

The Gender Gap in Science

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Association *femmes et mathématiques*

Association Femmes & Sciences

Association CPED

European Platform of Women Scientists



FEMMES & SCIENCES
a s s o c i a t i o n



ACT – Strategies

for Sustainable Gender Equality?

Paris, March 2, 2020



IMU-IUPAC Study 2017-19, approved by ICSU – Final Pre-Report, November 2019, book February 2020

THE GENDER GAP IN SCIENCE

A Global Approach to the Gender Gap in Mathematical, Computing, and Natural Sciences: How to Measure It, How to Reduce It?



A multidisciplinary and multicultural project funded by the International Science Council



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International Science Council



International Mathematical Union (IMU)



INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY



Gender InSITE



IUHPST
International Union of History and Philosophy of Science and Technology

A Global Approach to the Gender Gap in Mathematical, Computing, and Natural Sciences: ≡ RESULTS AND RECOMMENDATIONS ≡



<https://doi.org/10.5281/zenodo.3697222>

Cartoons by Léa Castor

Three parts

- Global Survey of Scientists: 32,000 answers
- Analysis of Academic Publications: 500,000 publications analyzed since 1970
- Database of Good Practices: 68 activities

Recommendations

- Instructors and parents: 4
- Local organizations: 7
- Scientific unions: 10

Recommendations for local organizations (1)

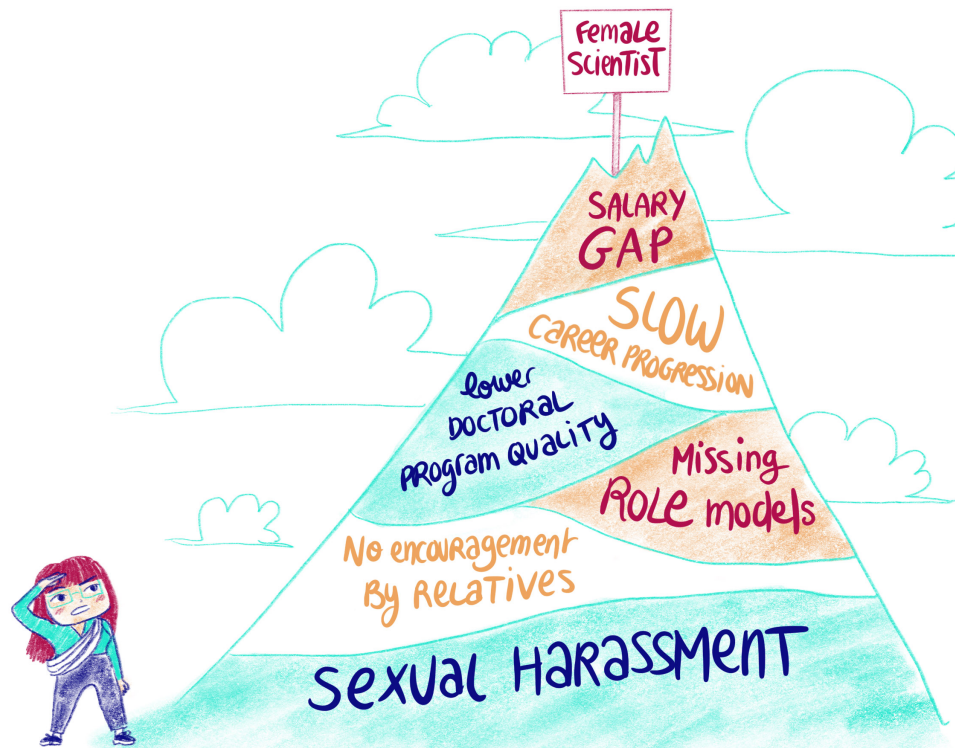
- Promote a **respectful, collegial working atmosphere**; monitor support of female academics.
- Define best practices **against sexual harassment and discrimination**.
- Address **the impact of parenthood** on the careers of women.
- Ensure **transparency** of statistics on salaries, teaching load, etc.

Recommendations for local organizations (2)

- Welcome families and provide **child friendly environments**.
- Address **gender equality** in all institutional policies.
- In all outreach and educational programs, include **the aim of reducing the gender gap**.

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Global Survey of Scientists (32,000 answers, men and women, 130 countries, 10 languages)



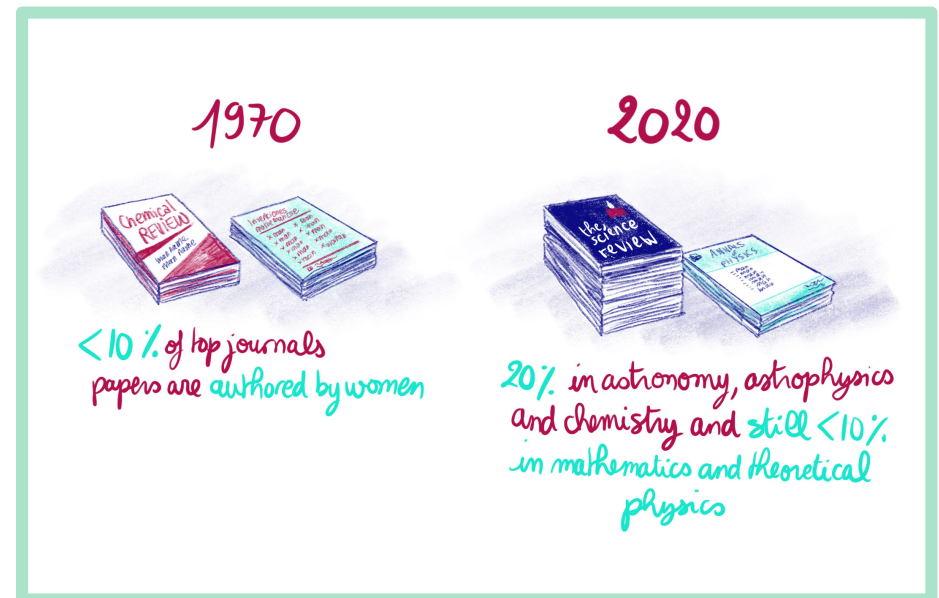
- Women's experiences in both educational and employment settings are consistently less positive than men's.
- Over a quarter of women respondents across the sciences reported personally experiencing sexual harassment at school or work.

Global Survey of Scientists (cont'd)



Analysis of Academic Publications (500,000 publications, since 1970)

- Steady increase of the proportion of women authors of scientific papers (10% to 27%)
- Productivity of female scientists has increased over time (now 85% to 95% of that of male scientists)
- Publications in “top journals” remain static in Mathematics and Theoretical Physics



Database of Good Practices



- Engage families and communities in promoting STEM careers to girls, especially when these careers are contrary to cultural expectations and norms.
- Engage females in exploring socio-scientific issues.
- Promote social support for females, such as peer networks and mentoring by more experienced STEM researchers or professionals.
- Develop females' STEM leadership, advocacy¹⁰ and communication skills.

*« If you want to go fast, go alone.
If you want to go far, go together. »*

(African proverb)

Thank you very much...

to many women engaged in STEM,
especially in France,

Claudine Hermann, physicist,

Catherine Jami, historian of science,

Marie-Françoise Roy, mathematician,

Éliane Viennot, historian of literature,

... and for your attention.