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RESEARCH

Gendered research and innovation (GRI)

Integrating sex and gender analysis into the research process

Recommendations from and for universities, to funders and others

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University of Amsterdam
Universitat de Barcelona
University of Cambridge
University of Edinburgh
University of Freiburg
Université de Genève
Universität Heidelberg
University of Helsinki
Universiteit Leiden
KU Leuven
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University College London
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Pierre & Marie Curie University
Université de Strasbourg
Utrecht University
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What is GRI

Eating disorders in young men are underdiagnosed and undertreated (Universities of Oxford and Glasgow)

- Young men with an eating disorder are not getting the help and support they need because of perception as a "women's illness“
- Men are underdiagnosed and undertreated for anorexia and other eating disorders, despite making up about a quarter of cases
- Frontline health workers have a key role in identifying eating disorders in young men

(Raisanen and Hunt, 2015, BMJ Open)

About the processes that integrate sex and gender analysis into all phases of research to assure excellence and quality of outcomes

THREE FIXES

1. FIX THE NUMBERS OF WOMEN
2. FIX THE INSTITUTIONS
3. FIX THE KNOWLEDGE

Londa Schiebinger, Stanford University

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Overview of the paper

- **Why GRI matters**
- **GRI matters in all kinds of research areas**
- **The role of social sciences and humanities in GRI**
- **Integrating GRI into different phases of the research process**
- **The role of research universities – innovative practice and recommendations**
- **The role of other actors - recommendations for governments, funding agencies and journals**
- **GRI in EU policies and programmes**
- **Conclusions**

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GRI matters because R&I matter

Hefei statement (LERU, 2013):

> ‘*University research drives innovation, helps respond to major national and global problems and helps provide the narratives that make it possible to understand a rapidly changing and increasingly volatile world’*

Global challenges require comprehensive, multidisciplinary, evidence based, (gender) inclusive solutions

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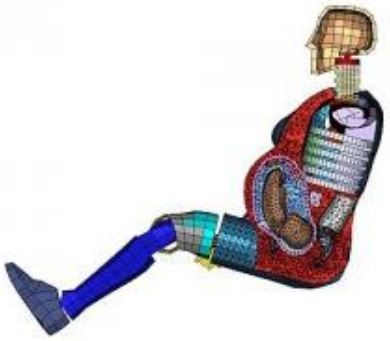
Three good reasons

- **Power, vitality and quality of research**
- **Eliminates bias and stimulates inclusivity**
- **Saves lives (and money)**



"Linda" by Volvo, a virtual pregnant crash-test dummy designed in 2002 by engineer Laura Thackray. "Linda" models the effects of high-speed impact on the womb, placenta, and fetus.

Between 1997 and 2000, 10 drugs were withdrawn from the U.S. market because of life-threatening health effects—8 of those showed greater severity in women (GAO, 2001).

Issues

- **Women are physically and hormonally different from men**

- **Gender roles differ:**
  - **more care-taking tasks for women**
  - **less economic and decision-making power**

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Why change is needed

- **Lack of <u>systematic</u> consideration and mainstreaming of GRI in the research process**

- **Lack of awareness by researchers, university leaders, policy makers, politicians, research funders and journal editors**

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Considerations

- **Integrate a gender perspective in ALL phases of the research process**
- **Avoid stereotyping and non-evidence-based assumptions**
- **Understand the role of social sciences and humanities in GRI**
- **Make the link with Responsible Research & Innovation (RRI)**

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Different phases of the research process

Framing the research question:

- **Validity**
- **Be aware, consult, …**
- **If no GRI dimension: fine, mention it**

Analysing results:

- **Include sex/gender-disaggregated outcomes**
- **Potentially combined with other factors (social, economic, environment) >> complex analysis**

Reporting results:

- **Mention if no interaction exists and why**

In addition:

- **Gender balance in teams: Related to engagement with GRI?**
- **Assumptions vs evidence base: e.g. “shrinking and pinking” products**

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The importance of SSH

"The social sciences and humanities cultivate knowledge about human expression, behaviour, and social life that is essential to understanding the human context of contemporary global challenges and to crafting viable solutions to them."

Leiden Statement, 2014

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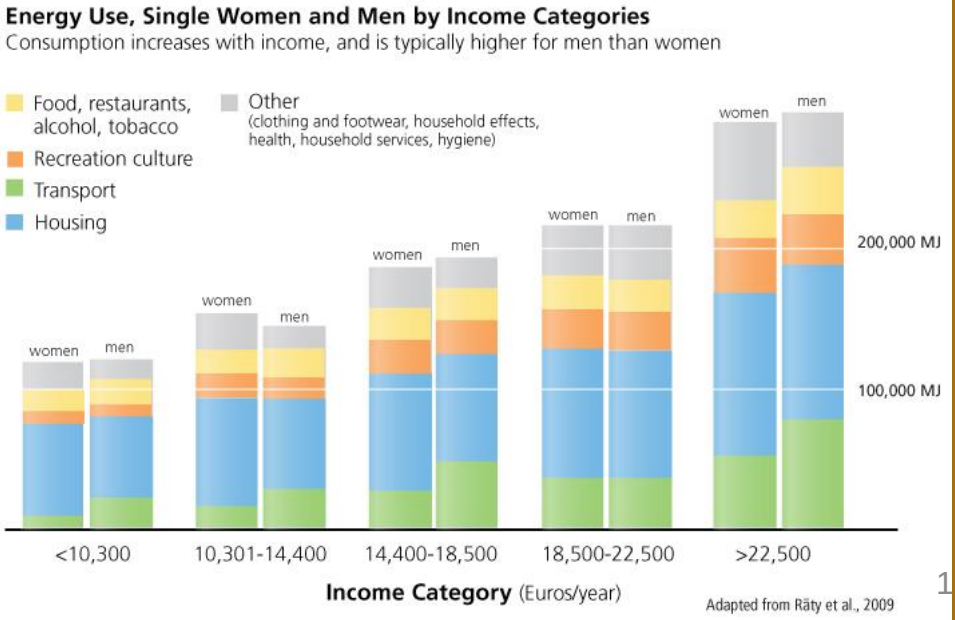
Example

Climate change (Gendered Innovations Project)

- **Social factors also predict climate footprint**
- **Factors that intersect with gender: income, age, travel patterns, geographical location**
- **Avoid stereotypes: M-F as undifferentiated groups**
- **Efficiency and equality by**
  - ✓ **achieving mitigation at the lowest possible SE cost**
  - ✓ **ensuring that costs are shared equitably**



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Example

Heart failure and cardiovascular disease (Utrecht University)

- **Sex-specific biomarkers for heart failure**
- **Risk prediction in cardiovascular disease**
- **Atherosclerosis special issue ‘Sex Matters to the Heart’, July 2015**
- **“Women Inc” a national initiative for public dissemination**

Example

Female birds sing, too (Leiden University)

- **Traditionally, song production has almost exclusively been studied in male birds**
- **With a different research design and a more inclusive, international database it was found that female bird song is more common than previously thought**

(*Nature Communications, 2014*)

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Example

Sports activities: linking research and education (Université Paris-Sud)

- **Raise awareness and educate future sport professionals about gender discrimination, diversity and equality issues in sport**
- **27-hour teaching module entitled "*Activités physiques et sportives et différences des sexes*" for all second-year students of STAPS (Sciences and Techniques of Physical and Sports Activities) - informed by gendered sports research**
- **30 hours of tutorial classes for third-year students on gender and diversity in sports education, taking into consideration socio-historical, psychological and pedagogical approaches**

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Example

Textbooks – the use of visual representation to illustrate physics (Lund University)

- **Textbook analysis: visual representation can be very powerful – and very biased**
- **For example: 1/ Suggestive pictures of women to illustrate the effect of parallel mirrors 2/ Pictures of men and women are very different, both in content and in numbers**
- **Context: university-wide "Gender Certification" project**
  - ✓ **Using methods very similar to the ones outlined in the "Gendered Innovations" project**
  - ✓ **For example, workshops to understand gender assumptions in physics professors' teaching and research**

23. What arrangement of mirrors would produce the multiple images of Ann Margaret shown in Fig. 35.51?

FIGURE 35.51

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Role of RIUs

Some examples from LERU universities

- ✓ **Lectures, symposia, courses**
- ✓ **H2020 guidance booklet for researchers: GRI included (Barcelona)**
- ✓ **Awareness raising, workshops, encourage interdisciplinarity (Freiburg)**
- ✓ **Include GRI training in diversity policy (Leiden)**
- ✓ **Include graduate research students: e.g. publication process workshop (Milan)**
- ✓ **Include in recruitment situations, job vacancies**

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Recommendations

To universities:

- ✓ **Advocate widely**
- ✓ **Create awareness and provide tools for researchers**
- ✓ **Allocate internal funds**
- ✓ **Identify experts**
- ✓ **Integrate GRI into the teaching curriculum**
- ✓ **Dialogue with governments**

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Recommendations

To journals:

- ✓ **Set standards for inclusion of GRI in publications**
- ✓ **Develop clear guidelines for authors**

"Please provide sex-specific and/or racial/ethnic-specific data when appropriate, in describing outcomes of epidemiologic analyses or clinical trials; or specifically state that no sex-based or racial/ethnic-based differences were present" (JACC—Journal of the American College of Cardiology Instructions for Authors).

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Recommendations

To governments:

- ✓ **Include GRI in research priorities**
- ✓ **Raise awareness, train**
- ✓ **Include gender considerations into new policies**
- ✓ **Allocate funding**

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Recommendations

To research funders:

- ✓ **Adopt GRI policies, incentivise researchers**
- ✓ **Model after EC/H2020 approach**
- ✓ **Spread good practice**

In June 2015 the NIH rolled out new guidelines for sex inclusion in research.

http://grants.nih.gov/grants/guide/notice-files/NOT-OD-15-102.html

The Canadian CIHR has implemented a requirement that all grant applicants respond to mandatory questions about whether their research designs include gender and sex [...] The purpose of this tool is to give health researchers a framework for thinking through how gender and/or sex might be integrated into their research designs" (CIHR, 2012).

August 2015 released online training for Sex and Gender in Biomedical Research.

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What can funders do?

A variety of international, national, and private granting organizations require sex and gender analysis. Grantees may be required to address how their projects will promote:

- ✓ Equal representation of men and women in employment, decision-making, and as clinical research subjects (fixing the numbers)
- ✓ Removing institutional barriers to gender equality (fixing the institutions)
- ✓ Employing sex and gender analysis as a resource to create new knowledge and technologies.

- ❖ The European Commission has made this an important part of Horizon 2020.
- ❖ The Canadian Institutes of Health Research requires all applicants to consider the sex and gender in their research.
- ❖ The Gates Foundation requires applicants to consider gender in agricultural research.

Source: http://genderedinnovations.stanford.edu/sex-and-gender-analysis-policies-major-granting-agencies.html

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GRI at the EU level

ERA (European Research Area) 2014 Progress report

- **GRI mentioned but remains a challenge and implementation is not supported enough**
- **Member States: 10 have provisions to include GRI in research programmes**
- **RPOs including GRI: 44% - with large variations**

  e.g. AT 70+%, DE 62%, 21% UK
- **RFOs supporting GRI: in 8 MS frequently**

  IT 82% frequently, UK 0%)

Open Science, Open Innovation, Open to the World?

- **EC H2020 Advisory Group on Gender:**
  - **Suggestions for GRI topics in the 2016-17 work programme (2015)**
- **GENDER-NET (ERA-NET FP7):**
  - **Compendium of national initiatives on the integration of gender dimension in research contents (2015)**
- **EC Vademecum on gender equality in H2020 (2014)**
- **EC Gendered innovations report:**
  - **expert group chaired by Londa Schiebinger (2013)**
- **EC Gender toolkit:**
  - **questions on how to integrate GRI**

Horizon 2020

- **Proposals: how is GRI taken into account, if relevant**
- **Monitoring by EC as of 2016**

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Conclusions

- GRI issues are not well-known nor practiced
- More awareness raising and training needed
- Some areas more obvious than others, but attention needed across the board
- GRI is not necessarily an issue – investigate at the outset and consider throughout if applicable
- LERU intends to lead in advocacy and by example
- In partnership with other actors: governments, funders, journals

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Women hold up half the sky, they deserve half the research

Thank you, Mao Zhedong and Simone Buitendijk

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