

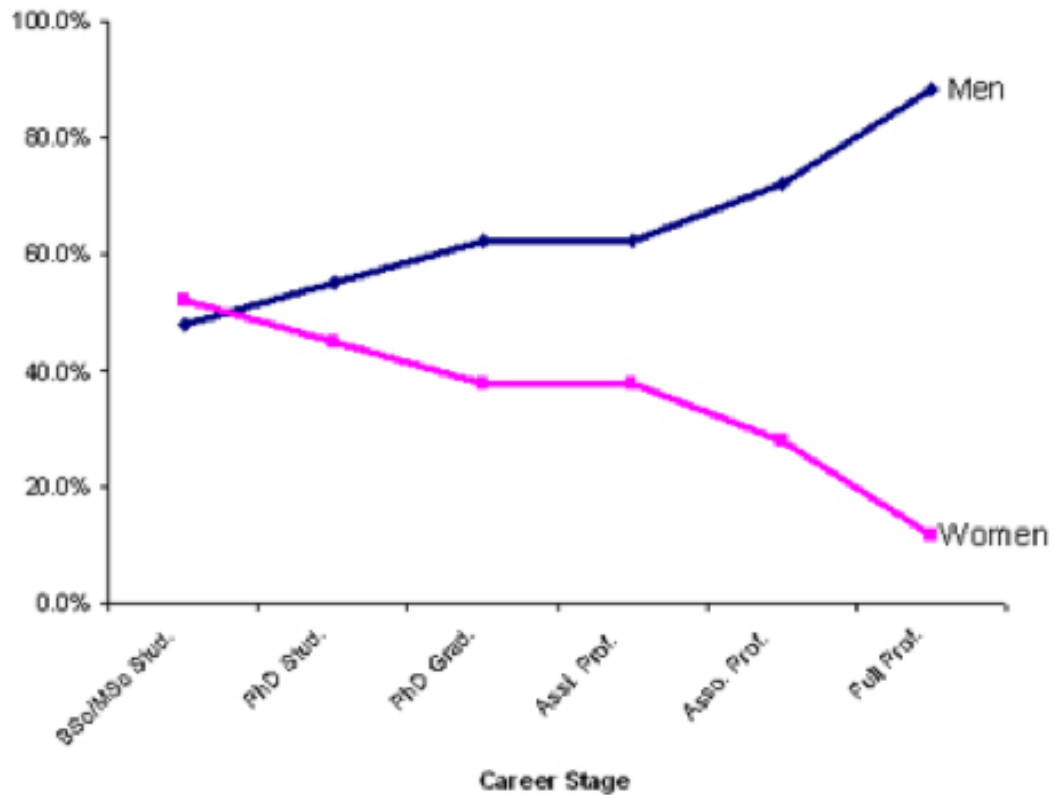
Mobility and careers: a never- ending training.



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Figure 1. The Gender Scissors



Data from the Third European Report on Science and Technology, 2003, http://www.dife.de/~mristow/2003EU_3rd_report.pdf

BSc or MSc student



PhD student



PhD graduate



Post-doc



Researcher (Staff Scientist)



Assistant Professor (Senior Scientist)



Full Professor (Research Director)

Actions taken by several European Organizations



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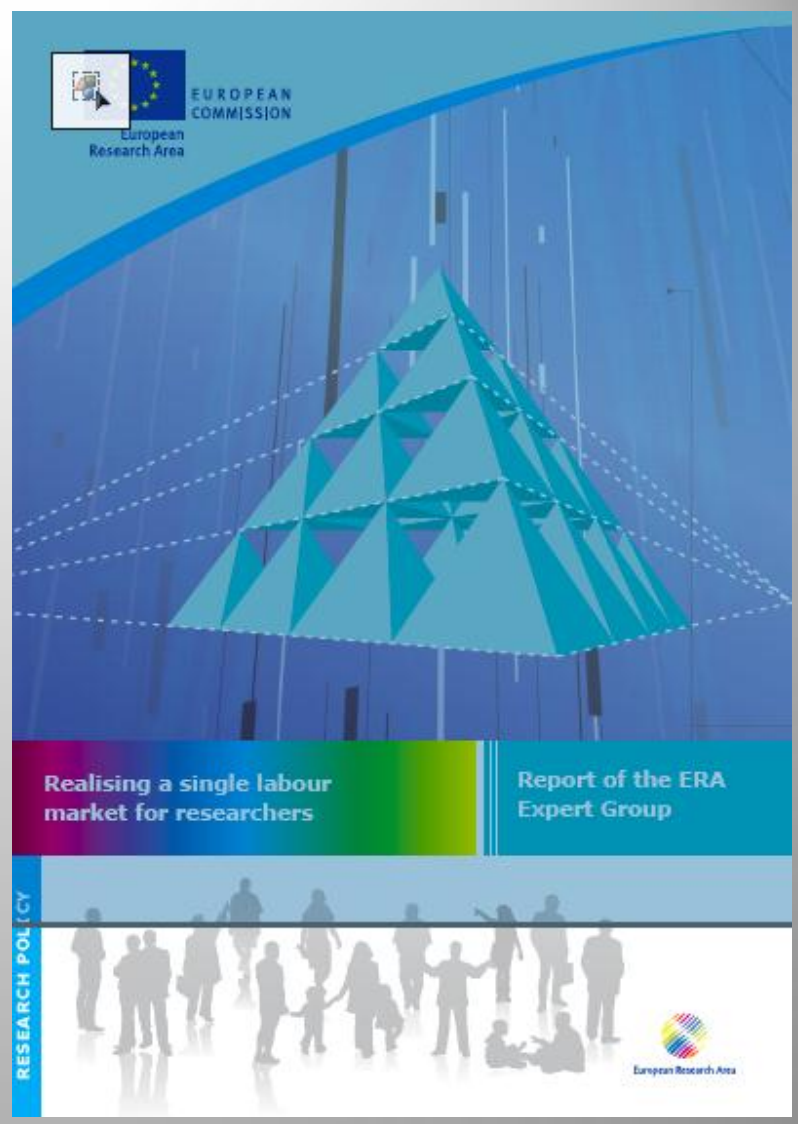
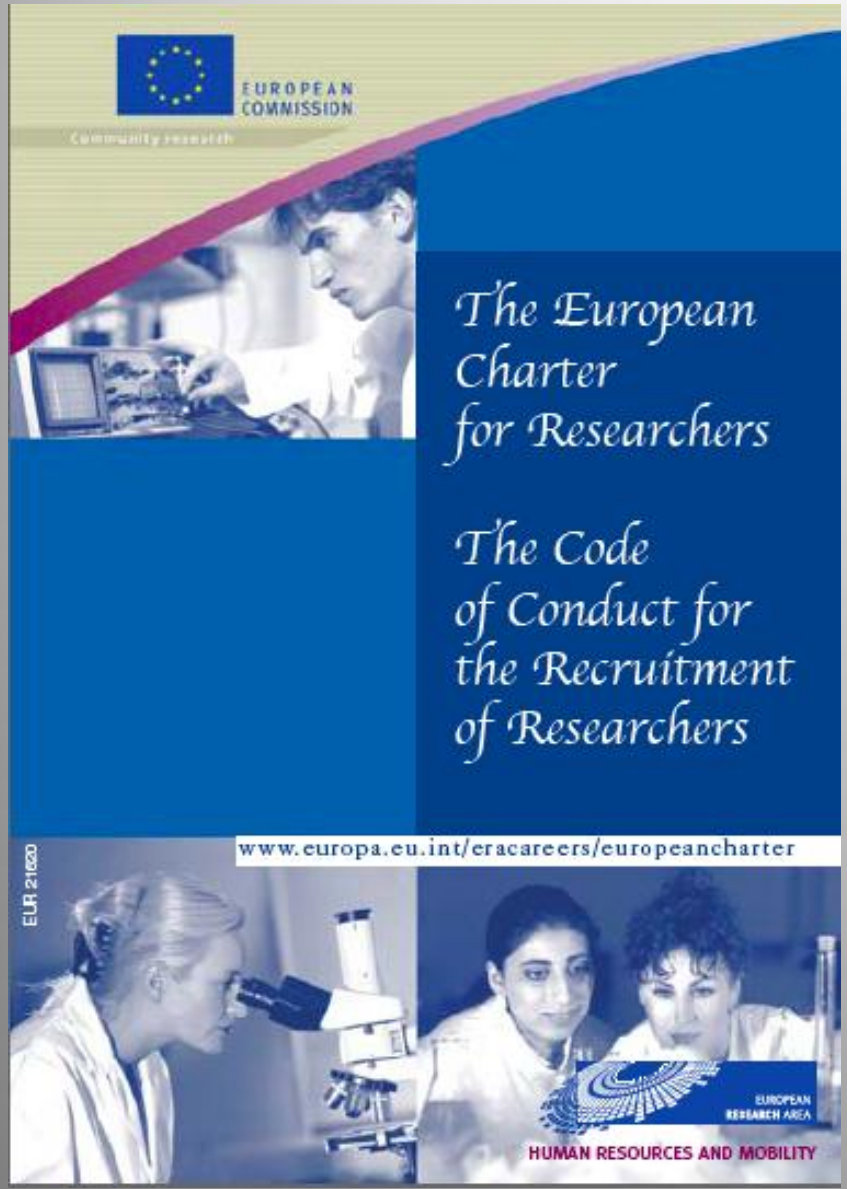


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Understanding current causes of women's underrepresentation in science

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Explanations for women's underrepresentation in math-intensive fields of science often focus on sex discrimination in grant and manuscript reviewing, interviewing, and hiring. Claims that women scientists suffer discrimination in these arenas rest on a set of studies undergirding policies and programs aimed at remediation. More recent and robust empiricism, however, fails to support assertions of discrimination in these domains. To better understand women's underrepresentation in math-intensive fields and its causes, we re-prise claims of discrimination and their evidentiary bases. **Based on a review of the past 20 y of data, we suggest that some of these claims are no longer valid and, if uncritically accepted as current causes of women's lack of progress, can delay or prevent understanding of contemporary determinants of women's underrepresentation.** We conclude that differential gendered outcomes in the real world result from differences in resources attributable to choices, whether free or constrained, and that such choices could be influenced and better informed through education if resources were so directed. Thus, the ongoing focus on sex discrimination in reviewing, interviewing, and hiring represents costly, misplaced effort: Society is engaged in the present in solving problems of the past, rather than in addressing meaningful limitations deterring women's participation in science, technology, engineering, and mathematics careers today. **Addressing today's causes of underrepresentation requires focusing on education and policy changes that will make institutions responsive to differing biological realities of the sexes.** Finally, we suggest potential avenues of intervention to increase gender fairness that accord with current, as opposed to historical, findings.

women in science | gender bias | child penalty | peer review

Claims of Discrimination Against Women Scientists

Recent scientific reports often assert that discrimination against female scientists in hiring, publishing, and funding is a cause of their underrepresentation:

"Substantial research shows that resumes and journal articles were rated lower by male and female reviewers when they were told the author was a woman; similarly, a study of postdoctoral fellowships awarded showed that female awardees needed substantially more publications to achieve the same competency rating as male awardees" (5, p. 1933).

"It is now recognized that biases function at many levels within science including funding allocation, employment, publication, and general research directions" (6, p. 1247).

"Research has pointed to bias in peer review and hiring. For example, Wennerås and Wold found that a female postdoctoral applicant had to . . . publish at least three more papers in a prestigious science journal or an additional 20 papers in lesser-known specialty journals to be judged as productive as a male applicant. . . . The systematic underrating of female applicants could help explain the lower success rate of female scientists in achieving high academic ranks" (7, p. 24).

"An impressive body of controlled experimental [research] . . . shows that, on the average, people are less likely to hire a woman than a man with identical qualifications, are less likely to ascribe credit to a woman than to a man for identical accomplishments. . ." (8, p. S2).

Such claims of discrimination against women are consistent with claims of glass ceilings, reduction of authorship credit and pay for comparable work, smaller laboratory space, and fewer research resources (9–11). For example, economists analyzing auditions for orchestras found that switching to blind auditions in which juries could not see applicants reduced discrimination

WORLD VIEW

A personal take on events

R. P. GRANT



Give postdocs a career, not empty promises

*To avoid throwing talent on the scrap heap and to boost prospects, a new type of scientific post for researchers is needed, says **Jennifer Rohn**.*

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- Post-doctorate as a “job” rather than ongoing training
- Plan number of competitive positions
- Do not waste experienced (old) post-docs
- Negative perception of head of laboratory (!)

BSc or MSc student



PhD student



PhD graduate



Post-doc



Researcher (Staff Scientist)



Assistant Professor (Senior Scientist)



Full Professor (Research Director)

Crucial step
Societal problems
security

A red bracket on the right side of the diagram, spanning from the 'Post-doc' level down to the 'Researcher (Staff Scientist)' level.

Mobility and careers: a never-ending training.

- Promote awareness among young researchers
- Promote actions that will increase security of jobs
- Act at the Level of Member States
- More jobs, more women will apply
- Europe competitiveness will increase

