The Cumulative Effects of Science Norms on Gender Inequalities in Academic Careers : lessons learned from the GenderTime project

Dr. Anne-Sophie Godfroy
Université Paris Est Créteil
Science Norms Decision (Université Paris Sorbonne & CNRS)

TRIGGER Conference – Paris 2015

Context: GenderTime project

- EU funded in FP7
- 4 years (2013-2016)
- Aim: to identify and implement the best systemic approach to increase participation and career advancement of women researchers/academics
- 8 participating institutions + 2 technical partners
- Very different in terms of size, activities, history
- Synergy and knowledge transfer
- Similar projects: FESTA, INTEGER, GENIS LAB, ADSO STAGES, etc.

The GenderTime Consortium

Egalité des Chances dans les Etudes et la Profession d'ingénieur en Europe	Co-ordinator	France
Inter-University Research Centre for Technology, Work and Culture		Austria
The University of Padua		Italy
Linköping University		Sweden
University Paris Est Créteil		France
Mihailo Pupin Institute		Serbia
Bergische Universität Wuppertal		Germany
Loughborough University		United Kingdom
Tecnalia Research & Innovation		Spain
Donau-Universität Krems		Austria

Self tailored gender action plans (GAP)

- Self tailored and systemic approach
- Examples of measures:
- Careers development and networking
- Institutional culture
- Management and policy making
- Recruitment
- Salaries
- Staff development and support
- Work-life balance

Aim of this paper

- Reflections on how to measure the effectiveness of the GAP
- Starting point:
  - Such measures exist for years with more or less results
  - Measures are not isolated but part of an overall academic context and science norms (to be defined)
  - Academic EU landscape has been deeply renewed in the last decades (From the Bologna process to now)
  - What role play the science norms regarding gender equality?
  - Not much interaction between research on science norms and gender research (e.g. bibliometrics)
- ***How do science norms interact with our measures?***

Data we have

- *She Figures*, plus similar data at national or local level
- Literature on measures
- We can observe trends, but we have no clue regarding causality
- Many facts are challenging and do not fit the usual explanations behind existing measures.

Some examples

- How to explain the decreasing number of women full professors in maths in France despite continuing activism of women and science associations?
- How to explain the huge increase of women students in medicine or law, without any specific measures?
- How to explain the lack of correlation between the proportion of women in one given field and their chances to be recognized or promoted compared to men?

Overall objective

- To open the black box
- To cross results from studies on science norms with gender and science studies
- First step: identifying factors interacting with GAP (exploration under progress, interviews and data analysis)
- Second step (in the future):
  - Integrating the results in monitoring tools
  - Promoting new measures regarding academic norms in general

Identifying "science norms"

- Bologna process and its consequences
- New funding schemes
- Scientometrics and bibliometrics
- Democratization and demography
- Shift from mode 1 to mode 2
- Academic culture issues: fast and slow science, having the right stuff
- *What consequences for gender equality? Work on progess, further research needed*.

Bologna process: since 1998

- References:
  - Charle & Soul, ed. (2007) *Les ravages de la «modernisation» universitaire en Europe*. Sylepse, Paris.
  - *The Black Book of the Bologna Process* (2005) Edited by ESIB.
- Teaching duties increased
- Ratio professor/student degraded
- Job-oriented teaching, increased gap between research interests and teaching.
- Deeper divide between permanent staff and contract researchers. More contract researchers, less permanent positions
- Less flexibility to fit the common standards. Case of Germany
- *Consequences ? Degraded conditions for all or worse for women academics?*

New funding schemes

- Less recurrent funding, more project funding
- More competitive and time consuming.
- Better chances in the less famous labs?
- Impossible to do research without applying for funded projects.
- *Consequences? Reports from gender equality officers national group in France: bad because some women researchers will be kicked out because of no funding, good because it raises awareness on the necessity to apply for funding.*

Bibliometrics

- Very few attempts to cross the two fields. (Project ACUMEN, Wouters et alii)
- STEM are better adapted to scientometrics than HSS
- Interdisciplinary topics not well recognized through bibliometrics.
- More pressure to publish, funding indexed on publishing in some countries.
- *Consequences?*
- *Probably negative effects on gender equality as women are more in HSS and in interdisciplinary subjects.*
- *Possible positive effects: better evaluation, without gender bias. Study in Northern Europe where women needed twice the number of publications as men to get the same position.*

Democratization and demographic dynamics

- More students, many first generation students (but not much more permanent positions)
- Academic demography affects careers: massive recruitment periods vs. scarce recruitment periods.
- Disciplinary dynamics: medicine, law, biology, political sciences are top choices, maths, physics, engineering and HSS become less and less popular.
- Those dynamics (academics and students) affect deeply numbers of positions and consequently, career opportunities.

Effects?

- *Pure demographic effects: What are the effects on academic working conditions? On career opportunities? In terms of gender?*
- *Attractiveness and cultural issues:*
  - *If efforts to attract women in science are not rewarded, can be part of an overall trend. Attracting women in some disciplines because nobody wants to study the field cannot be successful.*
  - *No clear explanation of those trends.*
  - *Does it change the academic culture towards a more open-minded culture?*

Shift from mode 1 to mode 2

- Nowotny, Scott, Gibbons et al. (1994 & 2001)
- Mode 1: disciplinary, homogeneous, clear boundaries between disciplines, between scientific knowledge and other knowledge, between science and society, between science and technology, hierarchical, problems solved for and by the scientific community, production, legitimation and circulation of knowledge inside the scientific community.
- Mode 2: context and application important, produced in a larger context including social and economical issues, transdisciplinary, heterogeneous, less hierarchy, socially accountable, knowledge production by negotiation through various actors
- *Consequences? Could be positive for gender equality. Interviews in WOMENG and PROMETEA projects.*

Debates on academic culture

- Stengers (2013): "The right stuff of the researcher"
- Invisible hierarchies (case of Paris universities vs. other French universities), not visible in overall statistical data.
- Gendered hidden norms where the neutral is in fact masculine and excludes the feminine.
- Discussion on values and hidden norms
- Slow science vs. fast science

Preliminary conclusions

- GAP are embedded in a larger context of changing science norms, complex interactions to investigate
- Contradictory trends:
  - shift to interdisciplinary vs. domination of focused disciplines (mode 2 vs. bibliometrics trends)
  - Slow science manifesto vs. entrepreneurial university
  - Does democratization lead to McDonald or open-minded university culture?
  - Need to investigate demographic effects

Perspectives

- Further research in GenderTime through interviews
- Identification of appropriate tools to measure interactions (GenderTime)
- Work on demographic dynamics (future project)
- Work on the norms: e.g. research to avoid gender-bias in bibliometrics and ranking (future project), and/or to include gender awareness in bibliometrics.