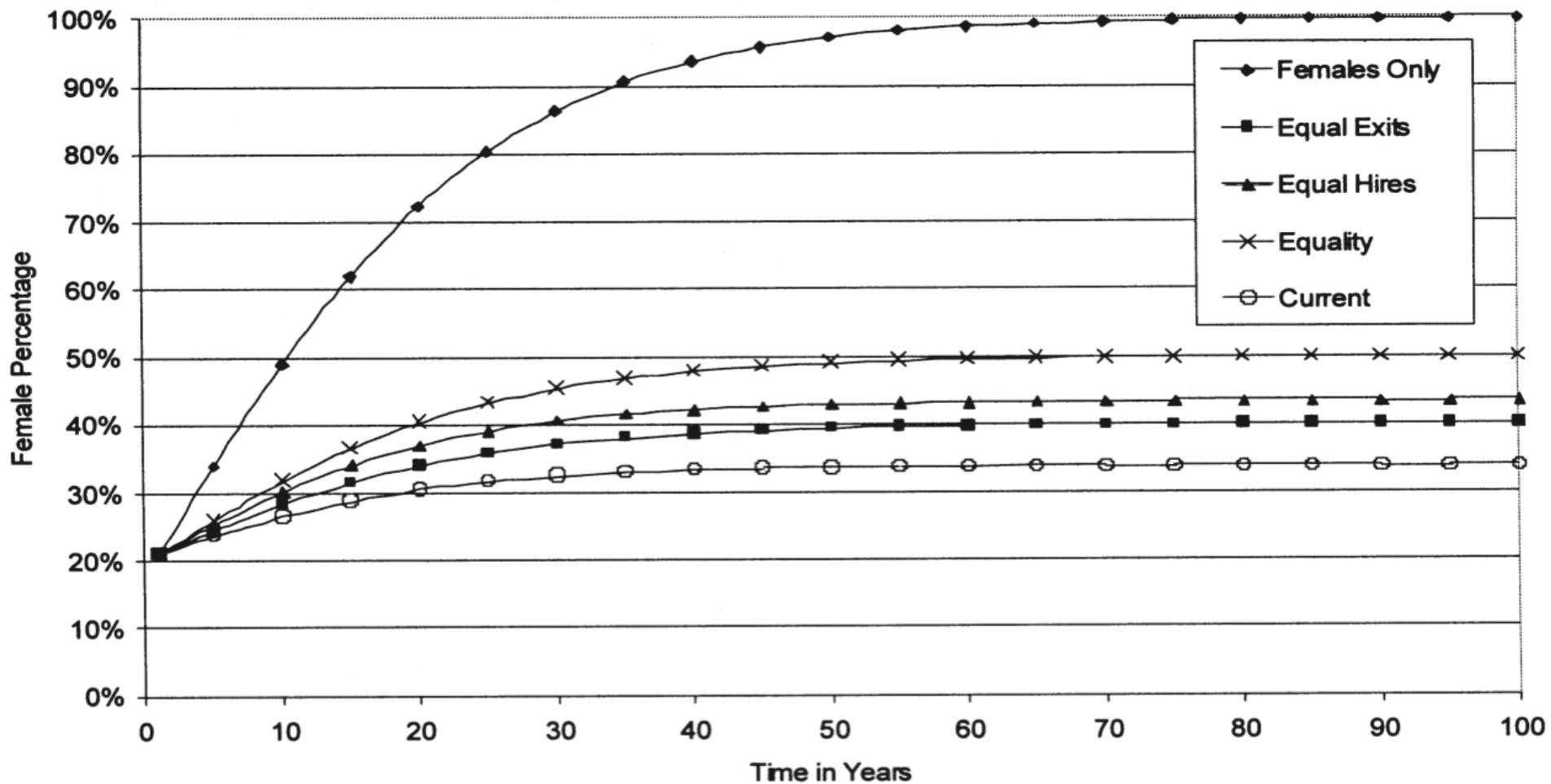


FIG. 2. Graph of female percentage of faculty per differential equations model.

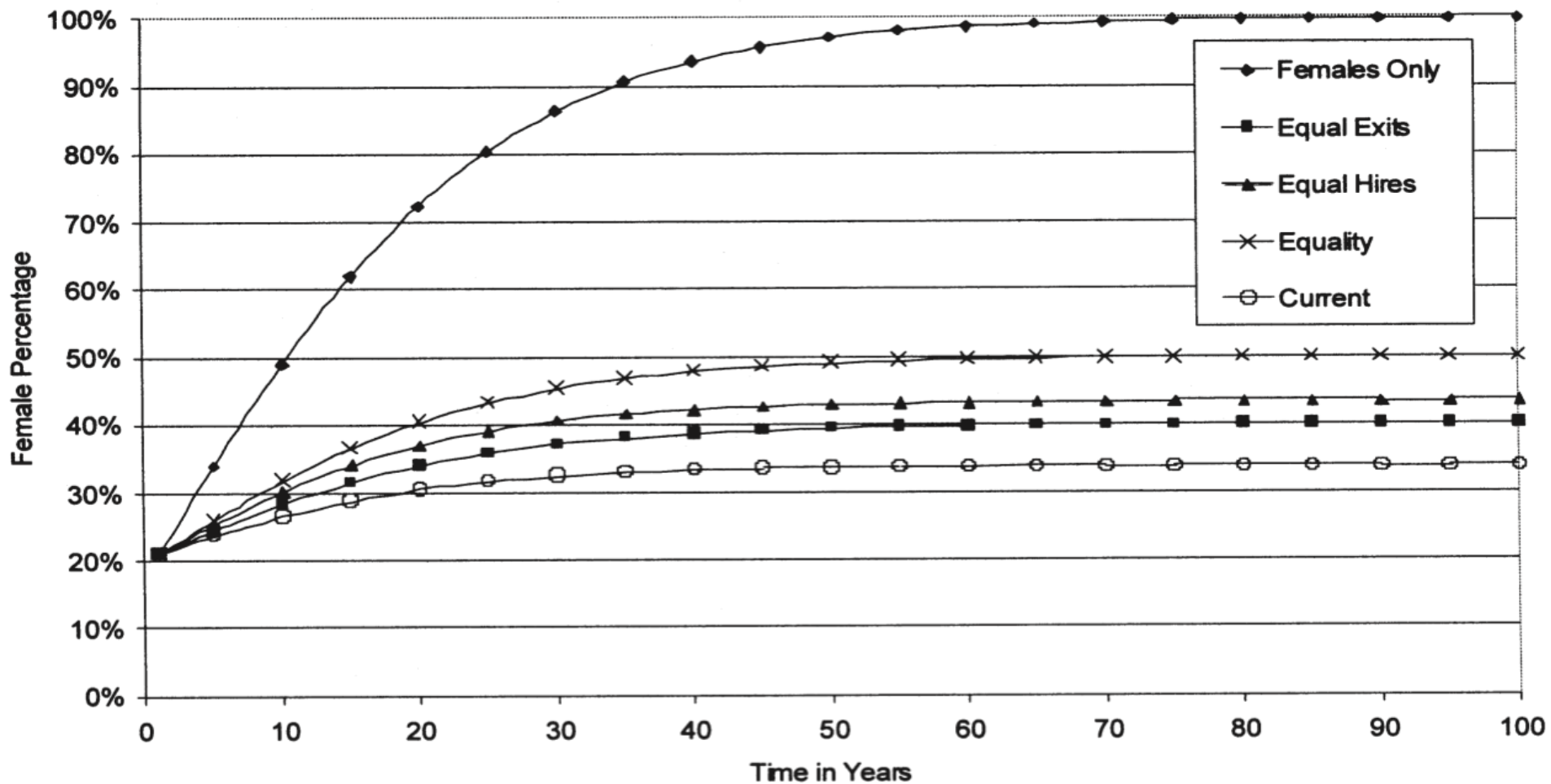


FIG. 2. Graph of female percentage of faculty per differential equations model.

# Career transitions

# **Gender Differences at Critical Transitions in the Careers of Science, Engineering and Mathematics Faculty**

Committee on Gender Differences in the Careers of Science, Engineering, and Mathematics Faculty;  
Committee on Women in Science, Engineering, and Medicine;  
National Research Council

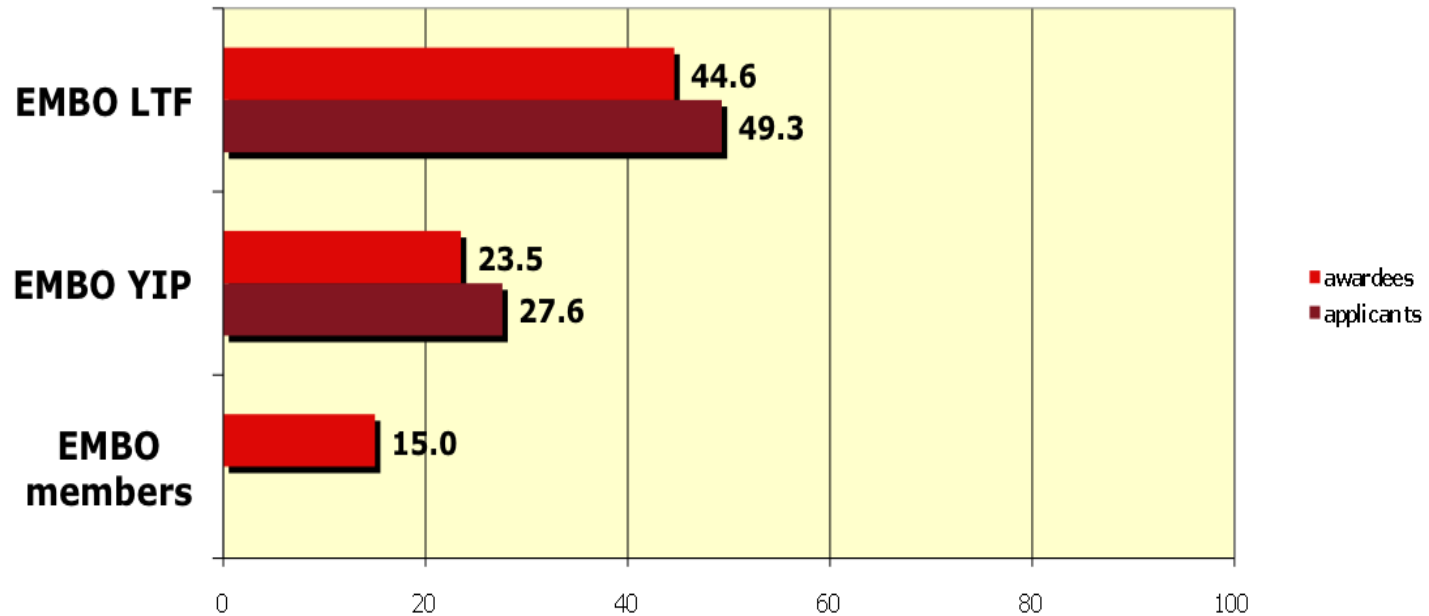
ISBN: 978-0-309-11463-9 (2010)

TABLE S-2 Transitions from Ph.D. to tenure-track positions by field at the Research I Institutions Surveyed (%)

	Doctoral Pool	Pools for Tenure-Track Positions		
	% women Ph.D.s (1999-2003)	Mean % of applicants who are women	Mean % of applicants invited to interview who are women	Mean % of offers that go to women
Biology	45	26	28	34
Chemistry	32	18	25	29
Civil Engineering	18	16	30	32
Electrical Engineering	12	11	19	32
Mathematics	25	20	28	32
Physics	14	12	19	20

SOURCE: Survey of departments; Ph.D. data is from NSF, WebCASPAR.

# EMBO Programmes



# A persistent problem

## Traditional gender roles hold back female scientists

EMBO reports | Volume 8 | 2007 | 982 - 987

Anna Ledin, Lutz Bornmann, Frank Gannon and Gerlind Wallon

**Anna Ledin, PhD**  
EMBO Women in Science  
Royal Academy of Sweden



**Lutz Bornmann, PhD**  
Formerly ETH Zurich  
Max Planck Gesellschaft



**Prof. Frank Gannon**  
Former Executive Director of EMBO  
Director Queensland Institute of Medical  
Research





# Analysis

1. Gender-blinding
2. Bibliometry on application
3. Bibliometry since application
4. Survey

# Analysis

1. Gender-blinding

The difference in success rate persisted

# Analysis

1. Gender-blinding

The difference in success rate persisted

2. Bibliometry on application

## Results from bibliometric analysis at application in 1998

- Awarded women publish as well as awarded men
- **Women overall publish fewer papers**, but of the same quality as men

eight years later in 2006

- the gap has increased

# Analysis

1. Gender-blinding

The difference in success rate persisted

2. Bibliometry on application

Women overall publish fewer papers, but of the same quality as men

3. Bibliometry since application

The gap has increased

4. Survey

# Summary (EMBO Study)

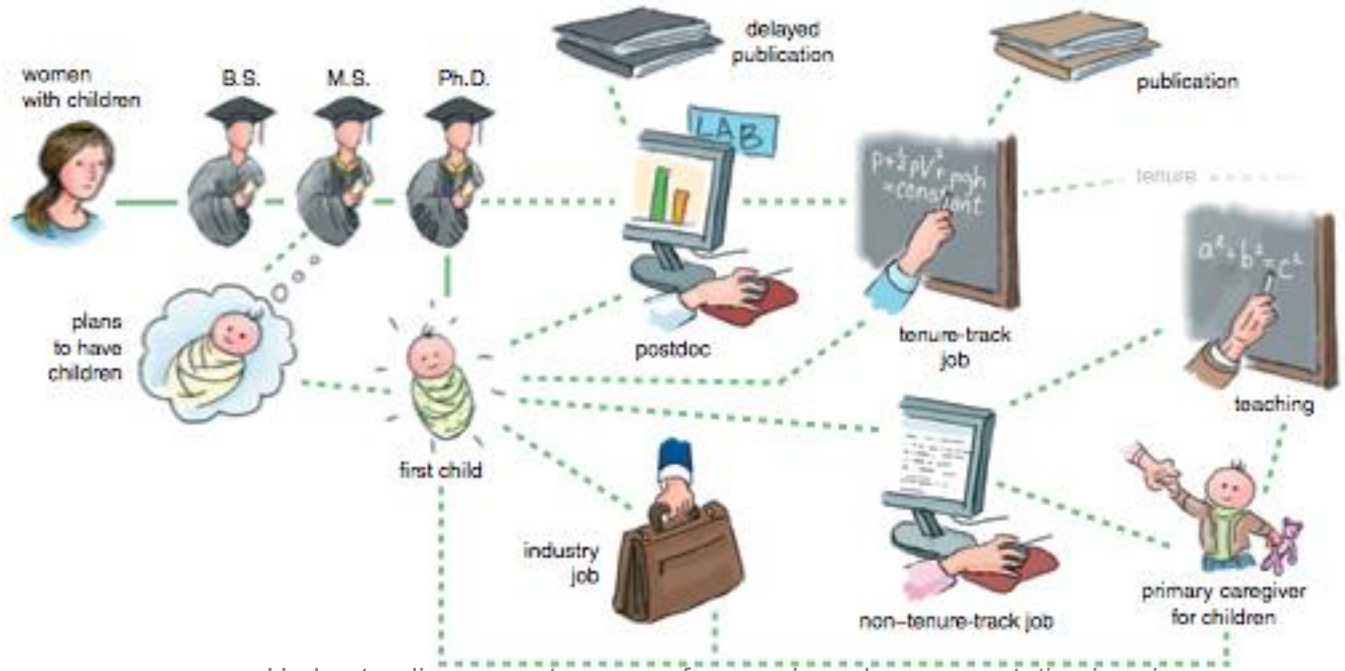
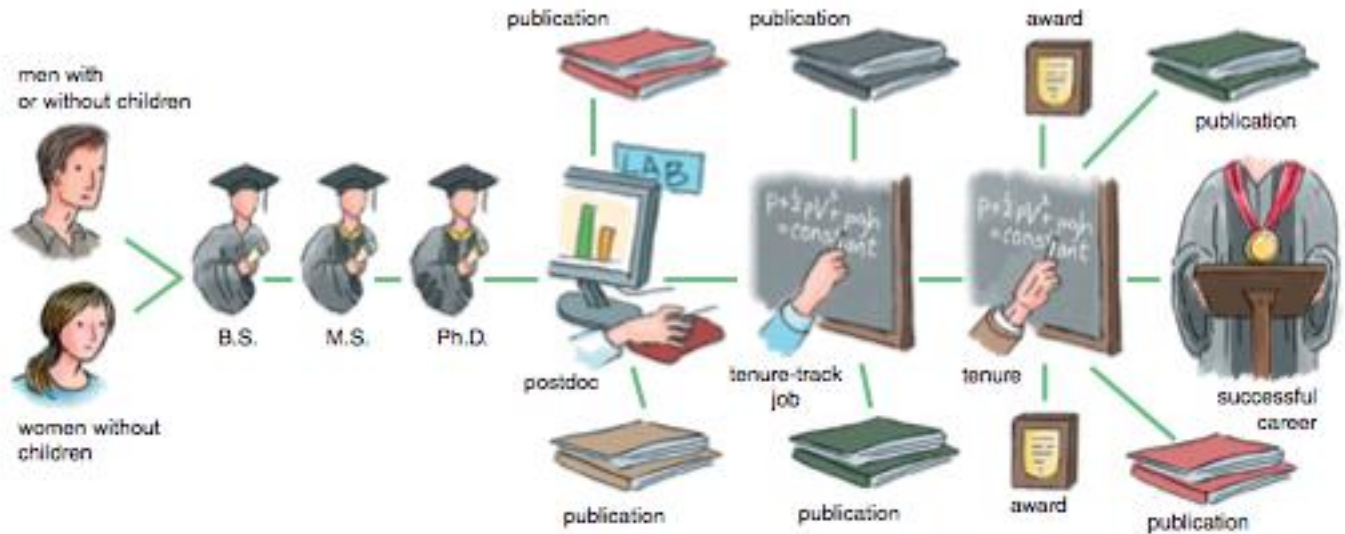
The gender gap increases as time goes by because:

- ☐ Women more frequently
  - ☐ have a partner with an equivalent education
  - ☐ move due to their partners' career
- ☐ Women work fewer hours than their partners
- ☐ Men generate a larger percentage of the family income
- ☐ Women accumulate career breaks due to children
- ☐ Women experience discrimination and less support

# Where are all the women gone...?

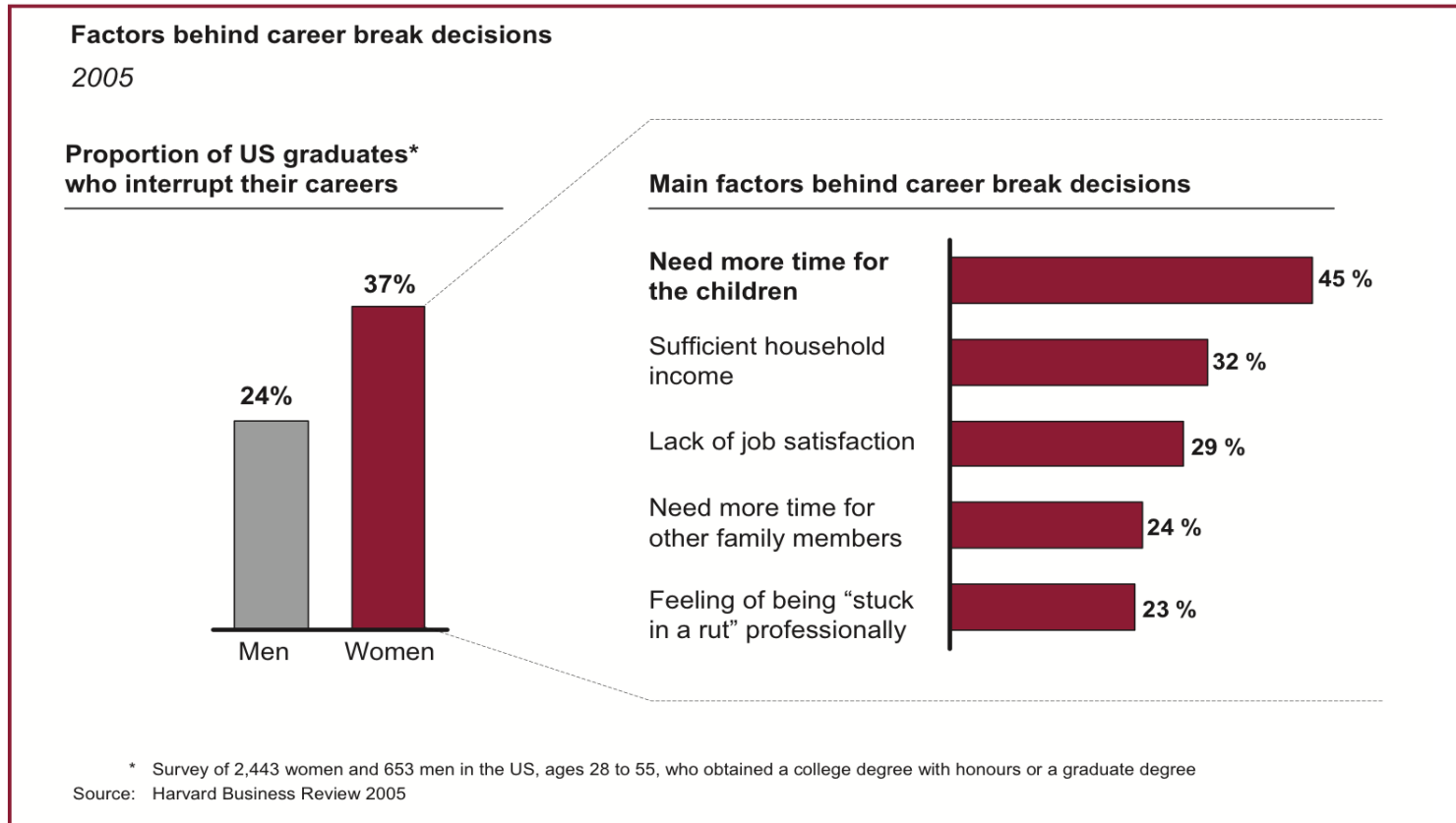
~~Where~~ Why are all the women gone...?





**Exhibit 4**

**Career breaks for women are mainly motivated by the need to spend more time with family**



# Women Matter

McKinsey & Company, 2007

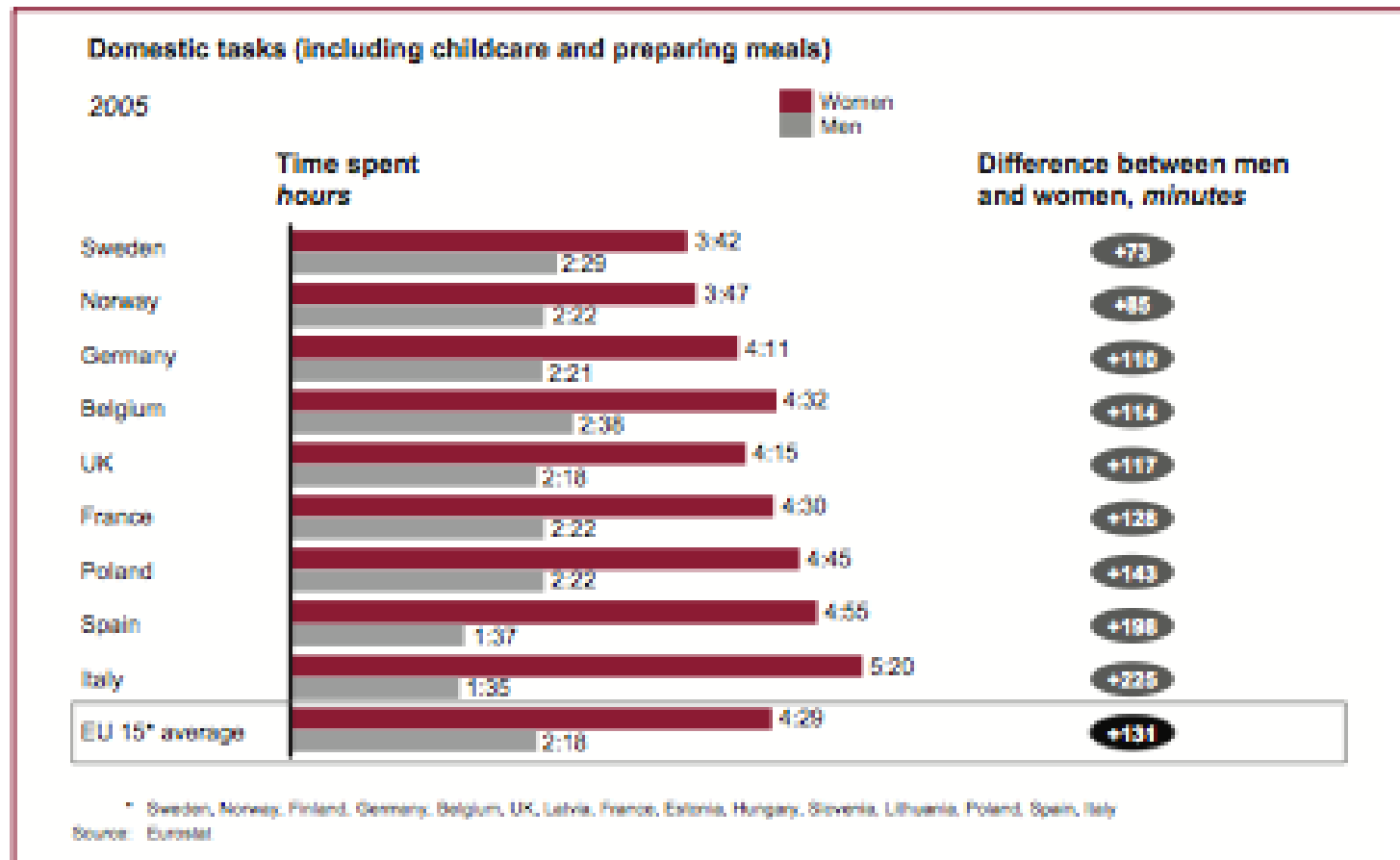
from: Off-ramps and on-ramps

Sylvia Ann Hewlett

Harvard Business Review, March 2005

**Exhibit 3**

**European women devote on average twice as much time as men to domestic tasks**



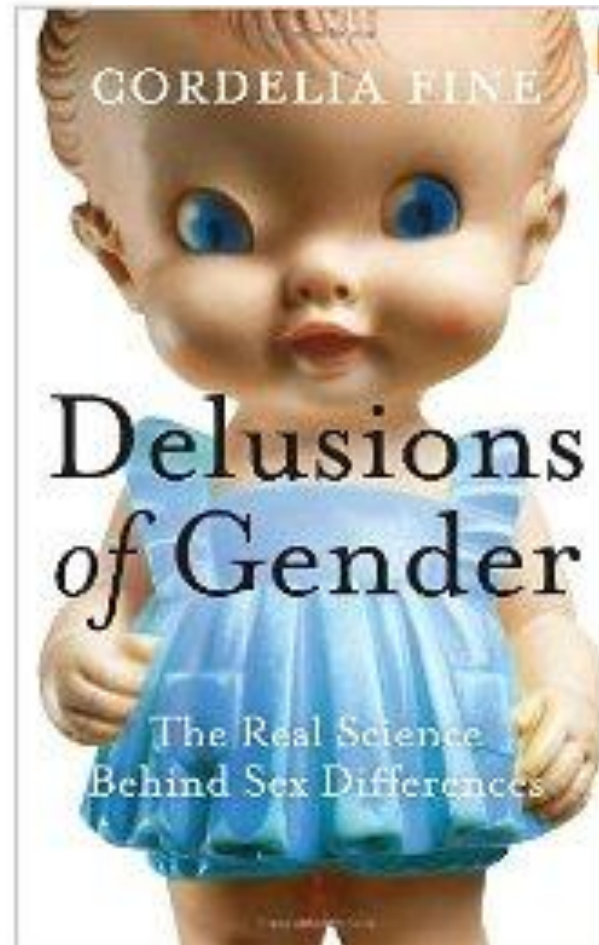
# Discrimination and unconscious bias

## Science faculty's subtle gender biases favor male students

Corinne A. Moss-Racusin, John F. Dovidio, Victoria L. Brescoll, Mark J. Graham, and Jo Handelsman.

*PNAS*, 109, 16474-16479 (2012)

# Discrimination and stereotype threat



# Summary

- Laissez-faire will not work
- Main factors hindering progression of women:
  - Babies
  - Biases





# Questions:

1. At what level of career does gender bias become evident?

- a) Self-selection for subject area
- b) After first degree?

How can the environment help?

- a) Address biases...
- b) Make it clear that the organization takes gender and family into account...

# EMBO policy:

## Post docs:

- Dependent's allowance (for children under the age of 18)
- Three months parental leave
- Option to work part-time
- Crèche support for Fellows with children under the age of six.

## Young Investigators:

- Extension of the eligibility period by one year per child for female candidates.
- Extension of programme membership by one year for each child born during current tenure.

## Courses and Workshops:

- Organizers of EMBO Courses and Workshops are instructed to ensure that at least 25 – 30% of speakers are female.

# EMBO policy:

## EMBO Lab Management Courses:

- “Female leaders in science”
- Incorporate in general lab management course programme

## Questions:

3. Does having more women in relevant positions help other women?
  - a) As realistic role models: likely
  - b) In the selection/decision making process: likely but not sufficient...

# EMBO policy:

## General:

30% of our committee members are female

## Questions:

4. Effects of blind refereeing/unconscious bias in appointments and letters of reference?
  - a) In our experiment we did not find evidence for this.
  - b) Another study did:  
Exploring the Color of Glass: Letters of Recommendation for Female and Male Medical Faculty  
*Trix and Penska*  
*Discourse & Society March 2003*

## Questions:

4. Effects of blind refereeing/unconscious bias in appointments and letters of reference?

“OBSERVATIONS ON GENDER  
EQUALITY IN A SELECTION OF THE  
SWEDISH RESEARCH COUNCIL’S  
EVALUATION PANELS”