

Abstract Compendium



*Mastering gender in research  
performance, contexts, and outcomes*

Quality Research and Innovation through Equality  
6 -7 November 2015, Berlin

The following abstracts were selected by the Gender Summit 7 Europe Regional Committee for inclusion in the Programme according to three categories: as presentation in parallel session; as part of the Poster Exhibitions; or as contributions to the Abstracts Compendium. The key selection criteria were the closeness of the research subject matter to the content of the Programme, maturity of the reported work, and overall interest of the topic.

First Edition

Print ISBN: 978-1-910663-06-6

Electronic ISBN: 978-1-910663-07-3

Published in the United Kingdom by:

Portia Ltd

9 Bonhill Street

LONDON, EC2A 9DJ, UK

Copyright © Portia Ltd 2015. All rights reserved.

## PRESENTATIONS

### PARALLEL 3: GENDER AS CROSS CUTTING ISSUE IN RESEARCH AND INNOVATION

- *Mainstreaming gender into methodologies and human resources development*  
**M. Kolossa-Gehring and A. Sauer**
- *The TIDES approach to increasing diversity in Computer Science*  
**K. Mack and K. Winter**
- *Strengthening gendered climate change knowledge by building up Competence Network*  
**U. Roehr and I. Weller**
- *How to include Gender Medicine in clinical research*  
**M. Hochleitner**

### PARALLEL 4: GENDER BIAS IN CAREER DEVELOPMENT, SOURCES AND EFFECTS

- *Which Part of the Story does Unconscious Implicit Bias Capture*  
**F. Jenkins**
- *Cognitive network and gender bias in early career grant decision-making*  
**P. van den Besselaar, L. Polo and U. Sandström**
- *And the grant goes to... Gender bias in early career research funding*  
**R. van der Lee and N. Ellemers**
- *De-gendering STEM: Lessons learned from the physics lab*  
**P. Lucht**

### PARALLEL 5: SCIENTIFIC INCLUSION AND DIVERSITY IN SCIENCE STRUCTURES AND PRACTICES

- *Gender in Research – Policies, Practices and Experiences*  
**S. Reidl**
- *Gender, Science, Technology and Innovation in Argentina: between facts and the mirage of equality*  
**G. Bonder**

- *Implementation strategies for gender-sensitive public health practice*  
**S. Oertelt-Prigione, L. Dalibert, P. Verdonk, E. Zemp Stutz and I. Klinge**

## POSTERS

Day 1 13:30 – 14:00, Posters 1 – 6

Day 1 14:00 – 14:30, Posters 7 – 12

Day 1 15:55 – 16:10, Posters 13-15

Day 1 18:15 – 18:40, Posters 16 - 20

Day 2 11:10 – 11:30, Posters 21 - 24

Day 2 13:45 – 14:15, Posters 25 - 30

Day 2 14:15 – 14:45, Posters 31 - 35

1. *Women Ways of Gaining Voice Online*  
**S. A. Lir**
2. *Sex in Science at the Wellcome Trust Sanger Institute and European Molecular Biology Laboratory – European Bioinformatics Institute: Embedding Gender Equality into Institutional Strategy*  
**S. Ahmed and E. Zeggini**
3. *Role Models for Women Mobile Scientists*  
**G. Avellis and R. Chmielowski1**
4. *An Analysis into the Republic of Belarus' Actors Who Are Involved in Gender Equality Issues*  
**S. Burova**
5. *Is my bias showing? The role of sponsorship in building scientific careers*  
**J. de Vries**
6. *Key authorship positions in neuroscience: A gender perspective*  
**T. Dehdarirad, A. Villarroya and M. Barrios**
7. *Gender Balance: Challenges and Opportunities at a Faculty of Science and Technology in Norway*  
**M. Dockweiler, I. F. Hellstrand, V. H. Bull and K. K. Halvorsen**
8. *Profile of a Nascent International University-Community Partnership in STEM Education: The Rutgers-Newark/P.A.Y. Namibia Collaborative*  
**K. Farmbry and M. Ndimbira**
9. *The influence of self-efficacy beliefs and self-assessment of professional skills on scientific*

- career aspirations of computer scientists*  
**S. Förtsch and A. Gärtig-Daug**
10. *Body images in medical teaching: a gender sensitive use*  
**S. Gahbauer**
11. *Should I Apply or Should I Leave? Female Decisions along Life Course Research*  
**A. M. González Ramos, E. Torrado, B. Revelles, A. Vayreda and E. Conesa**
12. *Beyond the leaky pipeline: Life Course Model for Comparing Men and Women Research Careers*  
**A. M. González Ramos, J. Navarrete Cortés and E. Cabrera Moreno**
13. *Mentoring: A focus on organisational change to enable individual careers*  
**M. Guillemin and J. de Vries**
14. *The Ideal Student.*  
**E. A. Günther**
15. *Status of Women in STEM in Slovenia*  
**R. Heller, D. Janezic and I. Ursic**
16. *Gender as cross cutting issue in research and innovation: EPWS actions*  
**C. Hermann and B. Muehlenbruch**
17. *Gender Sensitiveness in Computer Science Lessons*  
**M. Herpers and A. Steppacher**
18. *STEM: what should be taught in school?*  
**D. Bell, D. Wooff and M. Insenga**
19. *Roadmap to Dialogue - The Gender Dimension in Science and Research*  
**M. Jochimsen and S. Zurmaar**
20. *European Academies of Sciences: gender policies in traditional self-governing institutions*  
**E. Kouznetsova**
21. *Undoing gender in EU's social innovation policies?*  
**M. Lindberg**
22. *The String Theory Universe: A EU project in Physics with a gender component*  
**S. Penati and Y. Lozano**
23. *Why Jenny can't publish: Exploring the gender gap in research productivity at a Norwegian research institute*  
**L. Nygaard**
24. *Gender awareness. Assessing gender culture in Academia.*  
**E. Restiglian, L. Perini, A. M. Manganeli, S. Badaloni and M. De Rossi**
25. *Analysing the gender productivity puzzle in Middle Income Countries*  
**L. Rivera León, J. Mairesse and R. Cowan**
26. *Women doctors in Italy: present and future*  
**D. Romano**
27. *Opportunities for young girls from LDCs to undertake international travel and grow within the global scientific community*  
**E. Scala**
28. *Woman is men's best friend: Misogyny in Professional Virtual IT Community*  
**A. Sergeeva, E. Voronina and B. Kirillov**
29. *Implementing Gender Medicine: Description of progress and current state*  
**H. Siller, A. Bader and M. Hochleitner**
30. *Promoting the Inclusion of Gender in (Medical) Research: the Pro's and Con's from the Student's Perspective*  
**H. Siller and M. Hochleitner**
31. *And the grant goes to... Gender bias in early career research funding*  
**R. van der Lee (presenter)**
32. *Mind the gap: Are sex and gender considerations addressed in Canadian Clinical Practice Guidelines?*  
**C. Tannenbaum, A. Liu, B. Clow and M. Haworth-Brockman**
33. *Gender quotas change a lot*  
**E. Wolf**
34. *Gender Bias in Technology and Engineering Careers*  
**K Wosczyzna Birch and W. Robicheau**
35. *Gender analysis as part of research works at the University of Chemistry and Technology Prague, Czech Republic*  
**K. Zdenkova, P. Smejkalova, K. Grecova and A. Mittnerova**

## COMPENDIUM

1. *Professional Self-presentation: gender aspect*  
**T. Hovorun and Taras Shevchenko**
2. *Improving the system of prevention of domestic violence in the Republic of*

*Belarus (gender aspect)*

**A. Haurylenka**

3. *Bringing Gender Online: Iraqi women and the internet world*

**A. Bahiya**

4. *Gender Equality Analysis of Belarusian Legislation In The Field of Higher Education*

**V. Saskevich**

5. *Fixing the transformative and formative praxis (FTFP): a new model of institutional change to achieve gender equality in universities*

**D. Balahur and P. Dobrescu**

6. *Logical rules underlying a scientific method for gendered innovation*

**S. Badaloni**

7. *The perspective of Gender in the practices to promote health: a research about the representations of the operators*

**L. Portis**

8. *HEALTH, HUMAN RIGHTS AND GENDER: A Human Rights Assessment to Examine HIV/AIDS and Gender policy in Mauritius*

**S. Hurry R and R. Parsad Gunpath**

9. *Gender and Coaching*

**H. Aaltonen**

10. *Impact of Gender Segregation in Public Transport*

**S. Parashar**

11. *The treatment of gender-related asylum claims in the Belgian asylum procedure*

**F. Desvachez**

12. *Pioneer women in architecture*

**M. Bostenaru Dan**

## PRESENTATIONS

PARALLEL 3: GENDER AS CROSS CUTTING ISSUE IN RESEARCH AND INNOVATION

# Gender Mainstreaming at the German Federal Environment Agency – Healthy for Health Research and the Organization

Marike Kolossa-Gehring<sup>1</sup>, A. Sauer<sup>2</sup>

<sup>1</sup> Federal Environment Agency, Head of Department for Toxicology and Environmental Monitoring, Germany

<sup>2</sup> Federal Environment Agency, Research Officer for Gender Mainstreaming, Germany

**Keywords:** *Gender Mainstreaming, Gender in Research, Gender Impact Assessment, Health Research, Toxicology*

The German Federal Environment Agency (Umweltbundesamt - UBA) has identified gender as a topic of major interest for raising the quality of its own research, administrative actions and the transfer of science into policy. The UBA has adopted gender mainstreaming as a top-down, cross-cutting and ex-ante approach in research and organizational development.

## **1. Relevance**

The process of implementing gender mainstreaming can look back upon more than a decade of experience. Since the milestone project “Gender Relations and Sustainability” was implemented in 2000-2004, the agency has acknowledged that integrating the dimensions of sex and gender creates innovative research that addresses both the environment and the people (women/men) living in it. In many cases, taking sex/gender aspects into account has already led to more relevant and more target group specific results in departmental research, resulting in better governance and policy advice.

## **2. Aims & Objectives**

Since 2002, the German Ministry for the Environment has provided all divisions with the instrument „Gender Impact Assessment“, and since 2010 the UBA has used its own specific tool “Checklist: Gender Mainstreaming in Research,“ designed to assist with the integration of sex/gender dimensions into research. Achieving good stewardship in the implementation of gender mainstreaming corresponding to the cross-cutting mandate in a systematic fashion remains a challenge.

## **3. Methods**

In 2015 the UBA entered yet another new phase, in which a collegial bottom-up approach supplements the top-down approach within an overall paradigm of stewardship. The agency aims to improve the dissemination and application of gender mainstreaming instruments in research, based on strong cognitive educational elements, with the goal of making gender mainstreaming a collective practice. It also includes procedural aspects and sex/gender related research topic in its own process of developing policy advice from scientific data. One research focus will be the integration of sex and gender aspects in the development, evaluation and data interpretation of the population representative human biomonitoring study “German Environmental Survey” (GerES).

## **4. Results**

The presentation will describe the genealogy of gender mainstreaming at the UBA and present the existing instruments and their design. Finally, the new concept of a planned implementation of gender mainstreaming that controls for gender in the three overarching areas of organizational development, human resources and research will be elaborated on. Narrowing down the focus to departmental research, in the second part of the presentation sex and gender will be addressed from a toxicological/epidemiological point of view and give one example of good procedural and integrational practice, being the research project German Environmental Survey GerES, its preparation, premises and use.

## **5. Conclusions**

The integration of a sex and gender perspective in research adds value and informs better policy making. A systematic approach to gender in research is beneficial to its quality and excellence.



# The TIDES Approach to Increasing Diversity in Computer Science

K. Mack<sup>1</sup> and K. Winter<sup>2</sup>

<sup>1</sup> Association of American Colleges and Universities, USA

<sup>2</sup> Kate Winter Evaluation, USA

**Keywords:** *Self-efficacy, relevance, pedagogy, professional development*

To help meet U.S. workforce demands for computer scientists, the TIDES project works with computer science (CS) faculty to increase their understanding of and confidence using culturally responsive pedagogies. By working to make CS courses appealing and engaging for women and diverse students, TIDES seeks to equalize access to lucrative CS careers.

## 1. Relevance

By 2020, the U.S. will create over 120,000 new jobs annually that require a bachelor's degree in CS [1]. The U.S. produces 41,000 CS baccalaureates per year [2], and can no longer rely on foreign-born computer scientists to meet workforce demands. Women comprise the majority of U.S. undergraduate students, yet are underrepresented in CS [2], indicating that pedagogical reform is needed to recruit and engage them [3]. Many CS faculty, however, are ill-prepared to master new teaching approaches [4], and many development opportunities lack aspects of self-efficacy that are needed for sustained behavioral change [5].

## 2. Aims & Objectives

TIDES—Teaching to Increase Diversity and Equity in STEM aims to increase CS faculty self-efficacy in engaging in new pedagogical practices that engage today's CS students, thereby increasing the number and diversity of students graduating with CS degrees.

## 3. Methods

TIDES holds summer institutes to share key information and create opportunities for faculty to develop confidence with new teaching approaches. Faculty complete annual surveys that include self-efficacy and teaching aspects. Between institutes, faculty engage in course redesign projects with pre- and post-student surveys. Analysis of changes in survey responses, and in the student composition in the CS courses, demonstrates the impact of TIDES.

## 4. Results

Through a mixed methods network evaluation across the 14 funded TIDES projects, we have observed changes in faculty attitudes towards engaging diverse students, as well as changes in student attitudes regarding being in STEM. Early evidence indicates that strategies are successful in recruiting and retaining women and underrepresented minority students in CS.

## 5. Conclusions

Outcomes of the TIDES initiative offer important insights into successful, replicable strategies for making CS relevant and engaging to women in diverse institutional settings. Project details provide the context necessary to determine which strategies are best suited for adaptation or replication at other institutions seeking to diversify CS.

## References

- [1] C. Evans, M. Mckenna, and B. Schulte, *Educ. Rev.*, vol. 48, no. 3, 2013.
- [2] National Science Foundation; National Center for Science and Engineering Statistics, *Special Report NSF 13-304*, 2013.
- [3] President's Council of Advisors on Science and Technology, 2012.
- [4] J. E. Froyd, A. Srinivasa, D. Maxwell, A. Conkey, and K. Shryock, *Frontiers in Education, 2005. FIE '05. Proceedings 35th Annual Conference*. p. T3H–T3H, 2005.
- [5] A. Bandura, *Psychol. Rev.*, vol. 84, no. 2, pp. 191–215, 1977.

# Strengthening gendered climate change knowledge by building up a Competence Network Gender Equality in Climate Change (GenderNETCLIM)

U. Roehr<sup>1</sup>, Prof. Ines Weller<sup>2</sup>

<sup>1</sup> GenderCC – Women for Climate Justice, Germany

<sup>2</sup> University of Bremen

**Keywords:** *Gender knowledge, gender mainstreaming, gender analysis, mitigation, adaptation*

Knowledge about the gendered impacts of climate change and gendered contributions to climate change is fundamental for adequate and innovative response measures. This is recognised in relation to developing countries, yet in developed countries resistance within the research community remains, as well as among climate change decision-makers.

## **1. Relevance:**

One of the reasons for the absence of gender awareness in climate change research is a general lack of knowledge concerning gender dimensions in climate change and unwillingness to recognise the relevance of gender for innovative climate change policy. This is partially due to the fact that existing gender knowledge has not been adequately practice-oriented, particularly when it comes to addressing climate change related problems in industrialised countries.

## **2. Aims & Objectives:**

The project aims to contribute to gender equality in the context of climate mitigation and adaptation, as well as to highlight the relevance of gender research for innovative solutions in the field of climate change. Climate researchers and practitioners will be made aware of the relevance of this research and encouraged to apply the insights regarding gender dimensions in a practice-orientated manner. The networking opportunities will help to support women scientists and planners in the various climate change-related sectors.

## **3. Methods:**

- The development of a national competence and expert network “Equal opportunities in climate change”, which will make a substantial contribution in promoting gender equality in climate change-related transformation processes.
- The transfer and expansion of existing knowledge and recommendations in the field of gender and climate change mitigation/adaptation in dialogues between science and practitioners.

## **4. Results:**

By building gender know-how in the context of climate change and, related to this, the furthering the knowledge of the consequences of climate change for gender relations, and for (different groups of) women and men and their integration in climate change-related political processes and research, this undertaking seeks to make a significant contribution to gender equality.

## **5. Conclusions:**

To address the considerable deficit in gender-sensitive climate change-related research and practice, research projects that respond to the requirements at the level of implementation are crucial. Gender competence networks are beneficial in that they are able to facilitate the necessary processes at the same time as contributing to gender equality and promoting equal opportunities in the research community.

## **References:**

- [1] Röhr, Ulrike (with Gotelind Alber).2012. Gender analysis of the policy initiatives of the Member States in relation to climate change in the sectors of transport and energy. Study for the European Institute for Gender Equality (EIGE). Unpublished.
- [2] Weller, Ines. 2012. Klimawandel, Konsum und Gender. In: Gülay Çağlar et al (Hrsg.): Geschlecht – Macht – Klima. Feministische Perspektiven auf Klima, gesellschaftliche Naturverhältnisse und Gerechtigkeit. Politik und Geschlecht, Band 23. Opladen: Verlag Barbara Budrich, 177-191.

# How to include Gender Medicine in Clinical Research

M. Hochleitner<sup>1</sup>

<sup>1</sup> Medical University of Innsbruck, Austria

**Keywords:** *Gender Medicine, Clinical PhD, Curricula*

In order to have Gender Medicine take its rightful place in medical research many different tools are needed. These include guidelines for national and EU promotion, for expertises and assessments. We do have national and international Gender Medicine Societies, scientific meetings and scientific papers, but if we are to sustainably implement Gender Medicine in clinical research we have to start with our students. We have to include Gender Medicine in all our curricula as a regular subject, just like any other field of medicine. In this way we will hopefully get Gender Medicine into the heads of our researchers and into clinical research.

## **1. Relevance**

In order to have Gender Medicine be included in medical research it is essential to start with the students, that means including it in all curricula, especially in the PhD programmes.

## **2. Aims & Objectives**

This paper describes the current status of implementing Gender Medicine in the medical PhD programme by including Gender Medicine in the PhD thesis. We test our programme by collecting accepted “gender medicine posters” from this programme.

## **3. Methods**

In order to bring Gender Medicine into medical research we strive to include it in all curricula offered at our medical university right from the start. Gender Medicine is an elective, but we also included it in the compulsory curricula and the compulsory examinations. Moreover, it is a compulsory part of the clinical PhD programme. Students have to include Gender Medicine in their PhD thesis and prove this by having a poster be accepted for a national or international scientific meeting.

## **4. Results**

The beginning was marked by numerous discussions and the controversial nature of the subject. Today, after three years, this programme is well established and a regular subject, just like any other topic. To date about 35 posters have been accepted. Eight of them were awarded a poster prize or other award for a “Gender Medicine poster”.

## **5. Conclusions**

Getting Gender Medicine into research requires many different tools. We feel it is important to start with the students. While introducing Gender Medicine into the curricula is not possible without discussion, in the end it feels normal. We hope that by making Gender Medicine a compulsory part of all curricula and all examinations, especially in the PhD programmes, our students will continue to include Gender Medicine in their future clinical research.

## **References**

- [1] Hochleitner, M., Nachtschatt, U. & Siller, H., *How Do We Get Gender Medicine Into Medical Education?* Health Care for Women International, 2013. **34**(1): p. 3-13.

PARALLEL 4: GENDER BIAS IN CAREER DEVELOPMENT, SOURCES AND EFFECTS

## **Which part of the Story does Unconscious Implicit Bias Analysis Capture?**

F. Jenkins

Australian National University, Australia

**Keywords:** *Bias; Disciplines; Scientific Communities; Psychological Explanation; Decisions*

Explanations of persistent gender inequality today very often appeal to non-deliberate discrimination formed by unconscious implicit bias (UIB). Although UIB offers a well-validated and useful frame of analysis in very many contexts, this presentation discusses where the limits of applicability of UIB approaches lie. These questions are important to reflect upon as equity activism in academia now places much of its weight on appeals to UIB. It is therefore vital to understand what UIB theory allows us to question as well as what it tends to block from criticism.

UIB analysis does not claim to explain everything, but it has become the preferred mode of explaining persistent gender inequalities. This psychological focus tends to ignore wider social fields of meaning, with a focus on unconscious patterns of associative mind downplaying wider features of socio-political life-worlds. The value of acknowledging UIB needs to be set in relation to the persistence of other gendered aspects of weighing value - for instance of different kinds of research or methodology.

The work presented here is part of a wider collaborative project titled *Gendered Excellence in the Social Sciences*. Several Social Sciences, including economics, political science and philosophy, face very similar face similar problems of gender imbalance to the STEM disciplines. To illustrate, the presentation provides evidence about co-citation patterns. These reveal scientific communities formed by men speaking primarily with men. Citation rates for women's work are disproportionately low compared with their rates participation and job status. Although this phenomenon can be partly considered through a UIB approach, it also demands further ways of engaging the problem.

UIB is especially important for analysing inequality within a framework of legitimate decision-making characterized by meritocratic commitments. However, this may result in downplaying how, within reasonable decision -making, factors other than pure 'merit' are in fact highly salient. The presentation concludes by considering how to exercise more equitable forms of responsibility for practices of judgment in scientific communities, with a focus on considering the values and priorities scientific communities reproduce, and the social context of knowledge.

# Cognitive networks and gender bias in early career grant decision-making

Peter van den Besselaar<sup>1</sup> Lucia Polo<sup>2</sup> Ulf Sandström<sup>3</sup>

<sup>1</sup> VU University Amsterdam, The Netherlands

<sup>2</sup> Tecnalia, Spain

<sup>3</sup> KTH Stockholm & Orebro University, Sweden

**Keywords:** *gender bias, academic careers, career grants, proximity, cognitive distance*

Academic careers increasingly depend on whether the early career researcher has obtained a (prestigious) grant, like the Dutch Veni grant, or the ERC's starting grant. Success rates of these grants are very low and therefore an impartial selection process is crucial. In this paper, we (i) analyse the level of gender bias in a leading career grant system, and (ii) to what extent the bias can be explained by a difference in cognitive distance (the topical focus) between panel members that decide and male versus female applicants.

## 1. Relevance

For the future of the science system, it is crucial that selection processes select the bests, that these processes are unbiased, and that all talents get an equal chance to enter the career track – but gender bias is a major threat. However, the level of gender bias remains unclear as long as studies do not take into account the past performance of applicants (one of the few exceptions: Wennerås & Wold 1997). The contribution of this paper is that we (i) relate the assessment outcomes (= final scores) to the applicant's past performance, (ii) take a variety of performance indicators into account and (iii) explain gender bias with understudied but important (network) variables: the topical distance between applicants and panel members (Wang & Sandstrom 2015). This will lead to conclusions about organizing the evaluation process and about how the composition of panels could be improved.

## 2. Aims & Objectives

We firstly aim to determine the level of gender bias in a prestigious and large early career grant program – that can be considered as best practice. We secondly aim at explaining the bias in terms of distance variables. Here we focus on cognitive distance.

## 3. Methods

We identified all panel members and collected information about the person and about the field of research they are in. We did the same for the applicants. We developed a method for identifying and mapping the fields or research. We firstly create a map consisting of the fields of the panellists and then plot the field and position as a second layer. Are the granted applicants more in the core of the map? And are male and female applicants uneven distributed over the map?

## 4. Results

We are now conducting the analysis.

## 5. Conclusions

Conclusions will focus on the relation between gender bias and panel member characteristics. It will provide new guidelines about the required level of cognitive diversity in panels.

## References

[1] Wang, Q, and U Sandström, (2015) Defining the Role of Cognitive Distance in the Peer Review Process (with an Explorative Study of a Grant Scheme in Infection Biology).

*Research Evaluation*, in press

[2] Wennerås, C. and Wold, A. (1997) Nepotism and sexism in peer-review. *Nature*, 387: 341-3

# And the grant goes to... Gender bias in early career research funding

R. van der Lee<sup>1</sup>, N. Ellemers<sup>1</sup>

<sup>1</sup> Institute of Psychology, Leiden University, the Netherlands

**Keywords:** *gender bias, research funding, success rates, gendered language, academia*

Women today are still underrepresented in academia. Despite various attempts to promote gender equality (e.g., affirmative action initiatives, quota), women scientists—compared to men scientists—are less likely to get offered tenure, are judged to be less competent, receive less payment and research facilities, and are less likely to be awarded research grants [1, 2, 3]. The academic pipeline leaks.

## 1. Relevance

Women in academia continue to face a leadership gap, salary gap, and funding gap. Closing the funding gap is of particular importance as this may directly retain women in academia and foster the closing of other gaps.

## 2. Aims & Objectives

In the current research we examined the possibility of a funding gap in a national full population of early career scientists.

## 3. Methods

We examined the application and review materials of three calls ( $N = 2823$  with 42.1% women applicants) of a prestigious grant for excellent researchers awarded by the Dutch National Science Foundation (NWO). First, we assessed the role of applicants' gender in success rates and application evaluations. In doing so we used applicant gender as a statistical predictor of success rates, and to predict committee evaluations for each assessment criterion (quality of researcher, quality of proposal, knowledge utilization). Second, we examined the use of gendered language by content analyzing the instruction and evaluation materials.

## 4. Results

Results demonstrate the existence of gender bias in 1) application evaluations and success rates, and 2) language use in instructions and evaluation sheets for personal research funding. Specifically, applicant gender predicts 'quality of researcher' evaluations (but not 'quality of the proposal' evaluations) as well as actual success rates. Gender bias was most prevalent in scientific disciplines with the highest number of applications and with equal gender distribution among the applicants (i.e., life sciences and social sciences). Moreover, content analyses of the instruction and evaluation materials revealed the use of gendered language favoring men applicants.

## 5. Conclusions

This work illuminates how and when the funding gap is perpetuated, as the grant review procedure for personal research funding highlights bias-enhancing conditions [2]. This subsequently contributes to underrepresentation of women in academia.

## References

- [1] N. Ellemers, Policy Insights from the Behavioral and Brain Sciences 1 (2014) 1-9
- [2] A. Kaatz, B. Gutierrez, and M. Carnes, Trends Pharmacol Sci 35 (2014) 371-373
- [3] H. Shen, Nature 495 (2013) 22-24

# De-Gendering STEM - Lessons Learned from an Ethnographic Case Study of a Physics Laboratory

P. Lucht

Technische Universität Berlin, Center for Interdisciplinary Women's and Gender Studies (ZIFG), Germany

**Keywords:** *physics, science, sociology, gender studies, ethnography*

This paper presents results of an ethnographic case study of a physics laboratory located at a university in Germany, having the striking characteristic that of those at the PhD and the post-doc level, women outnumber men [1]. Might studying such a clustering of women in a male-dominated scientific field contribute to challenge perspectives on gender and STEM research that seeks to deconstruct gendered notions of STEM fields?

## 1. Relevance

In Germany, the participation of women in physics has significantly increased after the turn to the 21st century. Yet in 2012/13, women still made up only 20-25% of physics students on average at the bachelor, master, and PhD level. By contrast, women constitute a much higher proportion of the participants in the investigated physics laboratory. The case study explores possible consequences of this inversion of women's participation at the workplace in physics.

## 2. Aims & Objectives

This case study was part of a collaborative ethnographic investigation of several differing organizational settings for the research and study of physics [2]. It is examined how gender dynamics in this physics laboratory might be connected to (1) norms and policies of gender equality, (2) organizational structures in physics, and (3) professional cultures of physics.

## 3. Methods

The presented results are based on an ethnographic study over a time period of one and a half years that included also qualitative interviews with members of the physics laboratory.

## 4. Results

This physics laboratory exemplifies an exceptional assemblage of recruitment, norms and policies of gender equality, work organization, and professional culture of physics. Furthermore, prior investigations of gender studies showed that the professional culture of physics is constituted by various ways of 'doing gender' while 'doing physics'. In contrast this case study shows that 'doing physics' and 'doing gender' might become partly dis-entangled in this local setting of physics in the German context.

## 5. Conclusions

This study contributes to challenge perspectives on gender and STEM research that seek to de-gender the embedded gendered notions of professional cultures of STEM.

## References

- [1] P. Lucht, "De-Gendering STEM. Lessons Learned from an Ethnographic Case Study of a Physics Laboratory", in *Special Issue „Gendered motivation and choice in STEM - individual and contextual factors“*, *International Journal of Gender, Science and Technology*, eds. A. Ittel, and R. Lazarides (11/2015).
- [2] The project "genderDynamics. Professional Cultures and Research Organizations in Physics" is a collaborative research project of the Freie Universität Berlin (Prof. Dr. Elvira Scheich, Department of Physics) and the Technical University of Berlin (Prof. Nina Baur, Institute of Sociology; Prof. Sabine Hark, Center for Interdisciplinary Women's and Gender Studies). It is funded by the German Ministry for Education and Research (BMBF) and the European Social Fund (ESF) (No. 01FP1235-38).



PARALLEL 5: SCIENTIFIC INCLUSION AND DIVERSITY IN SCIENCE STRUCTURES AND PRACTICES

# Gender in Research – Policies, Practices & Experiences

S. Reidl<sup>1</sup>

<sup>1</sup> POLICIES - Centre for Economic and Innovation Research, JOANNEUM RESEARCH, Austria

**Keywords:** *gender in research, research funding policies, international comparison, experiences*

Integrating gender/sex analysis in research and innovation (R&I) content is one of three objectives that underpin the Commission's activities on gender equality in Horizon 2020. Thus, the European Commission wants to contribute to improve the scientific quality and societal relevance of the produced knowledge, technology and innovation [1]. But what are the national policies in Europe to support the integration of Gender in Research? Do the national research funding policies foster the integration of the gender dimension in R&I as well? And if so, what funding practices are in place? And what experience has been made with the integration of the gender dimension in research projects so far? What can be learned for interdisciplinary projects generally?

To answer these questions we first analyse data from ERA countries that are published in the "Analysis of the state of play of the European Research Area in Member States and Associated Countries", a study that JOANNEUM RESEARCH and partners have conducted. These data show that Austria is one of the European forerunner when it comes to funding gender in research [2]. We will then discuss the funding policies of the Austrian Research Promotion Agency (FFG) and Austrian Science Fund (FWF) and analyse funding data showing in which scientific fields and technological areas research projects with an explicit gender focus were funded and the amount of funding they received [3]. By this we can show that the national research funding policy in Austria has contributed to acquiring competences related to the integration of gender into research projects and subsequently to successfully meet the requirements of Horizon 2020. In the last part of our analysis we focus on experiences that were made in these funded research projects: What new skills have the researchers gained? What challenges did they face? How were problems overcome?

To answer these questions we refer on qualitative data from three research projects in the fields of sensor technology, optotechnology and renal replacement therapy, mainly research diaries and group discussions of the research teams. We also include recent findings from other national studies (Ratzer et al. (2014) [4] and on a qualitative study on challenges of gender in research projects in Austria commissioned by the Federal Ministry of Transport, Innovation and Technology [5]).

From these sources we identify potential added value of gender in research-projects and lessons learned on a qualitative basis. Moreover we will formulate recommendations how policy makers and stakeholders can build an enabling environment for such interdisciplinary projects.

## References

- [1] European Commission, *Horizon 2020. Gender Equality in Horizon 2020*, Version 1.0, (Brussels, 2014) 2.
- [2] European Commission, *Analysis of the state of play of the European Research Area in Member States and associated countries: focus on priority areas*, (Brussels, 2014)
- [3] Austrian Research and Technology Report: *Report under Section 8(1) of the Research Organisation Act, on federally subsidised research, technology and innovation in Austria*, (Joanneum Research: project co-coordination, chapter contributions), (Vienna, 2014)
- [4] B. Ratzer, A. Weiss, B. Weixelbaumer, N. Mirnig, M. Tscheligi, D. Raneburger, R. Popp, J. Falb, "Bringing Gender into Technology: A Case Study in User-Interface-Design and the Perspective of Gender Experts." In: *International Journal of Gender, Science and Technology*, Vol.6, No.1 (2014)

- [5] F. Holzinger, N. Schaffer: *Gender in der angewandten Forschung – FEMtech FTI Projekte* (Vienna, 2011)

# Gender, Science, Technology and Innovation in Argentina: between facts and the mirage of equality

G. Bonder

UNESCO Regional Chair on Women, Science and Technology in Latin America, at FLACSO-Argentina

**Keywords:** *gender, science, technology, innovation, Argentina.*

We will present a national assessment on Gender differences and inequalities in Science, Technology and Innovation in Argentina. This assessment is based on the Gender Equality – Knowledge Society (GE&KS) indicator framework elaborated by WISAT.

The presentation will stress the project's innovative methodological framework, its main findings and the dissemination and advocacy strategy used to influence policy makers in these fields and its main results.

## **1. Relevance**

To produce an updated and comprehensive diagnosis of gender differences and inequalities in Science, Technology and Innovation in Argentina articulated with an understanding of the social, economic, cultural and political enabling conditions that encouraged women's progress as well as the remaining obstacles for their equal participation in all social spheres and particularly in STI.

## **2. Aims & Objectives**

We seek to fill an existing knowledge gap in gender inequalities in STI in Argentina and use the research findings for sensitizing researchers, educators and decision makers on the need to integrate gender equality measures and indicators in national policies and programs in those fields.

## **3. Methods**

It brings together gender-sensitive data produced in the last 10 years on key areas in the knowledge society (ICT, science, technology and innovation) with gender indicators of health, economic, education, work, political participation and social status to assess the barriers and opportunities for women as students, researchers, and decision makers in STI.

## **4. Results**

The assessment shows that women's participation in Argentina society has significantly improved along the last 10 years mainly in the legal sphere, and also in the number of women students in higher education and as researchers, and in their participation in the political arena. However, our findings also show that an "illusion of equality" exists in Argentina that masks widespread vertical and horizontal inequalities and overt and subtle discrimination in STI fields. This calls for particular attention with respect to the need for changes in legislation public policies related and institutional cultures and daily practices.

## **5. Conclusions**

It will share contextually based information and analysis on cultural patterns, policies, and practices that explain some remarkable advances of women in STI as well as the obstacles and resistances in place for achieving gender equality.

[1] G. Bonder, "*La industria del software y los servicios informáticos: Un sector de oportunidad para la autonomía económica de las mujeres latinoamericanas*". División de Asuntos de Género, CEPAL. Chile. (2014)

[2] M.E. Estébanez, *Estudio comparativo Iberoamericano sobre la participación de la mujer en las actividades de investigación y desarrollo*. Documentos de Trabajo. Centro Redes. Argentina. (2011)

# Implementation strategies for gender-sensitive public health practice

Sabine Oertelt-Prigione<sup>1</sup>, Lucie Dalibert<sup>2</sup>, Petra Verdonk<sup>3</sup>, Elisabeth Zemp Stutz<sup>4,5</sup> and Ineke Klinge<sup>1</sup>.

<sup>1</sup> Institute of Gender in Medicine, Berlin, Germany

<sup>2</sup>Department of Health, Ethics and Society, Maastricht University, the Netherlands

<sup>3</sup>EMGO Institute for Health and Care Research, School of Medical Sciences, Amsterdam, the Netherlands

<sup>4</sup>Swiss Tropical and Public Health Institute, <sup>5</sup>University of Basel

**Keywords:** *gender-sensitive, public health, implementation, steps*

We introduce herein a collection of implementation steps and practices assembled during an expert workshop within the European EUGenMed project. A group of diverse stakeholders representing all instances involved in the public health process convened and participated in moderated discussion rounds on how to best achieve implementation of gender-sensitive public health. Through iterative rounds of analysis we defined implementation strategies and identified best practice examples that were assembled in a systematic collection.

## 1. Relevance

Implementation has been identified as a major challenge in the medical and public health field that hampers the transfer from research results to practice. Most medical disciplines and public health endeavours only focus on implementation as a final step. We believe that implementation strategies should already be included in project design especially in the field of gender-sensitive medicine, which harbours some field specific challenges, such as e.g. ideological confusion with feminism in medicine or women's health.

## 2. Aims & Objectives

As the field of gender-sensitive interventions is growing and there is no systematic approach to implementation or collection of best practices, we developed a structured collection of implementation steps and examples for the use of practitioners.

## 3. Methods

Within the EUGenMed project (<http://eugenmed.eu>) we convened a workshop on sex and gender in public health with relevant actors in the field. We organized discussion rounds that all participants attended in sequence. The rounds were organized to match the three levels of evidence for public health interventions. "Priorities" focussed on urgency for action, "Principles", identified the main messages for gender-sensitive action and ideal conditions and structures for implementation. "Practices", further detailed implementation, identified strategies for promotion and practical uptake. The results were then transcribed and analysed in iterative rounds to define overarching strategies and principles to match with the previously defined general steps of implementation laid out in the ERIC taxonomy [1].

## 4. Results

We have produced a comprehensive table of overarching implementation strategies for gender-sensitive public health matched with relevant examples from completed or ongoing projects. The table will be published within a scientific paper and made available to the public through the website of the EUGenMed project.

## 5. Conclusions

A clearly defined implementation strategy should be mandated for all new projects in the field of gender-sensitive public health and medicine. This will help avoid delays in transfer to practice, which harbour significant costs, potential harm due to delayed access for vulnerable populations and generally impede the advancement of research to improve population health. We have developed a tool that can aid researchers and practitioners in finding good practices and relevant examples to inform their project planning.

## References

- [1] Powell BJ, Waltz TJ, Chinman MJ, Damschroder LJ, Smith JL, Matthieu MM, Proctor EK, Kirchner JE, Implement Sci. (2015) Feb 12;10(1):21.

## POSTERS

# Women Ways of Gaining Voice Online

S. A. Lir<sup>1</sup>

<sup>1</sup> Gender researcher Bar Ilan University, Israel

**Keywords:** *Cyberfeminism, action research, women activists, women in new media*

**Summary:** *The gender aspects of speaking out and establishing public recognition, as previously discussed in feminist literature, have not yet been updated to include the different phases in which women form their public self in their transition stages to online activism<sup>i</sup>. My findings indicate that digital literacy is a necessary but insufficient condition for women who wish to speak out and establish a public digital self in online platforms. The research discusses five stages women undergo in the process of transition from offline to online activity, and views the means that are needed to assist women who are activists to voice themselves in the digital sphere.*

## **1. Relevance**

Utopian approaches to computer mediated communication often consider the web as an alternative public sphere in which marginal and subordinated voices can be enhanced, while challenging traditional practices of excluding and silencing women. However, scholarly perspectives that view the digital environment's potential to strengthen democracy have not yet responded to the formation of the public digital self among women, and thus, have left the conditions for women's active contribution to the social online discourse under-theorized.

## **2. Aims & Objectives**

My study inquired whether digital literacy is a necessary and sufficient condition for women to voice themselves online – and suggests a systematic examination of the implications of the process women undergo while acquiring digital literacy.

## **3. Methods**

The preliminary stage consisted of interviews with 31 women activists. This allowed clarification of the issue of speech and silence in offline activism. Afterwards, my study initiated an intervention process, including two workshops on new media applications, which enabled the research group to acquire digital literacy and make the transition to online activity. Once the workshops were over, another round of interviews with 25 participants of the study group took place. This research method allowed the analysis to shed light on different aspects of women transitioning from offline activism and public involvement to digital activism.

## **4. Results**

The data analysis revealed that in order for the digital sphere to function as an alternative platform for women's voices, certain processes and preconditions are necessary. Some are related to the social conditions and constructions which exist in offline environments. These create obstacles to the expression of women's voices prior to their digital activities. Other conditions are related to the specific features of online applications as platforms for public speech. Thus, digital literacy is a necessary but insufficient condition for women who wish to speak out and establish a public digital self in online platforms.

## **5. Conclusions**

The topic of voice is central in gender studies. Understanding the stages women undergo in their transition to online activity is essential the shaping of new online platforms and enhancing women's voices in the public sphere.

---

<sup>i</sup> See Belenky, Mary; Clinchy, Blythe; Goldberger, Nancy; Tarule, Jill (1997). *Women's ways of knowing: The development of self, voice, and mind*. New York: Basic Books.

# **Sex in Science at the Wellcome Trust Sanger Institute and European Molecular Biology Laboratory – European Bioinformatics Institute: Embedding Gender Equality into Institutional Strategy**

S.Ahmed<sup>1</sup>, E.Zeggini<sup>1</sup>

<sup>1</sup> Wellcome Trust Sanger Institute, UK

**Keywords:** *gender, equality, science*

The Sex in Science (SiS) Programme is a joint initiative of the Wellcome Trust Sanger Institute (WTSI) and European Molecular Biology Laboratory-European Bioinformatics Institute (EMBL-EBI). Here we highlight some of the many initiatives and activities that are taking place on campus to advance and embed gender equality into institutional strategy.

## **1. Relevance**

The attrition of women along the leaky pipeline is a well-documented phenomenon. For example, in the Biological Sciences women make up 58.4% of graduates<sup>1</sup>, but only 25.1% of professors<sup>2</sup>. The structures, culture and traditional way of working in research adversely impact women and increasingly, men.

## **2. Aims & Objectives**

The Wellcome Genome Campus SiS Programme was established in 2011 to ameliorate gender inequality at a strategic level by raising awareness of issues that traditionally face women in science, addressing and challenging preconceptions, inspiring women and men at different stages of their scientific careers to progress to more senior levels and driving change in practice and policy. Infinitesimally small inequalities can have a substantial cumulative effect, so we aim to tackle potential disadvantage at the nascent stage.

## **3. Methods**

The SiS Programme has the support of a dedicated project manager and working group that meet once a month. The backbone of the programme is a series of monthly events, such as inspirational talks, workshops, career days, discussion panels and theatrical plays that engage staff and raise awareness. The work is underpinned by the WTSI's commitment to the Athena SWAN Charter, of which we are Bronze Award holders. Diversity is viewed as a strategic resource and as such, we have senior management commitment and ring-fenced resource.

## **4. Results**

Successful activities that have been initiated by the programme include a work-based nursery scheme, a carers' grant that allows WTSI staff to claim back expenses incurred due to caring responsibilities, the Janet Thornton Fellowship, which is a post-doctoral level returners fellowship aimed at those who have been out of science for a minimum of 12 months, and the campus-wide 'Best Practice in Supporting Women in Science' award that recognises and celebrates staff that have made a positive difference to women's careers.

## **5. Conclusions**

The SiS Programme demonstrates that with high-level commitment, and support from across the board, it is possible to start to change the culture of an organisation and drive institutional change. We will continue to monitor efficacy of our activities and share best practice with other science and gender bodies. The working group will ensure that issues are kept under the spotlight and delivery methods will be continuously reviewed and innovated.

## **References**

[1] HESA Student Record 2013 -2014

[2] HESA Staff Record 2012/13



# Role Models for Women Mobile Scientists

G.Avellis and Riia Chmielowski<sup>1</sup>

<sup>1</sup> Marie Curie Alumni Association, Belgium

**Keywords:** *women, mobility, role models, dual career.*

*More and more women today are choosing to study science and undertake scientific careers. Likewise mobility during one's career is increasingly important in today's world. Cutting edge research tends to be undertaken via international collaboration, often within networks built up by moving to a new country to obtain a degree or undertake research. Therefore we have developed an ebook to showcase the careers of women scientists who have undertaken mobility during their careers, many of whom have moved to a number of different countries during their careers to undertake research.*

## 1. Relevance

*Reading about successful scientists who have achieved a healthy work-life balance while moving to new locations will be particularly helpful for those individuals considering mobility in their own career.*

## 2. Aims & Objectives

*There is still a gap between female graduates and the pool of female job applicants – even though the proportion of female graduate students and postdocs in most scientific fields is higher today than it is ever been. Therefore we suggest that focus should be placed on examining the real challenges which women need to overcome, particularly when "mobility" comes into play. Role models who have overcome these challenges will continue to play an important part achieving true gender equity in science.*

## 3. Methods

*We implemented our ebook with the contribution of 13 women mobile researchers of Marie Curie Alumni Association. The work has been done in the context of MCAA GEMS WG.*

## 4. Results

*In general people choose mobility as a path to acquiring new and different skills with respect to those available in their country of origin, but the aim of each individual who chooses mobility depends mainly on their previous occupation and age. The benefits gained from the mobility experience and the ease of reintegration afterwards also depend largely on the career stage and country of origin. For people facing such issues the availability of role models who have triumphed over similar situations can be inspiring. Challenges specific to mobility can arise due to family situations; often it can be difficult to fulfil the needs of dual careers. Practical arrangements for the everyday life in a new country, inside and outside Europe, are also a critical issue. All of the women whose stories are included herein agree that mobility is an enriching experience from both the point of view of their personal lives and their careers.*

## 5. Conclusions

*The ebook on Role Models for Mobile Women Scientists is available to be used by programs that support the development of systematic approaches to increasing the representation and advancement of women in science, engineering and technology, since mobility plays a key role in these programs.*

## References

1G.Avellis and Riia Chmielowski, <https://www.mariecuriealumni.eu/library/role-models-mobility-mcaa-women-scientists>

# **An Analysis into the Republic of Belarus' Actors Who Are Involved in Gender Equality Issues**

Svetlana Burova

Associate Professor, Chair of Social Sciences, Belarusian State University

**Keywords:** *gender sector stakeholders*

## **1. Relevance**

A research into the gender sector in Belarus was conducted in 2014 by Belarusian researchers at the request of the European Office for Expertise and Communications.

## **2. Aims & Objectives**

To get an insight into the players of gender sector in Belarus and to present the findings for a public discussion.

## **3. Methods**

The baseline materials for the analysis were international and national regulatory legal documents, survey data, statistical data, assessments by 35 experts provided in a course of individual and group interviews. The research has used gender-sensitive quantitative and qualitative analytical methods.

## **4. Results & Conclusions**

1. Pursuing a gender equality policy is of a momentous significance in Belarus, because:

- the nation witnesses widespread direct and indirect forms of gender discrimination which are not perceived as such by the majority of public or by authorities;
- the State bears international obligations, identifies achieving gender equality as one of its priorities and declares the pursuit of the gender equality policies;
- the gender equality policies promote unlocking of all the people's potentials and a sustainable development of the society.

2. The gender sector players are: the State as represented by legislative, executive and judicial branches of power, international organisations represented by the UN agencies, European Commission delegation *et al.*, the civil society: NGOs, trade unions, political parties, individual initiatives, the academia and media. All the sector players are featured by different gender sensitivity levels and have their own *motifs* to engage in the sectorial activities. The 'female' NGOs are seems to be the most pro-active. However, as the NGOs are few and their resources are limited, their voice is not well heard in the sector. There is a situation-specific kind of collaboration amongst stakeholders, but no real consolidation is in place.

3. Belarus has developed legal and regulatory frameworks, which enshrine sex equality, but it fails to contain mechanism intended for real protection of these rights, if infringed upon. The country lacks a gender development strategy.

4. Belarus lacks any systematic gender education, without which the public will be unable to achieve comprehension of the gender equality and its advantages as a way of life. This also contributes to the deficiency of the specialists in gender field.

5. The gender-related issues are misapprehended by the majority of the public as a purely female agenda. The Belarusian society is predominantly a patriarchal one; its gender-based stereotypes are quite widespread and are shared by more than a half of the adult population, while most men or women fail to see the need for changing anything. This being said, the women' dominant perceptions on the gender equality agenda tend to be more progressive than those among the men.

6. Without active involvement of men in the gender sector, the movement towards the gender equality does not seem possible.

# Is my bias showing? The role of sponsorship in building scientific careers

Jennifer de Vries

University of Melbourne, Australia

**Keywords:** *sponsorship, scientific careers, gendered practice, 'linear career bias'*.

Clarifying the distinction between mentoring and sponsorship has highlighted sponsorship as a 'missing ingredient' in corporate women's careers, undermining career advancement (Ibarra et al. 2010). Sponsors, in contrast to mentors, are understood to be active advocates and creators of opportunity for more junior colleagues. This idea of a 'missing ingredient' resonates for women's scientific careers, with a review of the literature revealing the lack of what we now term 'sponsorship' (Husu 2004).

## 1. Relevance

While sponsorship practices in scientific careers may be nothing new, the explicit naming and examination of sponsorship practices in building scientific careers opens up new ways of thinking about informal gendering practices and points of intervention to ensure more gender equitable career outcomes.

## 2. Aims & Objectives

The aim of this exploratory study was to more clearly describe and understand the nature of sponsorship practices and the role of sponsorship in building scientific careers.

## 3. Methods

This qualitative study took place in two Australian research-intensive universities. In total 28 (17 female, 11 male) semi-structured interviews were conducted with interviewees identified as either interested in mentoring and sponsorship; considered to be good sponsors; working in identified pockets of good practice or focussed on researcher development.

## 4. Results

This study confirmed the pivotal role of sponsorship in building scientific careers, and the positive cascading effect whereby opportunities result in increased visibility and networks, creating further opportunity, contributing to building track record and the accrual of merit. Sponsorship acts, large and small, within the discipline base appear to be crucial in the early career stages. Rather than the customary focus on careers as self-made this highlights the important role of leaders and colleagues in building careers. Deciding who is sponsorship worthy appears to be highly subjective and vulnerable to unconscious biases, such as affinity bias, gender bias and what I term 'linear career bias' where those who more closely fit the normative linear career ideal are more likely to receive sponsorship. Sponsorship is implicated as a key practice that creates and sustains inequality.

## 5. Conclusions

The role of sponsorship in building scientific careers has been largely invisible, with any potentially inequitable effects remaining unscrutinised. Highlighting its importance emphasises the agency of individual scientists, through their sponsorship practices, to contribute to, or potentially disrupt, the gendered status quo. A raft of measures needs to be considered to strengthen sponsorship as an informal but more equitable practice, and as a formal practice with leadership accountability for the development of junior scientists.

## References

- [1] Husu, L (2004). Gate-Keeping, Gender Equality and Scientific Excellence *Gender and Excellence in the Making* (pp. 69-76). Brussels: European Commission.
- [2] Ibarra, H., Carter, N. M., & Silva, C. (2010) *Harvard Business Review*, September, 80-85.

# Key authorship positions in neuroscience: A gender perspective

Tahereh Dehdarirad<sup>1</sup>, Anna Villarroya<sup>2</sup> and Maite Barrios<sup>3</sup>

<sup>1</sup> Department of Library and Information Science, University of Barcelona, Barcelona (Spain)

<sup>2</sup> Department of Public Economy, Political Economy and Spanish Economy, University of Barcelona, Barcelona (Spain)

<sup>3</sup> Department of Methodology of Behavioral Sciences, University of Barcelona, Barcelona (Spain)

**Keywords:** *Authorship position, gender, proportion of female author, neuroscience*

The increasing specialization of scientists and funding challenges have made scientists take part in large, collaborative authorship teams. Consequently, it is becoming important to assess what kind of contribution the listed authors have made to a paper (Haeussler and Sauermann, 2013). According to the literature, the most important authorship positions are first, last and corresponding (Costas and Bordons, 2011).

## 1. Relevance

Key authorship positions are considered as one of the important indicators of research activity, both for men and women. Consequently, they are highlighted in the promotion process or grant allocations at academic institutions.

## 2. Aims & Objectives

To study the proportion of female authors per paper and in key authorship positions (first, last and, corresponding).

## 3. Methods

The data set used in the study comprised 1,007 articles in the field of Neuroscience indexed in the Web of Science database between 2009 and 2013. Papers were selected using a stratified random sampling technique. For each paper, the gender of authors and the proportion of female authors were determined.

## 4. Results

The results revealed 5,512 authorship, of which 1,927 (34.96 %) belonged to women and 3,585 (65.04 %) to men. The average proportion of women per paper was 0.34 (SD= 0.26). In order to study the participation of women in multi-authored papers, single-authored papers were excluded from the analysis (n= 26). Data showed that the percentage of women signing as first author (40.41 %), last author (25.42 %), or corresponding author (29.69 %), was significantly lower compared to the percentage of men in these positions (p<.001).

Additionally, in 460 (46.90 %) papers, the same person was both corresponding and last author, of which the percentage of male 346 (75.2 %) was significantly higher than that of for female 114 (24.8 %) (p<.001). In 452 (46.07 %) papers, the same person appeared as both first and corresponding author, of which the percentage of male authors, 290 (64.2 %), was significantly higher than that of female authors, 162 (35.8 %) (p<.001).

## 5. Conclusions

The study provides insights regarding key authorship positions of male and female authors in the field of neuroscience. This may serve as the basis for further analysis of the current situation and the identification of necessary actions to accelerate the closure of the gender gap.

## References

[1] R. Costas, and M. Bordons, *Scientometrics*. 88(1), (2011) 145–161.

[2] C. Haeussler and H. Sauermann, *Research Policy*. 42(3), (2013) 688-703.

# **Gender Balance: Challenges and Opportunities at a Faculty of Science and Technology in Norway**

M. Dockweiler<sup>1</sup>, IF. Hellstrand<sup>1</sup>, VH. Bull<sup>1</sup> and KK. Halvorsen<sup>1</sup>

<sup>1</sup> University of Stavanger, Norway

**Keywords:** *gender balance, STEM, Norway, gendered practices, organizational change*

The Faculty of Science and Technology (FST) at the University of Stavanger (UiS) is home to a notorious gender imbalance within the STEM fields: 35% of its PhD students and only 8% of its professors are women.

By 2017, the FST's strategic goal is that 25% of its academic employees at assistant professor level and higher be women. This study sets out to aid the FST reach this goal by shedding new light on challenges and opportunities for improving its gender balance.

The study is funded partly by the FST and partly by the Norwegian Research Council.

## **1. Relevance**

The FST's systemic gender imbalance exemplifies the broader and continuous gender(ed) challenges in STEM research fields. Our empirical study explores the taken-for-grantedness of this imbalance, and it will simultaneously provide new and situated research insights into the constructions and persistence of - and possible solutions to - these gender(ed) challenges.

## **2. Aims & Objectives**

The study aims to explore both *challenges* and *opportunities* for a better gender balance at the FST. It will conclude by presenting recommendations for organizational changes that will aid the FST in reaching its strategic gender balance goal.

## **3. Methods**

The study initially generates a statistical overview of developments in FST's academic staff over the past 10 years. It then combines tendencies found in these quantitative data with qualitative data derived from semi-structured interviews with 20 academics from two selected departments at FST. The interviewed academics are men and women, Norwegians and non-Norwegians, employed at various levels: PhDs, assistant professors, professors.

Nationality may be a particularly relevant variable in the study. Many of FST's female PhD students are non-Norwegians and existing research on gender in academia points to particular challenges related to being both a woman and a foreigner: the double strangeness.

Interviews are semi-structured. Questions focus on reflections related to possible experiences (practices) of gender at work, reflections around if/how to manage FST's gender balance, and broader reflections on career opportunities and work-life balance issues.

## **4. Results**

The project started in early 2015; we will present our initial results at the GS7 in November. The FST's leadership commitment and decision to fund the study are positively related to obtaining access to data and thus accumulate relevant results.

## **5. Conclusions**

Leadership commitment at UiS and the FST suggest opportunities for successful long-term organizational change. Anchoring the study in UiS' own gender research network means that the researchers have extensive knowledge of the FST's organizational and societal context. The gathering and analysing of data will benefit from this knowledge, and suggested organizational changes will thus be optimally tailored to the organization.

UiS's mission is to "challenge the well-known and explore the unknown". This study is finally a chance to explore the well-known and very persistent gender imbalance at its FST.

Profile of a Nascent International University-Community Partnerships in STEM Education: The Rutgers-Newark/P.A.Y. Namibia Collaborative

K.Farmbry<sup>1</sup>, M. Ndimbira<sup>2</sup>

<sup>1</sup> Rutgers University-Newark, United States

<sup>2</sup> Physically Active Youth, Namibia

***Keywords:*** Namibia, STEM, Rutgers, Africa, Girls

In July of 2015, The Graduate School at Rutgers-Newark and Physically Active Youth Namibia entered into a partnership through which graduate students in the sciences and mathematics would participate in a digital tutoring opportunity to work with elementary and high school youth, particularly girls, in their math and science skills. This presentation will examine the initial stages of this partnership, and its goals for impacting access for math science education for Namibian girls, as a particular subset of students participating in the effort.

This presentation will examine the need for alternative partnerships to provide education in the areas of math and science to girls in Namibia. The presentation will also examine some of the initial lessons learned in establishing the partnership, initial anticipated outcomes, and justification for such outcomes.

1. Relevance

This presentation will present the early stages of a model for building a cross-national, potentially replicable, partnership to enhance girls access to STEM education and mentoring.

2. Aims & Objectives

1) To present a potentially replicable model for cross-national provision of educational support for girls in STEM education. 2) To present an overview of challenges encountered by girls in accessing quality STEM education in Namibia.

3. Methods

This effort is a case study in development. It will incorporate profile data on the institutions involved, the communities involved, and the emerging programmatic partnership between P.A.Y Namibia and Rutgers University-Newark.

4. Results

The presentation will share basic data on access to STEM education for girls in Namibia as well as initial lessons from this nascent partnership.

5. Conclusions

Conclusions will be focused on strategies for developing a partnership such as the one emerging between P.A.Y. Namibia and Rutgers-Newark with a goal of enhancing the educational opportunities, and support, for girls studying science and math in Namibia.

# The influence of self-efficacy beliefs and self-assessment of professional skills on scientific career aspirations of computer scientists

S. Förtsch, A. Gärtig-Daug

University of Bamberg, Faculty of Information Systems and Applied Computer Sciences, Germany

**Keywords:** *computer sciences – gender differences – scientific career aspirations – self assessment of professional skills – self-efficacy beliefs*

Only a small percentage of computer science graduates, particularly fewer women than men, choose an academic career. In this contribution, we analyze whether gender differences with regard to self-efficacy beliefs and self-assessment of professional skills exist and how these affect scientific career aspirations.

## 1. Relevance

Female doctoral candidates and full professors are of high importance for industry and research. The integration of the female perspective is seen as an essential requirement to create innovative products that satisfy the needs of a wide range of users [1] [2]. Female researchers are also needed as role models to further encourage young women to study computer sciences [3] [4].

## 2. Aims & Objectives

Despite good academic achievements [4], we suppose that female undergraduates rate their skills and competencies worse than men. We also hypothesize that women in computer sciences courses have lower self-efficacy beliefs than men. By testing these hypotheses, we want to identify reasons that keep women from scientific career paths. Recommendations for gender-sensitive teaching and recruitment strategies of female researchers are made.

## 3. Methods

We conducted a questionnaire-based survey among undergraduate students at the Faculty of Information Systems and Applied Computer Sciences at the University of Bamberg (Germany). The survey was done at two points of time. The first survey was conducted in 2013 with a return rate of 18.59% (116 out of 624 students) and the second survey was done in 2014 with a return rate of 13.56% (110 out of 811 students). Hypotheses were tested using Wilcoxon rank-sum test and discriminant analysis.

## 4. Results

Female students are significantly lower self-confident than male students. Women are more doubtful whether they have the relevant capabilities to follow a course of study in the field of computer sciences. They are also less self-confident that they can successfully cope with unexpected study-related problems. Furthermore, fewer women than men believe that they have acquired the necessary professional skills for taking science as a career during their course of studies. Women rate skills such as expert knowledge, basic knowledge, multidisciplinary thinking, problem-solving, analytical capabilities and the ability to implement results significantly lower than men. Results of the discriminant analysis support the hypothesis that self-assessment of skills plays an important role in scientific career choices of female students.

## 5. Conclusions

It is important that lectures at university provide more positive feedback for good academic achievement and strengthen self-efficacy beliefs. So female students can come to a more realistic self-assessment of their skills and can be motivated to pursue an academic career.

## References

- [1] L. Hardmann, C. Pereira, More Women in Informatics Research and Education. Informatics Europe Working Group on Women in Informatics Research and Education (2013), digital version available at: [http://www.informatics-europe.org/images/documents/more-women-in-informatics-research-andeducation\\_2013.pdf](http://www.informatics-europe.org/images/documents/more-women-in-informatics-research-andeducation_2013.pdf).
- [2] S. Förtsch, A. Gärtig-Daug, U. Schmid, Transformation of corporate cultures – career development in the field of computer sciences. Results of the research project „Alumnae Tracking“ [research report in German] (Bamberg, 2015).
- [3] Y. Asmare, Gender-Based Stereotypes and Discrimination on Women Employees, VDM Verlag (Saarbrücken, 2010).
- [4] U. Schmid, A. Gärtig-Daug, S. Förtsch, Informatik Spektrum (2014), published online: 06 March 2014.



# Body images in medical teaching: a gender sensitive use

S. Gahbauer<sup>1</sup>

<sup>1</sup> Medical University Vienna, Austria

**Keywords:** *Gendered Bodies, Medical Imaging, Medical Teaching, Gender Sensitive Teaching*

Gender sensitive medical teaching is often linked to gender sensitive teachers and language in teaching materials. In this context visual material is often neglected, though representations of gender relations do not stop in front of bones, as Vesalius sought to do them in former times. On the contrary, the utopia of transparent bodies and further development of imaging technologies created new forms of gender relations to discuss and to change (Cartwright 1998). This project aims to analyse body images in learning materials used at the Medical University Vienna.

## 1. Relevance

As several authors claim biomedical images unfold their authoritative power and their cultural meanings differently in different contextual use (e.g. Burri 2008). That is why imaginations of gender in anatomical images have to be researched in different contexts. Teaching – so far often neglected – is one of them.

## 2. Aims & Objectives

The use of bodily male reference models is very common in medical science. The project aims to analyse biomedical images used for anatomical teaching at the Medical University Vienna in regard to a gender sensitive use in medical teaching. Further, it aims to find out if the use of digital learning material differs from other books and materials used. Continuative gender sensitive visual teaching should be improved.

## 3. Methods & Results

The analysis will be conducted at the Medical University Vienna, in the department of Gender Mainstreaming. The data of the project are the teaching materials used at section 2 which is called “the human body”. The methods in use will first be visual in order to describe gender imaginations related to the visual material. In a second step a discourse analysis will be applied in order to find out about the relations between image and text.

## 4. Conclusions

The results will contribute to the understanding if scientists discuss the female body as a deviant body in learning materials and if so in which way this is done. In a further step, the project aims to foster the production of innovative learning materials and therefore contribute to the advancement of gender sensitive teaching in medical science.

## References

- [1] R. Barthes, *Image. Music. Text.*, Fontana (London, 1977).
- [2] R. Burri, *Doing Images. Zur Praxis medizinischer Bilder*, Transcript (Bielefeld, 2008).
- [3] L. Cartwright, *A Cultural Anatomy of the Visible Human Project*, in *The Visible Woman. Imaging Technologies, Gender, and Science*, eds. P. Treichler and L. Cartwright and C. Penley, New York University Press (New York, 1998).
- [4] R. Gilian, *Visual Methodologies. An Introduction to the Interpretation of Visual Materials*, Sage (London, 2007).

# Should I Apply or Should I Leave? Female Decisions along Life Course Research

Ana M. González Ramos<sup>1</sup>, Esther Torrado<sup>2</sup>, Beatriz Revelles<sup>1</sup>, Agnès Vayreda<sup>1</sup> and Ester Conesa<sup>1</sup>

<sup>1</sup> IN3, Open University of Catalonia, Spain

<sup>2</sup> Department of Sociology, University of La Laguna, Spain

**Keywords:** *meritocracy, professional careers, self-confidence, retention, promotion*

Empirical evidence proves tensions between individual trajectories and structural organisation of science based on a hegemonic model of progression. Men and women rely on diverse strategies in research careers because they face different challenges in their professional and private lives. Additionally, informal practices and values regulate quotidian experiences that influence retention and women's expectations of promotion in research.

## 1. Relevance

Most literature addresses individual choices of women; this study highlights women's environments considering legal and labour conditions in combination with personal factors and subjectivity on their achievements/failures along their research trajectory.

## 2. Aims & Objectives

The study focuses on female careers (decision-making, mentoring and labour conditions) and compares diverse environments and cultures to discover challenges and outcomes.

## 3. Methods

We conduct five case studies in nature science, social science, humanities and IT departments in Spanish Universities and centres of research. We examine regulations on hiring processes and track the research trajectories of men and women during their life course. We interview around 10 senior and postdoc researchers (>5 years) and ask them to draw her 'ego diagram describing their professional trajectories'. These pictures depict what resources (i.e. grant) and people (i.e. mentor) were relevant for progression or, on the contrary, the interruption and/or slow advancement in their careers.

## 4. Results

The position of women in research strongly depends on favourable conditions for promotion and also on personal and professional balance. The growth of institutions in recent times in Spain has allowed the access of women in academia, even those traditionally masculine areas. However, they have to deal with difficulties in promotion due to cultural prejudices of their competence and commitment with goals' institutions, bolstered by gatekeepers' decisions. Transparent and quantitative evaluation processes seem more attractive and helpful for women, whilst interviews and public defences appear discouraging. Family and negotiation with their partners are essential factors for planning female research careers. Young women explain their choices about slow careers or dropouts as a result of their negotiation of family balance. Competitive environments discourage women pursuing successful careers who tend to reject the masculine power exercise. Mentoring is scarcely mentioned although senior women openly express that they reach full professor positions because of friendly environments constructed with other women who mutually supported collective goals.

## 5. Conclusions

These findings reinforce the idea that we should reconsider the model of promotion in research, taking into account non-linear and diverse trajectories of men and women. We should disseminate results of gender studies in order to create friendlier environments and raise awareness about invisible obstacles that women face in research. A social change is necessary for both men and women because of strong male hegemonic values.

# Beyond the leaky pipeline: Life Course Model for Comparing Men and Women Research Careers

Ana M. González Ramos<sup>1</sup>, Jose Navarrete Cortés<sup>2</sup> and Esther Cabrera Moreno<sup>2</sup>

<sup>1</sup> IN3, Open University of Catalonia, Spain

<sup>2</sup> Secretary of Scientific Knowledge of Andalusia, Spain

**Keywords:** *Linear careers, non-linear careers, meritocracy, professional-family milestones*

The leaky pipeline metaphor reflects a decreasing number of women along research careers, but many questions remain unanswered. Do women develop non-linear careers whereas men advance in a linear path? Is the maternity wall the only obstacle for women in research? This work analyses researchers' career paths by observing professional and personal milestones during the life course and comparing precocity of men and women in research.

## 1. Relevance

The leaky pipeline model is based on the aggregation of data from people in different stages in their career in a sectional timeline, but it does not reflect their trajectories. We need to know what happens with individual careers through the life course to discover differences (linear career, precocity) and causes (maternity, collegiate decisions) of the gender gap in scientific careers.

## 2. Aims & Objectives

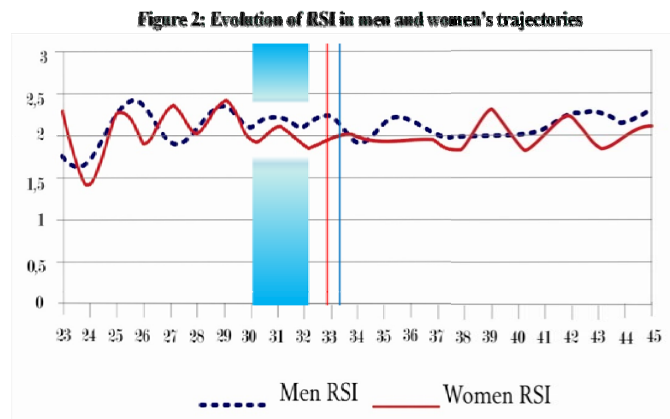
The study aims to explore men and women careers, as the literature suggests that men display linear careers while female careers are non-linear. We also examine the influence of family formation and child birth on their professional life course in order to validate the hypothesis of a maternity wall.

## 3. Methods

An innovative and interdisciplinary methodology (from bibliometrics, statistics and sociology) is used. We compare milestones of men and women researchers at different ages to draw their research trajectory. To do that, we construct a research synthetic indicator (RSI) over which we compare the influence of family milestones on professional careers.

## 4. Results

The blue zone represents the average age for family formation. The blue line depicts the mean age of child birth for men and the red line sets the mean age for women. The findings show non-linear trajectories for both men and women researchers. Child birth strongly influences women researchers.



## 5. Conclusions

The empirical work discloses linear and non-linear trajectories for men and women scientists and uncovers the relevance of personal and professional milestones throughout scientists' life course. The RSI shows that women delay their progression for maternity. Women show high productivity and precocity in early careers, while men's main achievements appear at 37-40 years old. It reveals unequal conditions for men and women in scientific careers and, in our opinion, may encourage more women to believe in the value of affirmative action.

# **Mentoring: A focus on organisational change to enable individual careers**

M. Guillemin, and J. de Vries

University of Melbourne, Australia

**Keywords:** *mentoring, organisational culture, systemic change, peer mentoring.*

Mentoring programs are commonly used to help women advance in their careers. However, mentoring can have a remedial focus on individual women and neglect the gendered organisational cultures and structures within which careers take place. We report on a successful mentoring program operating since 2011 within the Faculty of Medicine, Dentistry and Health Sciences. This program uses innovative design to address systemic and organisational change, as well as individual development.

## **1. Relevance**

This program assists mentees, mentors and the Faculty to work for systemic change and maintain a critical focus on the organisational context within which careers take place; this in turn benefits individual women, and indeed all its employees.

## **2. Aims & Objectives**

The aim of the mentoring program is to create an organisational culture that strives towards gender equity, while at the same time, enabling individuals to reach their full potential.

## **3. Methods**

The Faculty is large (2200 employees), with 70% academic and 30% administrative staff. Women are well represented overall, with 58% of academic staff and 79% of administrative staff. However, women are under-represented in senior faculty, with 28% women professors. In order to engage all staff in its organisational change focus, the program is open to men and women, and academic and administrative staff. Each year, different classification levels are targeted, with mentees invited to apply. Each mentee is matched with a senior mentor and a peer mentoring group, with development workshops for mentees and mentors. Key elements of the program include: a) Peer mentoring groups of 5-6 mentees working on shared objectives, for example, becoming more visible, and exploring leadership styles. Groups are provided with strategies, such as culture mapping, to develop greater systemic awareness and build a 'careers in context' view. Concepts of power and change agency are introduced in workshops, and peer groups support each other to address career issues and become change agents in their workplace; b) Mentors are assisted to develop two-way developmental relationships with mentees, where both parties can understand the organisation from each other's perspectives. Mentors meet as a collegial group to identify systemic issues and are encouraged to work for change; c) Mentors and mentees are encouraged to strengthen informal mentoring and sponsorship practices in their workplaces; d) The program finale brings together mentees, mentors and the Faculty senior leadership to highlight systemic organisational issues identified by peer groups.

## **4. Results**

To date, 273 staff have participated either as a mentee and/or as a mentor. Women made up 79% of mentees and 65% of mentors. In addition to the new skills, networks, and insights gained for individuals the program has identified and tackled systemic problems such as bullying, authorship and attribution of work, and problems with short-term contracts.

## **5. Conclusions**

The implementation of the MDHS mentoring program is building an organisational culture where systemic issues can be identified and addressed, while at the same time offering opportunities for personal and professional development.

# **The »Ideal« Student. Intersectionality in Science, Technology, Engineering, and Math Education**

E. A. Günther

TU Wien, Austria

*Keywords: intersectionality, gender, inequality in STEM education*

Up to now research on inequality in academia mainly focused on faculty recruitment and work conditions. However, the academic career starts before that: members of the faculty in general have a university degree. In order to obtain such a degree, they must have studied and got taught by the faculty at the time, perhaps their predecessors. Or to put it in another way: members of the faculty not only recruit their potential successors but also educate them. Hence, the gatekeeping process that privileges some group, e.g. male majority members of the society, influences university teaching.

In my PhD thesis I therefore examine, with an intersectional lens, which group of students has better odds to persist in a science, technology, engineering, or math (STEM) study program. Furthermore I examine notions of the »ideal« student to unveil discriminatory processes and to explain – partly – how it comes that female and male students, with or without immigration status, have different chances to proceed a career in STEM. This paper comprises the main results of my PhD thesis on intersectional interference in teaching and studying at an Austrian university of technology (the University).

## **1. Relevance**

Besides generating further knowledge on unconscious, perhaps also unwittingly discrimination in STEM education, my results allow to develop further, made-to-measure solutions (e.g. for diversity training of teachers).

## **2. Aims & Objectives**

The goal of my thesis was to identify (1) factors for students drop out that could be tackled by the University and policy makers and (2) inequality processes that are enacted pre-reflectively (unconsciously), and produce privilege and disadvantages.

## **3. Methods**

I first analysed students enrolment data from 1998-2010 with logistic regression analysis to show which social groups has better or worse odds to graduate (when enrolment behaviour and pre-university education is controlled for). In addition, I conducted four group discussions with university teachers, one with beginners, and one with advanced STEM students, as well as twenty semi-structured interviews with teachers, students, and equality officers. This qualitative data is used to examine the notions of the »ideal« student and to elaborate on pre-reflective, discriminatory behaviour.

## **4. Results**

Even with same pre-university education, enrolment behaviour, and performance, female students are less likely to persist than male students. However, immigration status reduces the odds stronger for male than for female students. Despite official demands for more fairness in universities, teachers' prejudices are efficacious. This shows among others in an implied hierarchy of disciplines and skills, elite in-group constructions, and a distorted perception of students' capabilities. Furthermore, the conditions of teaching counteract the aspirations for more equality.

## **5. Conclusions**

In order for universities to increase fairness they also have to consider how they teach their student and generate conditions that allow equality measures to establish. A discussion of my results within the University (and other institutions) as well as diversity trainings, based on my results, would be good starting points.

# Status of Women in STEM in Slovenia

R. Heller<sup>1</sup>, D. Janezic<sup>2</sup> and I. Ursic

<sup>1</sup> George Washington University, USA

<sup>2</sup> University of Primorska, Slovenia

**Keywords:** *STEM, Status of Women, National Study*

Our study, The Status of Women in Science in Slovenia, sought to understand the position, status and advancement of women in STEM fields across the nation.

## 1. Relevance

Our national study positioned the status of women in STEM within the context of other national surveys and report.

## 2. Aims & Objectives

Our study, The Status of Women in Science in Slovenia, sought to establish a baseline of data pertaining to the numbers, salaries, positions and environments for women scientists in Slovenia. Our aim was to engage in a meaningful national survey, gather data heretofore not collected from as wide a population as possible.

## 3. Methods

The survey used was modelled on the Massachusetts Institute of Technology (MIT) and Coache (Collaborative on Academic Careers in Higher Education) surveys. It was tested for clarity with a group of 8 young scientists and the resultant study was sent to more than 11,000 registered scientists from around Slovenia using their email addresses.

## 4. Results

Overall, a greater percentage of women than men reported dissatisfaction with resources, space, and salary. The data here indicate women earn on average 78% of what their male counterparts earn, report roughly 10% smaller offices and nearly 47% smaller labs than their male counterparts. Women reported a lack of fairness in evaluations, limited access to awards, advancement, recognition and leadership positions. The challenges for the advancement of the status of women in STEM in Slovenia lie in the 'softer' aspects of the inequalities noted in the survey, the access to mentors, the awarding of awards and the general attitude of the society. Supports to address these shortcomings include structural changes to the organizations to review the pay and resources provided women to insure equality, to provide more flexible work hours, to encourage mentoring and to actively nominate women for prestigious awards. In the field of mentoring, women seem to be more comfortable with outside mentors and this should be encouraged and strengthened. The more women are known outside of their institute, the more it will be possible for them to serve as role models for others, to be visible for nominations for awards and more they will be able to influence the status of women.

## 5. Conclusions

With fewer of women in most science disciplines, especially physics and engineering, the challenge remains to find ways to support the women who are there so that they can advance in their career. The future is bright as science as a whole is valued by the society. As a young democracy there is understanding that the full representation of women is part of the economic engine.

# Gender as cross cutting issue in research and innovation: EPWS actions

C. Hermann<sup>1</sup> and B. Muehlenbruch<sup>1</sup>

<sup>1</sup>European Platform of Women Scientists –EPWS, Belgium [www.epws.org](http://www.epws.org)

**Keywords:** *equal opportunities in science, gender policy*

In the 2014-2020 framework programme Horizon 2020 (H2020) “Gender is a cross-cutting issue and is mainstreamed in each of the different parts of the Work Programme, ensuring a more integrated approach to research and innovation” [1]. Three objectives are guiding the gender equality strategy in Horizon 2020: i) fostering gender balance in research teams; ii) ensuring gender balance in decision-making; iii) integrating the gender dimension in research and innovation content, to improve their scientific quality and societal relevance.

## 1. Relevance

These three issues have been worked on, since its foundation in 2005, just ten years ago, by the European Platform of Women Scientists-EPWS, an umbrella association representing 12,000 women scientists through their networks and associations.

## 2. Aims and objectives

EPWS has had among its objectives to give them a voice at European Union (EU) level in the political agenda and to make science culture more gender-sensitive.

## 3. Methods

EPWS’ methods consist in producing position papers and articles, organising yearly conferences and events on issues in relation with the Women in Science problem, participating to EU conferences recommendations [2] and to various events in Europe and beyond. This leads to discussions and disseminations of its points of views all over Europe.

## 4. Results

During H2020 preparation, EPWS joined its efforts to the Helsinki group on Women in Science’s ones to provide gender equality a suitable place in H2020 Regulations, in particular through their Article 16 [3]. Recently EPWS expressed its concerns, to the Commissioner and members of the European Parliament and in a paper [4], on the gender consideration in H2020 2016-2017 working programme. EPWS is convinced that a gender-sensitive science culture should include an enhanced security and predictability of scientific careers; an increased transparency in recruitment processes; a proactive acknowledgement of the social dimension of scientific recognition and achievement; equal opportunities with respect to training, enhancement of skills and experiences; a work-life balance-sensitive mobility; a gender-sensitive evaluation of scientific quality and excellence.

## 5. Conclusions

The EPWS actions in favour of gender integration in EU policy are complementary to those of decision-makers: thus the Gender Summit is an ideal place for discussions between various stakeholders that will be able to exchange their views and mutually enrich them for a better inclusion of gender as indeed a cross-cutting issue in research and innovation.

## References

- [1] <http://ec.europa.eu/programmes/horizon2020/en/h2020-section/promoting-gender-equality-research-and-innovation>
- [2] See for example [www.sis-rri-conference.eu/wpcontent/uploads/2014/12/RomeDeclaration\\_Final.pdf](http://www.sis-rri-conference.eu/wpcontent/uploads/2014/12/RomeDeclaration_Final.pdf)
- [3] Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013, Official Journal of the European Union, EN L347 (2013), 104  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:347:0104:0173:EN:PDF>
- [4] E. Pollitzer, I.Klinge, C. Hermann, B.Mühlenbruch, and L. Schiebinger, Pan European Networks: Science & Technology 15 (2015), 1

# Gender Sensitiveness in Computer Science Lessons

M. Herpers<sup>1</sup>, A. Steppacher<sup>2</sup>

<sup>1</sup> University of Applied Sciences Fulda, Computer Sciences, Germany

<sup>2</sup> University of Applied Sciences Fulda, Social Sciences, Germany

**Keywords:** *computer science, education, university, gender sensitiveness*

Universities support gender and diversity with a lot of programs in particular to increase the number of female students in technical studies e.g. by mentoring programs or study programs just for women. The number of female students in engineering sciences is increasing but very slowly. The male image of engineering and the way of how technical topics are taught haven't changed with respect to gender diversity in the last decades.

The idea of the research project was to analyse the training material, whether hidden barriers (in gender studies called symbolic barriers [1]) for women can be removed. The women's study programs for computer science in Germany provide some best practice examples. Can those examples be used for normal mixed courses as well?

## 1. Relevance

New IT technology is changing constantly our daily life and society. Women have to be part in this change, so computer science has to open the study programs and to remove the hidden barriers for women.

## 2. Aims & Objectives

The aim of this interdisciplinary project (partly funded from gFFZ, Frankfurt, Germany) was to identify changes to remove the hidden barriers at universities, in order to change the male image and include women's living environment.

## 3. Methods

In this research project the best practice examples of the women's study programs in Germany have been observed and compared with the kind of educational material used at an exemplary normal mixed study program in computer science (basic courses). The educational material had been analysed and classified by using the grounded theory.

## 4. Results

The classification of educational material showed, that different forms of exercises are used from purely instrumental until comprehension oriented. Women's study programs disregard the concrete form of the exercises, they prefer to change education to modern teaching forms (e.g. problem based learning). Considering both results, we could derive some recommendations for the educational material of normal mixed courses.

## 5. Conclusions

University teaching depends heavily on the number of students in a course and on the preference the individual professor has. So modern teaching methods can't be expected for every normal academic education. With our recommendations gender sensitivity can be improved with some small changes to existing material.

A next step would be to set up a data base with gender sensitive exercises for all basic courses in computer science. This offer would support all professors, who want to make their learning material gender sensible.

## References

- [1] Schinzel, Britta: „Geschlechtergerechte Informatik-Ausbildung an Universitäten“. in *Handbuch Geschlechterforschung und Fachdidaktik*, eds. M. Kampshoff und C. Wiepcke, Springer VS (Wiesbaden 2012) 331–344



# **STEM: what should be taught in school?**

Dawne Bell, David Wooff, and Michela Insenga

Faculty of Education, Edge Hill University, UK

*Keywords: STEM, career choice, narrative inquiry, grounded theory, education*

STEM disciplines are considered fundamental for countries' competitiveness on a global scale, and moreover characteristics and skills owned by a STEM graduate are invaluable not only in STEM job places but for employers in any other field. This is why there is such an interest and benefit for the society as a whole to increase the number of students pursuing STEM subjects, with an eye to the inclusion of under-represented groups, such as women.

As female participation in Higher Education exceeds that of men in several parts of the world, women remain an untapped resource for science and innovation (OECD, 2006:18). A great deal of what should be taught in school in relation to STEM has been the focus of many debates, but little research has been done in this regard. This study aims to investigate the role of education in engaging students (with a comparison between male and female students) in STEM subjects in the classroom. What is the role of education, how can we motivate students to embark and remain in a scientific career field?

## **1. Relevance**

A lack of students who choose STEM careers is detrimental for the economy particularly in this moment in time, as STEM disciplines are seen as fundamental for countries' economies, to increase global competitiveness. For this reason, increasing participation of people - with a specific eye on improving the gender balance and the inclusion of under-represented groups - in STEM is high on governments' agendas, both at national level and at European level.

## **2. Aims & Objectives**

Aim of this project is to provide a basis for teachers and educators to help understanding how to best teach STEM subjects in school to engage with male and female students, and secondly how to tackle and overcome the question of gender conscious and unconscious biases in the classroom, with the intention to help them motivate and attract female students in STEM fields.

## **3. Methods**

This study uses a narrative inquiry methodology through the means of unstructured interviews and focus groups, to pull out elements from the participants' life history to understand how STEM education taught in school has had an impact on their career choices. This study is based on grounded theory.

## **4. Results**

The research is in a very early stage; thematic analysis on interviews and data collected is currently been performed to find common patterns of what aspects of STEM education in the classroom have worked for them and what hasn't worked.

## **5. Conclusions**

The aim is to provide a solid basis for change in STEM education in England, proving that STEM education as it is currently taught is failing to attract students towards subjects such as Maths, or Engineering, and to help students choose and persist in a STEM career.

## **References**

[1] OECD, *Women in Scientific Careers: Unleashing the Potential*, OECD Publishing, Paris: 2006

# Roadmap to Dialogue – The Gender Dimension in Science and Research

M. Jochimsen and S. Zurmaar

Essen College of Gender Research, University Duisburg-Essen, Germany

**Keywords:** *Gender Dimension, Science & Research, Innovation, Excellence*

The demand to integrate the gender dimension in science and research has reached the research policy and institutional management level – at least verbally. Together with the promotion of women in science and decision-making and the promotion of structural change in research institutions, the integration of the gender dimension figures in the catalogues of demands and sets of recommendations of academic associations and research policy institutions of various kinds. It also is a declared goal of the European Commission, as inter alia documented in Horizon 2020.

However, national and European key actors in the field lack a regular forum for the mutual exchange of ideas and strategic cooperation. To foster such exchange between “knowledge” and “political action” to strengthen and expand existing approaches in both areas, the project ‘Ready for Dialogue. Conference on the Gender Dimension in Science and Research’\* proposes the purposeful linking-up of relevant national and European key players in the field presenting a roadmap for the institutionalization of a regular strategic dialogue.

## **1. Relevance**

Despite various research policy measures and efforts of different institutional groups, progress on the integration of the gender dimension is not appropriate in pace or disciplinary width to the dimension’s economic-technological as well as social innovation potential. Valuable scientific insights and research results remain unearthed with their innovative potential untapped.

## **2. Aims & Objectives**

To outline ways to an improved utilization of the innovation potential of the gender dimension for scientific impulses and consequent social changes, the poster proposes a regular, institutionalized strategic dialogue between national and European key players, working groups, research and funding institutions and associations that work within and outside of the university context on the integration of the gender dimension in science and research.

## **3. Methods**

To foster dialogue among the relevant actors, an international conference on the integration of the gender dimension is planned in Berlin on 5 November 2015. In preparation of the discussion, a strategic roadmap will be drafted on the basis of an analysis of existing recommendations from projects and working groups to be discussed during at the conference.

## **4. Results**

Key elements of the roadmap to be presented at the Gender Summit are such as the defined main topics of the future dialogue, approaches for a purposeful division of tasks as well as ways to establish and institutionalize the initiated dialogue.

## **5. Conclusions**

To foster exchange on the designed roadmap, it is crucial to further promote and discuss its key aspects within the target community. The European Gender Summit 2015 on the guiding theme ‘Mastering gender in research performance, contexts, and outcomes’ offers an internationally orientated and interested audience to do so.

\* The project is funded by the Federal Ministry of Education and Research under grant number 01FP1456. The responsibility for all content supplied lies with the authors.

# **European Academies of Sciences: gender policies in traditional self-governing institutions**

E. Kouznetsova

Belarusian State University, Belarus

**Keywords:** *Academy of Science, Self-governing Institution, Gender Policy*

The European countries have been exercising gender mainstreaming policies for two decades. National Academies of Sciences are often involved in its analysis and elaboration of future actions as governmental advisors. Rarely though Academies of Sciences critically assess own membership rules and practices alluding to inherently autonomous self-governing nature of the scientific community. Present study looks at the membership requirements in the constituent acts of the Academies of Sciences; compares it to the actual number of female members of Academies; and places it within the context of state gender policy to explore the extent to which the state-imposed gender standards are indeed being internalized and implemented by self-governing scientific institutions.

## **1. Relevance**

The first learned societies appeared in Europe in early 17th century while women started to be considered for the membership only in 20th century. Being predominantly self-governing autonomous non-profit institutions Academies of Sciences serve as good example of how seemingly objective formal criteria of membership lead to gender gap that is hard to tackle by standard state regulations.

## **2. Aims & Objectives**

The main aim of the research was to test a hypothesis on the effectiveness of the state-imposed gender mainstreaming policies in the settings of the long-established autonomous self-governing scientific institutions.

## **3. Methods**

The study is a positivist attempt to analyse membership criteria and procedures in the formal constituent acts of the European Academies of Sciences, statistical data on the number of the female members of the Academies and particular state regulations in the field of gender non-discrimination. The study covers both “old” and “new” European countries.

## **4. Results**

Materially Statutes and other internal regulations of the European Academies of Sciences refer only to merit-based criteria for the membership. Procedurally current Academy members vote on the eligibility of the candidates. Statistics on female/male Academy members’ ratio is clearly showing large gender gap, though treatment of the data is to take into account lifelong status of the Academician as well as their average age. Presence of state legislation on gender equality is not effective enough in fighting institutional inertia in terms of gender bias due to implicit and unresolved conflict with legislative guarantees of the autonomous character of the Academies. Examples of successful Academy projects like Momentum in Hungary underline importance of gender-specific policies for women in science.

## **5. Conclusions**

To guarantee gender-neutral results of the member selection process in the European Academies of Sciences it is important to take additional gender-specific steps to combat institutional gender bias. European and global scientific international organizations currently have projects working on recommendations on best managerial practices for Academies of sciences to ensure representation and empowerment of women-scientist.

# Undoing gender in EU's social innovation policies?

M. Lindberg<sup>1</sup>

<sup>1</sup> Luleå University of Technology, Sweden

**Keywords:** *innovation, social innovation, innovation policy, doing gender*

## 1. Relevance

EU's new policy strategies for growth and innovation include a strong commitment to promote social innovation in contrast to earlier innovation policies in the union and its member states, which mainly have focused technological product innovation in a distinct gendered pattern [1]. There is thus a need for increased knowledge on the potential of social innovation to reduce gendered marginalization in innovation.

## 2. Aims & Objectives

In order to address existing gaps of knowledge and democracy in innovation, this paper identifies and analyses new paths to gender inclusive innovation policy as distinguishable in the new EU policy strategies Europe 2020 and Innovation Union that seem to open up public innovation support to wider societal participation.

## 3. Methods

The strategies are analysed by their statements on social aspects of innovation and the gendered implications of these statements are analysed by means of Bacchi's approach *What's the problem represented to be? visualising how various actors and areas are benefited or disadvantaged in a gendered manner, depending on how problems are represented and what solutions are proposed* [2]. This gendered visualisation is then further analysed by means of three additional theoretical perspectives – social innovation, gendered innovation, undoing gender – in order to distinguish the potential of the studied strategies to truly challenge and change gendered structures in EUs promotion of growth and innovation.

## 4. Results

The results expose that the broad approach to innovation identified in the strategies seems to open up public innovation support to wider societal participation and benefit, by expanding the focus from technological to social aspects of innovation, on a general level. This expansion seems to imply a more equal inclusion of women and men in innovation, as so far they diminish segregating and hierarchical notions of gender by including a broad range of sectors, industries, organisations, disciplines and innovation types. A closer examination of this gender inclusive potential reveals, however, possible reinforcement of existing gender patterns if strategies of smart specialisation, critical mass and excellence are implemented in a gender exclusive manner.

## 5. Conclusions

In order to counteract responses of resistance and restoration when implementing inclusive innovation, the transformation of EUs strategies from theory to practice could be guided by the main components of gendered social innovation in order to be truly transformative.

## References

- [1] M. Lindberg and H. Schiffbänker, Entry on gender and innovation, in E.G. Carayannis, *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship*, Springer (New York, 2013).
- [2] C. L. Bacchi, *Women, policy and politics – the construction of policy problems*, SAGE (London, 1999).

# The String Theory Universe: A EU project in Physics with a gender component

S. Penati<sup>1</sup>, Y. Lozano<sup>2</sup>

<sup>1</sup> Dipartimento di Fisica, Università di Milano-Bicocca, Milano, Italy, and INFN, Sezione di Milano-Bicocca

<sup>2</sup> Department of Physics, University of Oviedo, Oviedo, Spain

**Keywords:** *Particle Physics, String Theory, Symmetries, Dualities, Gender issue*

We present the goals and achievements of the European COST project MP1210 “The String Theory Universe” [1,2]. This is a project in Theoretical Physics with a strong commitment in finding the best practices to increase the number of women researchers in this sector of Science. The Action started on March 4, 2013 and will end on March 3, 2017.

## 1. Relevance

String Theory has grown as a rich mathematical structure that has allowed outstanding applications to very different areas in Theoretical Particle Physics, Cosmology and Condensed Matter Physics. Nonetheless, the percentage of women working in this area is extremely low (less than 5%).

## 2. Aims & Objectives

Coordinate and reinforce collaborations among different groups working in String Theory in EU, promote knowledge transfer and scientific culture, promote the emergence of young talent, in particular female talent, redress the considerable gender imbalance in Theoretical Physics. These objectives are in line with the EU Commission’s strategy on gender equality.

## 3. Methods

Organize joined Workshops and scientific missions. Increase the visibility of women scientists within the project. Increase the number of female speakers in Workshops and Training Schools. Increase the number of women in selection committees. Organize discussions about gender issue during scientific workshops, also by inviting experts in gender. Discuss new practises to increase the presence of women in key roles, organize outreach activities in high-schools, get in contact with women scientists in other fields.

## 4. Results

Chair and vice-Chair of the Action are women, and some of the Working Group leaders as well. Therefore, beyond scientific achievements, the main result so far has been to partially break cultural barriers that in the past prevented any open discussion about gender imbalance within the community of string theorists. We have now the possibility to organize mentoring activities for young female scientists. We are increasing the number of women in scientific boards and in the selection committee for post-doctoral and permanent positions. We have organized the “First Workshop on String Theory and Gender”, in Valencia [3] with psycho-sociological talks mixed with string theory talks.

## 5. Conclusions

Presenting the first main achievements of our Action at Gender Summit will allow us to get in contact with women researchers in other fields and compare with them different experiences. This will help in finding the best practices to redress gender imbalance in Science at European level.

## References

- [1] Memorandum of Understanding,  
[http://www.cost.eu/COST\\_Actions/mpns/Actions/MP1210](http://www.cost.eu/COST_Actions/mpns/Actions/MP1210)
- [2] <http://www.weizmann.ac.il/stringuniverse/>
- [3] <http://www.uv.es/genderstring/>

# Why Jenny can't publish: Exploring the gender gap in research productivity at a Norwegian research institute

L. Nygaard<sup>1,2</sup>

<sup>1</sup> Peace Research Institute Oslo (PRIO), Norway

<sup>2</sup> Institute of Education, University College London, UK

*Keywords: Research productivity, gender, academic literacies, faculty writing, gender gap*

Research productivity – that is, the quality and quantity of published output resulting from an investment of time and money in research – is a matter of great concern to managers and administrators at research producing institutes all over the world. A truism in studies on research productivity since the 1980s is that men publish more than women. And women continue to be over-represented among the non-producers and under-represented among the super-producers. What is surprising about this gap is not only its persistence, but also that girls outperform boys in most measures of writing ability throughout the school years, and generally display a higher degree of self-efficacy about their writing abilities, suggesting that something happens when they enter the world of academic publishing. Although the most recent research suggests that this trend might be changing in some fields, the gender gap is evident in most disciplines and most research settings. The context of the Peace Research Institute Oslo (PRIO) in Norway offers a unique opportunity to observe challenges to research productivity under some of the most favorable conditions possible: no teaching obligations for the research staff, and some of the most progressive gender balance policies in the world when it comes to parental leave. Yet the productivity gap remains, particularly among the younger researchers.

## **1. Relevance**

In the research productivity literature, existing research on this gender gap has been primarily quantitative and focused on structural obstacles. Little work has been done on the subjective experience of academic publishing at the individual level and how this might be gendered.

## **2. Aims & Objectives**

The purpose of this study was to qualitatively explore the subjective experience of academic publishing at PRIO to both better understand why women seem to produce less than men and to improve practice (i.e., what can be done to increase productivity among women).

## **3. Methods**

I used an ethnographic approach that allowed access to publications statistics, institutional policy, and participant observation. I followed 19 researchers in particular, both men and women, and carried out semi-structured interviews (about 90 minutes each), and triangulated responses through a short questionnaire.

## **4. Results**

Differences emerged between men and women in how they perceive themselves as academics, the ways they perceive their environments, and the coping strategies they develop. Notably, younger women in particular tend to suffer from a paralyzing perfectionism and tend to use networks differently than men do.

## **5. Conclusions**

I conclude that these are not issues of deficit – that women are doing it wrong – but rather that they are genuine negotiations where both women and men face choices that have a gendered dimension. This has implications for how we conceptualize and measure research productivity, as well as for how we can support researchers in their publishing activities.

## Gender awareness. Assessing gender culture in Academia. Some results at UNIPD.

Emilia Restiglian, Lorenza Perini \*, Anna M Manganelli, Silvana Badaloni, Marina De Rossi  
University of Padua, Italy  
\*corresponding author

**Keywords:** *gender bias, gender awareness, academia, discrimination*

This paper aims to highlight the results of an on-line survey on the perception of gender culture in Academia that took place at the University of Padua (Unipd) last year (2014). The instrument was tested within the FP7 European Project “GenderTime” and it was based on the indicators recognized as sensitive by the Athena Swann Charter (2010). The academic research areas involved at Unipd were: Engineering, Humanities (Education, Philosophy and Sociology) and Science (Physics and Mathematics).

### 1. Relevance

The cultural survey represents the first attempt to gather data and monitor the level of gender awareness in a very large university like Padua, that counts on 75,000 students and about 3,000 permanent staff (professors, researchers and research fellows).

### 2. Aims & Objectives

The main purpose of the survey was to detect and monitor the under-representation of women in scientific research areas as well as in decision-making positions. Another important goal was to measure the perception and awareness on gender differences in assessments, in careers, in the different presence and visibility of men and women in decision-making apical positions.

### 3. Methods

The cultural survey was carried out through a structured questionnaire of 40 items in which the respondents were asked to indicate the level of agreement or disagreement with each statement. Data were analyzed using SPSS software to highlight the indices of central tendency and variability.

### 4. Results

The survey underlined that the gender bias show up and is perceived implicitly and tacitly by all the respondents, with a prevalence of non-awareness of the problem among men: according to men everything in academia is fine, they are not aware of any gender equality related problem. As regards to the perception of gender differences men more than women believe that the merit is the basis on which people are treated (Figure 1); women feel less encouraged than men to pursue incentives and career opportunities (Figure 2).

### 5. Conclusions

What is evident is that among men the perception of a “gender issue” in Academia is quite completely absent. They are convinced that the current situation of consistent disparity is the result of decisions based in any case on merit, that for positions and apical roles both men and women can equally compete and that the organization of work interferes little with other aspects of life such as care and work-life balance.

### References

- [1] S.Badaloni (2015), *Women in science the GenderTime Project*  
<http://www.ingenere.it/en/articles/women-science-gendertime-project>  
[2] A. Godfroy., S. Badaloni, (2015), *Measuring and Monitoring Gender Equality in the Academia: A Comparative Approach of Recent European Gender Equality Plans*, Gendering Science: Women and Men Producing Knowledge Conference, 4 – 6 June 2015, Prague-

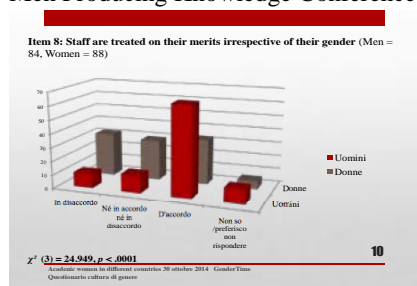


Fig.1

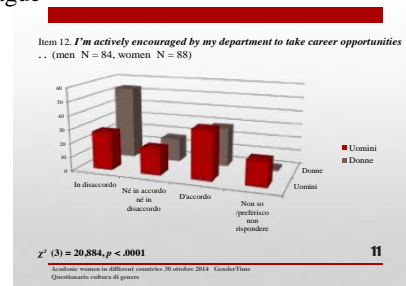


Fig.2

# Analysing the *gender productivity puzzle* in Middle Income Countries

L. Rivera León<sup>1</sup>, J. Mairesse<sup>1 2</sup> and R. Cowan<sup>1 3</sup>

<sup>1</sup> UNU-MERIT, Maastricht University, Netherlands

<sup>2</sup> CREST-ENSAE, France

<sup>3</sup> BETA, Université de Strasbourg, France

**Keywords:** *scientific productivity, gender productivity puzzle, South Africa*

The paper explores whether the publication productivity gender gap exists in South Africa. Our results show that female researchers have fewer chances than men to be promoted in their academic careers, they are under-represented in the highest levels of seniority and they need higher number of publications to reach the same levels of seniority comparatively. The paper applies an adapted version of a method recently developed by Mairesse and Pezzoni [1], using data on rated researchers from the National Research Foundation (NRF) of South Africa.

## 1. Relevance

This research focuses on the gender “productivity puzzle”. Although inequality between researchers exists in developed countries, and evidence is well documented in the literature, researchers in developing countries have greater tolerance for unequal work arrangements. The paper contributes to the literature on gender differences in the scientific productivity of researchers and fills in a gap in the economics of science literature, where evidence on Middle Income countries is limited.

## 2. Aims & Objectives

The main objective of the research is to understand whether the publication productivity gender gap exists in South Africa, even after controlled for selectivity, career promotion and unobserved individual heterogeneity.

## 3. Methods

The paper uses data on rated researchers from the NRF on the basis of their peer-reviewed publications during the period 2002-2011. It uses a productivity function and correct for three potential biases and specification errors regarding selectivity, career promotion of researchers, and unobserved individual heterogeneity. The productivity function accounts for personal characteristics, high-quality-publishing time spells, career development and its determinants, and research and collaboration characteristics.

## 4. Results

The results show that women are less prone to promotion; while white researchers are more prone to it specifically in Science, Engineering and Technology (SET) disciplines. The results suggest that old, white, male researchers are overall more productive, relative to their (young and old) non-white female peers. This points to the existence not only of a gender productivity gap in South Africa, but also to that of a race productivity gap.

## 5. Conclusions

Our findings suggest a direction for public policy intervention in line with the overall aims of the Gender Summit, including the implementation of evaluation and promotion panels that need to be “manned” in a balanced way. Science systems in Middle Income Countries should also enable similar framework conditions for women and men in academia, including policies that reduce the possibilities of *self selection* as a source of inequalities in the research system.

## Reference

- [1] J. Mairesse, M. Pezzoni, Does Gender Affect Scientific Productivity? A critical review of the empirical evidence and an econometric panel data analysis for French physicists, *Revue économique* – vol. 66, N° 1, janvier 2015, p. 65-114



## **WOMEN DOCTORS IN ITALY: PRESENT AND FUTURE**

**Author: Debora Romano**

**Keywords: women doctors, reconciliation of private and professional life.**

**Aims: The role of Italian Women Doctors at the present and in the future**

### **Introduction**

**There are 376.265 doctors and dentists registered in the professional associations ; of these 137.324 are women ( about 30%; EMPAM data 35%)**

**The largest part of male doctors are between 50 to 70 years old while 70% of women doctors and dentists are around 25-45 years old.**

**In the next 5 years about 30% of doctors will retire and less than 5 % of women will continue working after retirement as freelancers.**

**The presence of women doctors will rise to 68% in the next years ( 2025); there will be general scarcity of professionals for various reasons.**

### **Methods**

**Literature Review: fonts EMPAM, ONDA, ISTAT, IMPS, FOMCeO; OMCeO Roma**

### **Results**

**Already in 2011 women specialists outnumbered men with a modest increase of female presence in the area of surgery and radiology, but with a net prevalence in classic areas of specialization, that is pediatrics, gynecology, anesthesiology and reanimation , dentistry, genetics, high presence in courses of General Medicine, modest in neurosurgery and orthopedics. We must also remember that not always of high level of educational qualifications corresponds to an adequate employment.**

**There are 412.125 women employed in the National Sanitary System ( SSN) as doctors, nurses and administrators. That is 63.8 % of those hired: women doctors 37% and nurses 77% .**

**13% of women doctors have apical roles: 1/3 has no companion or children or is either separated or divorced. The possibility for women doctors to divorce is 30% higher compared to female population and is directly proportional to the number of weekly work days; while for male doctors more work days correspond to a lower divorce incidence.**

**EMPAM data show that women doctors earn less than their male colleagues.**

**According to the research by the OMCeO of Rome ( 41.000 registered of whom 10.000 women) 4% of women doctors have been subjected to violence and aggressions in their work places opposed to 2.1 % of the national average.**

**20% of Italian women have no children, one out of three women doctors have none and one in five for men doctors.**

**Despite the growing number of women in medicine their prospects are to hold professional roles of less authority, income and prestige.**

### **Possible causes:**

- 1) Difficulty to reconcile profession and family**
- 2) Obstacles by equals (gender casting) or in associations of category (crystal ceiling)**
- 3) Self-exclusion**

### **Conclusions**

**There can be no reconciliation or harmonization in a women's private and professional life without male involvement. A profound change in the logic of role assignment with greater participation of men in private life and family management is necessary.**

**No more vertical and leaderistic organization of the Sanitary System and above all the introduction of flexible work time, less face-time with optimization of the organization of time, production and above all projects, more parental leaves of absence.**

# Opportunities for young girls from LDCs to undertake international travel and grow within the global scientific community

E. Scala

University of Trieste, Department of Engineering and Architecture, Trieste, Italy  
Member of the Equal Opportunities Board of the University of Trieste, Italy

**Keywords:** *Least Developed Countries, International Cooperation, International Mobility Programs, Scientific Careers, Ethiopia*

Although the recognized importance and progresses made in recent years regarding the international mobility programs as instruments to share advanced scientific knowledge worldwide, high school graduated youth in Least Developed Countries (LDCs), especially girls, continue to be extremely underrepresented. Lowest rates are reported for girls in sub-Saharan Africa calling for new strategic changes that focus on the effectiveness of the funds originally granted to the weakest.

## 1. Relevance

To achieve the world's main challenges, it's essential to expand access to global higher education in scientific disciplines for most marginalized youth; especially for young girls from minorities and underprivileged sectors.

## 2. Aims & Objectives

UNESCO (2000-2014) reported Ethiopia as one of the most vulnerable context regarding data on scholarships for underprivileged youth. The research developed deep analysis of multifactorial influences taking as a case study the cooperation between Italy and Ethiopia and collected data able to prove that only few students from Ethiopian *élite* are able to obtain abroad scholarships. Differently from the traditional short term analysis, after working for six months in the relevant Ethiopian-Italian Institutions in the capital city of Addis Abeba collecting multilevel data, the author matched problems/opportunities considering the Universities of Trieste and Udine framework. The objective is to identify new strategies able to contribute to select proper candidates from LDCs' low income families in order to provide them with the scientific knowledge necessary to their homeland development while enhancing intercultural dialogue.

## 3. Methods

The research is based on a case study data collection method using a preliminary worldwide UNESCO macro data (2000-2011) reporting Ethiopia as one of the most vulnerable context. The followed bilateral statistical survey regarding the Italian Universities framework confirmed the total absence of undergraduate first year scholarship granted students from Ethiopia (Italian Ministry of Education 2000-2011). In a second step, the survey performed in the city of Addis Ababa provided detailed information on the juridical-bureaucratic specificity both on quantitative and qualitative domains. A third level of analysis was conducted in the University of Udine and Trieste to test a new potential pilot project involving all the relevant Institutions and industrial stakeholders.

## 4. Results

The principal results reveal that the young students from low income families can't afford the opportunities to be enrolled in the international mobility flows due to different reasons. The main obstacles are: lack of supporting projects dedicated to their age/level; minimum amount of €5.424,90 to obtain a student visa; suitable housing guaranteed abroad; abroad legally responsible tutor.

## 5. Conclusions

International mobility programs testify poorness as main obstacle faced by Ethiopian disadvantaged students to achieve existing chances. The research emphasizes the need to focus on new strategies to support disadvantaged youth participation in global science community. The author concludes that, considering countries like Ethiopia, with monthly minimum wage of €13.98, if meritorious girls from low income family need to provide a bank account of at least €5.424.90 to obtain a student visa without any support, the current international mobility programs framework is leaving them without power to break the cycle of poverty.

## References

- [1] <http://www.oecd.org/edu/Education-at-a-Glance-2014.pdf>
- [2] <http://datatopics.worldbank.org/Education/wDHS/HProfiles.aspx>
- [3] <http://www.uis.unesco.org/Education/Pages/international-student-flow-viz.aspx>
- [4] <http://statistica.miur.it/>

# Woman is men's best friend: Misogyny in Professional Virtual IT Community

A. Sergeeva<sup>1</sup>, E. Voronina<sup>2</sup> and B. Kirillov<sup>1</sup>

<sup>1</sup> ITMO University, Russia

<sup>2</sup> IT-specialist, independent researcher, Russia

**Keywords:** *gender stereotypes, professional virtual communities, CMC, ICT, CDA*

This paper is concerned with gender stereotypes propagation in the biggest Russian IT Virtual community. Based on both article comments structure data and the networking structure of the said community we analyse the overwhelmingly sexist image of women that community maintains and reinforces in its members. We also looked at communicative strategies employed by female participants, and found that a significant portion of them perpetuate such stereotypes, likely to fit in with the male majority.

## 1. Relevance

Even though the general number of jobs in IT sphere continues to rise, the empirical estimates of female to male ratio show significant gender discrepancy in IT: five males to one female [1]. It is probable that this discrepancy can be partly explained by the professional community pressure it exerts on its female members.

## 2. Aims & Objectives

Our key goals were to analyse the "woman image" in modern virtual IT-community discourse and how the real women in the community deal with such image.

## 3. Methods

We used the social network analysis to found a female-participant "position" in the community and content- and critical discourse analysis to analyse male and female users' comments on "women" and gender issues. We also used the community "liking" system to find the conventional way of topic's presentation inside the community.

## 4. Results

We found a sexist way of speaking about women in the virtual community discourse (ranging from benevolent sexism to objectifying).

The notion that women can't (as in biologically unable) code properly is common in the community discourse. At the same time, a significant part of the discourse is the denial of any kind of gender-based discrimination in both this particular virtual community, as well as in the IT sphere as a whole. Female members of the community are either reluctant to challenge these notions due to the overwhelming negative reaction from the male majority or engage in internalized misogyny in order to fit in.

## 5. Conclusions

Virtual IT discourse continues to be aggressively male, and pushes back on any suggestion of a change. Therefore it is imperative to work on discouraging these kinds of attitudes, to eliminate gender imbalance. Modern IT communities appear to be stuck in a self-fulfilling prophesy: virulently hostile environment leads to lack of women in IT, which in turn, gives "data" that is used to enforce the environment.

## References

[1] <http://www.cisco.com/web/RU/news/releases/txt/2012/061112a.html>

# Implementing Gender Medicine: Description of progress and current state

H. Siller<sup>1</sup>, A. Bader<sup>1</sup> and M. Hochleitner<sup>1</sup>

<sup>1</sup> Women's Health Centre, Medical University of Innsbruck, Austria

**Keywords:** *Gender Medicine, Courses, Medical University, Implementation*

Gender Medicine is gaining importance; however, implementation of Gender Medicine is discussed as challenging [1, 2].

## 1. Relevance

Gender Medicine needs to be incorporated in all medical degree programmes to ensure students' awareness on the importance of gender in medicine.

## 2. Aims & Objectives

This paper aims at describing the progress and current state of courses on Gender Medicine at one Medical University in Austria.

## 3. Methods

Legal and ministerial "Gender subsidies and guidelines" paved the way for including Gender Medicine in medical curricula. The aim was to include Gender Medicine into the core curriculum as compulsory courses and to implement Gender Medicine at various levels of medical education (undergraduate, postgraduate level).

## 4. Results

A lecture series (elective) that included presentations of heads of clinics on gender aspect in their field of expertise, the S.O.S. training for those pursuing the *venia docendi* (compulsory) and on-going training for physicians (elective) were implemented first. Thereafter compulsory lectures for medical students (undergraduate and postgraduate level) were implemented. Within the past 10 years, the course programme for Gender Medicine has extended and is now implemented for human medicine, molecular medicine, and dental medicine as well as for other health care professions and for Phd programmes in natural sciences.

## 5. Conclusions

Gender Medicine aims at providing knowledge on the relevance of gender in medicine and health care. Implementing courses on this subject on various levels (undergraduate, postgraduate, continuing training, certificates for practicing physicians) is needed. Additionally, having compulsory courses on this matter supports the perception of Gender Medicine as "normal" despite resistance towards it in the beginning. The overall aim is to bring Gender Medicine into the mainstream and thereby warranting sustainability.

## References

1. Risberg, G., E.E. Johansson, and K. Hamberg, 'Important... but of low status': *Male education leaders' views on gender in medicine*. *Medical Education*, 2011. **45**(6): p. 613-624.
2. Hochleitner, M., U. Nachtschatt, and H. Siller, *How Do We Get Gender Medicine Into Medical Education?* *Health Care for Women International*, 2013. **34**(1): p. 3-13.

# Promoting the Inclusion of Gender in (Medical) Research: the Pro's and Con's from the Student's Perspective

H. Siller<sup>1</sup> and M.Hochleitner<sup>1</sup>

<sup>1</sup> Women's Health Centre, Medical University of Innsbruck, Austria

**Keywords:** *Gender Medicine, including gender in research*

Including gender as a variable in research can still not be considered as self-evident. For example in medicine there is confusion on how to use sex and gender [1], but there are also advances regarding integrating sex and gender in health research [2].

## 1. Relevance

To ensure inclusion of sex and gender in research students have to be familiarised with the concepts of sex and gender and its inclusion by practically doing so.

## 2. Aims & Objectives

The aim of the study was to assess how medical students experienced the inclusion of sex and/or gender in their research project.

## 3. Methods

Study participants were recruited in a course on Gender Medicine. In this course students had to familiarise themselves with definitions of sex and gender, integrate sex and/or gender in their PhD project, present these findings at a conference. A questionnaire with open questions on positive and negative aspects when integrating sex and gender was handed to students and analysed using the qualitative content analysis [3].

## 4. Results

15 PhD students participated in the study (3 women, 11 men, 1 missing). Students emphasized the importance of gender in medical research to optimally care for patients and reported increased awareness after translating Gender Medicine into one's research project. They reported coming to innovative and novel conclusions by including gender. Challenges were experienced regarding timely and statistical issues. Thus, gender should be integrated right from the start and gender-specific aspects should be presented and discussed even if no differences were found – an aspect also criticised when searching for literature. Statistical issues were stressed with regard to female and male study participants and sample size.

## 5. Conclusions

Familiarising medical students with gender in medicine can be challenging. In the beginning there was hesitation to integrate gender, but students experienced it as “plus” because of additional publication possibilities, further conference participation, and innovative and novel research. Bringing positive aspects about gender in medical research to the fore is expected to ensure a sustainable implementation thereof.

## References

1. Hammarström, A. and E. Annandale, *A conceptual muddle: an empirical analysis of the use of 'sex' and 'gender' in 'gender-specific medicine' journals*. Plos One, 2012. 7(4): p. e34193-e34193.
2. Greaves, L., *Why put Gender and Sex into Health Research*, in *Designing and conducting gender, sex & health research*, J.L. Oliffe and L. Greaves, Editors. 2012, Sage Publications: Thousand Oaks, CA. p. 3-14.
3. Mayring, P., *Qualitative Inhaltsanalyse. Grundlagen und Techniken (10th edition, first edition 1983)*. 2008, Weinheim: Beltz Deutscher Studien Verlag.

# Mind the gap: Are sex and gender considerations addressed in Canadian Clinical Practice Guidelines?

C. Tannenbaum<sup>1</sup>, A. Liu<sup>1</sup>, B. Clow<sup>2</sup>, M. Haworth-Brockman<sup>3</sup>

<sup>1</sup> Canadian Institutes of Health Research-Institute of Gender and Health, Canada

<sup>2</sup> Independent Consultant and Adjunct, Dalhousie University, Canada

<sup>3</sup> Independent Consultant and Adjunct, University of Winnipeg, Canada

**Keywords:** *clinical practice guidelines, sex, gender, integration, evidence-based practice*

Sex and gender shape us, inside and out. In 1995, Canada signed the Beijing Declaration on Gender Equality and has since adopted a policy that federal health agencies, including the Canadian Institutes of Health Research, must use evidence to conduct a sex- and gender-based analysis and ensure that women and men benefit equally from health interventions. As a result, there has been a growing recognition in the scientific community of when, how, and why sex and gender can influence health and clinical treatment outcomes. While significant progress has been made, knowing that sex and gender are important is not enough. We can only reap the societal and economic benefits of research findings if they make their way into practice.

Clinical Practice Guidelines (CPGs) were developed to address the “know-do” gap between research and practice, to improve the quality of health care by synthesizing and making available up-to-date evidence to guide clinicians and patients in informed decisions. CPGs also have considerable potential to transform health practice and policy to address the needs of both women and men. We do not, however, know the extent to which CPGs include evidence on sex and/or gender and their implications for clinical practice.

## 1. Relevance

CPGs are important mechanisms for mobilizing the uptake of current evidence in health decision-making, including research on sex and gender. However, little attention has been paid to sex and gender in the development of CPGs.

## 2. Aims & Objectives

Our research aims to assess the extent to which scientific evidence on sex and gender is integrated into Canadian CPGs.

## 3. Methods

We identified Canadian CPGs dealing with selected chronic health conditions, published in English from 2013 to 2015. Sex-specific health conditions (e.g. prostate cancers) were excluded. We searched the texts of CPGs for keywords related to sex and/or gender and assessed the extent to which and the ways in which the sample of CPGs addressed sex (biological) and gender (sociocultural) considerations. We then identified common themes and gaps among these CPGs.

## 4. Results

Of 118 CPGs that fit our inclusion criteria, 81 (69%) included keywords related to sex and/or gender. While this represents a majority of CPGs, the type, quantity, and quality of evidence on sex and/or gender they include is quite variable. Only 19 (22%) of CPGs provide some type of epidemiological information about men and women and in 15 (18.5%), this is the only information presented. Analysis of other CPG sections, including prevention, screening, symptoms and diagnosis, treatment, and communications, revealed both significant gaps and some promising examples of sex and gender inclusiveness and responsiveness.

## **5. Conclusions**

Our findings suggest that we have considerable distance to go in bridging the sex and gender “know-do” gap in CPGs. In some cases, more research on sex and gender may be required, but it is also imperative that we find ways to encourage and support the integration of evidence on sex and gender into the process of developing CPGs, such as identifying promising examples and processes.



# Gender quotas change a lot!

E. Wolf<sup>1</sup>

<sup>1</sup> University of Applied Sciences in Munich

**Keywords:** *gender differences, competitiveness, affirmative action, academics.*

The most common objection against gender quotas is that there aren't enough qualified female candidates, such that the requirement profiles of selected positions have to be lowered. In the end, the job matching quality is deteriorated which reduces economic efficiency and the selected women are stigmatized as token women. However, this argument only holds if the best suited candidate is hired absent this policy, which is not obvious in case of discrimination.

In order to objectify this discussion, I analyse the effects of a gender quote in academics by looking at supply and demand-side effects. I argue that the evaluation of gender quotas changes a lot as soon as we take into account that gender quotas may produce different incentives on women and men. There exists clear empirical evidence that quotas help to mitigate women's averseness to competition, first because they know they have a fair chance of winning and second because all their rivals become female (see e.g. Niederle et al. (2013)). Furthermore, establishments engaging in affirmative action offer less scope for discrimination because they recruit more extensively and rely more heavily on formal performance evaluations than do non-affirmative action.

## 1. Relevance

Incentive effects are always essential to evaluate policy measure. Ignoring the expected positive effects on female labour supply evokes a too critical view on gender quotas.

## 2. Aims & Objectives

The main goal of this study is to assess the effect of gender quotas on the quality of the recruited staff. This sheds new light on the question whether this type of affirmative action actually generates token women or whether this often cited argument is nothing than a myth.

## 3. Methods

I reviewed the existing literature on the obstacles impeding female careers at universities to see how gender quotas may crack these vitreous hurdles.

## 4. Results

Most of the obstacles that impede female careers at universities are weakened by implementing gender quotas. First, women are more likely to succeed in academic selection processes due to a variety of side effects on the design of these hiring decisions and thus the scope for discrimination. Second, and even more important, women are more likely to be in the selection process. This is because women shy away from competitive situations, be it because they fear discrimination, they are more risk averse or they have less self-confidence. Gender quotas can offset this effect and boost the number of applications of qualified women.

## 5. Conclusions

Policies to increase the share of female researchers and teachers at university should take into account the gender differences in attitudes. Gender quotas therefore seem to be a successful and efficient measure to increase the participation of women in academics.

## References

- [1] Niederle, Muriel; Carmit Segal und Lise Vesterlund (2013): How Costly is Diversity? Affirmative Action in Light of Gender Differences in Competitiveness, *Management Science*, 59(1), 1 – 16.

# GS7-091 Gender Bias in Technology and Engineering Careers

K WosczyznaBirch, W.Robicheau

<sup>1</sup> CT College of Technology, United States of America  
Board of Regents, CT, United States of America

**Keywords:** (*Engineering, Technology, Underrepresented, Careers*)

Summary of or introduction to the main ideas to be presented.

Women in engineering and technology careers have historically been underrepresented. Although there have been research studies regarding the factors that discourage women from pursuing careers in these disciplines, specific strategies that have been successfully implemented to increase both the recruitment and persistence of women in engineering and technology disciplines have been limited. The Regional Centre for Next Generation Manufacturing, a National Science Foundation Centre of Excellence, has implemented the promising practices identified in research for the development and implementation of specific strategies that have increased the number of women who successfully complete programs in engineering and technology disciplines and ultimately pursue careers in these fields.

**1. Relevance:** In order to create a diverse workforce that is globally competitive, it is critical that women are recruited for careers in science, technology, engineering and math (STEM) disciplines.

**2. Aims & Objectives:** The goals of this project were to identify strategies that have been proven to increase the success of women in STEM careers and to adapt these strategies for implementation in higher education institutions in New England.

**3. Methods:** Twelve institutions of higher education were used for the implementation of the strategies identified that included peer mentoring, marketing materials that highlighted females, profiles of women in STEM careers and support systems that contributed to improving the climate for women in STEM classes and laboratories. Data was collected for the number of women who enrolled and completed the STEM programs. In addition, qualitative data was collected and included interviews and profiles of women in the STEM programs.

**4. Results:** The data demonstrated that recruitment and persistence strategies for increasing the number of women in STEM disciplines are successful and should be further adapted throughout the academy. Qualitative data demonstrated that the strategies implemented did in fact create a cultural change at the participating institutions that contributed to the success of women in STEM disciplines.

**5. Conclusions:** Strategies such as peer mentoring, marketing and outreach activities such as expositions that target women create an infrastructure that is effective in increasing the recruitment and persistence of women in STEM careers.

## References

- [1] D. Beede, et. al. "Women in STEM: A Gender Gap to Innovation." Department of Commerce. Economics and Statistics Administration. Washington, D.C., United States. 2011.
- [2] M. Charles; B.Harr; E.Cech; A.Hendley. "Who likes Math? Gender Differences in Eighth-graders' Attitudes Around the World." International Studies in Sociology of Education. Vol.24, Issue 1, 2014.

# Gender analysis as part of research works at the University of Chemistry and Technology Prague, Czech Republic

K. Zdenkova, P. Smejkalova, K. Grecova and A. Mittnerova

University of Chemistry and Technology Prague, Czech Republic

**Keywords:** *sex/gender analysis in research, biotechnology, food safety, water analysis*

We are introducing an ongoing process of structural changes of culture at the University of Chemistry and Technology Prague in terms of gender equality, incorporation of gendering content into research and new approaches to scientific topics.

## 1. Relevance

Chemistry is a scientific discipline that affects nearly all fields of everyday human activities. Therefore it is necessary to encourage researchers to think about sex/gender analysis as an innovative part of research. Starting already by continual work with undergraduate students is essential.

## 2. Aims & Objectives

Despite scepticism and resistance of a part of academic community, our aim is to initiate and gradually include the sex/gender analysis into research work of our students and researchers and support continuity of such practice.

## 3. Methods

To provide/ensure sufficient expertise in this field, we cooperate with the National Contact Centre for Gender & Science. We are participating in the FP7 project TRIGGER - Transforming Institutions by Gendering Contents and Gaining Equality in Research running since 1.1.2014. During the first year we have done a lot of surveys and learned a lot from our partners.

In order to encourage and make our students and researchers think of potential topics where sex/gender analysis is relevant, we organize a prize contest of student papers including sex/gender analysis. The prize was named after female Professor Julie Hamackova, the first female student, professor and Dean (1957) at the Technical University in former Czechoslovakia; she was the founder of the Czech hydrochemistry schools.

The first run of the contest was announced in mid-June 2015. We have discussed the potential topics with our experts and selected biochemistry, food and water analysis and safety. We are open to entirely new topics as well. The training by experts from Yellow Window is planned for September 2015. The prize will be awarded in November 18, 2015.

## 4. Results

The contest will be evaluated by the end of 2015 and experience gained during the first year will be utilized in the next year.

## 5. Conclusions

The incorporation of sex/gender analysis into research in chemical disciplines is a completely new approach to research and innovation. Mutual cooperation with more experienced partners helps to improve its adoption at new member states universities.

## References

- [1] Londa Schiebinger, Ineke Klinge , Gendered Innovation, ISBN 978-92-79-25982-1, EU 2013
- [2] Hana Víznerová, Marcela Linkova "Proc a jak na genderovou rovnost ve vede" National Contact Centre for Gender & Science, ISBN 978-80-7330-244-3, Praha 2013
- [3] TRIGGER FP7-SCIENCE-IN-SOCIETY-2013-1, GA 611034, <http://triggerproject.eu/>
- [4] GRO – genderova rovnovaha, <http://gro.vscht.cz>



## COMPENDIUM

## **Professional Self-presentation: gender aspect**

What are the psychological drivers of the existing gender gap in career achievement? Is it due to women's lower self-confidence in professional settings? The fact that women are less likely to negotiate their salaries and promotions? Additionally, how likely are women to endorse the existing gender stereotypes and to which extent such endorsement influences their self-esteem and professional achievement? The present research aims to address these questions. 82 young men and women from colleges in Ukraine took part in the survey. Women constituted 60% of the sample.

Respondents were administered a series of surveys.

- The survey "Three types of competence» (A. Matchak)
- The survey "People at work" (A.Matchak, A.Yavorovska )
- The survey "The multidimensional self" (E.Obrayan, S. Epstein)
- The survey "Life existential attitudes» (Richard Klamut)

The analyses compared levels of endorsement between men and women. Female students show higher levels of social competence. They have more relationships at work and are better capable of solving interpersonal issues. However, females score lower on the feelings of subjective control and assessment of success, which indicates a recognition of the barriers that existing work conditions and stereotypes pose on their professional success.

The self-assessment indicators show higher levels of female identity in comparison to male peers. Women demonstrate higher self-acceptance as a result of coherence between moral views and factual behavior and a more favorable assessment of their physical attractiveness, popularity, competence, capacity for leadership, and managing people. However, the general level of women's self-esteem is lower, which may be rooted in the fear of possible rejection by society where success is measured through male standards. Men show the desire to be seen in the best light, which sometimes is accompanied by anger and aggression when they feel misunderstood or underestimated.

According to "People at work" findings, women show higher levels of being in control in job settings. Males are more likely to attribute their success to external factors while women are more likely to attribute any kind of advancement to their own efforts.

The findings from "Life existential attitudes" show that women's feelings of responsibility, internal values and goal consistency are higher in comparison to the male sample. Lower scores on the existential vacuum and death acceptance dimensions show women's concern over providing for others and a higher level of anxiety and uncertainty about the future.

The data suggests that young women in Ukraine enter into the professional world believing in their competence and in having control of their professional achievements. They are less likely to endorse external factors, such as connections or luck, as determinants of their success. Contrary to the stereotypes of women's preference to be submissive in professional settings.

Our research suggests that an important barrier to women's success in a workplace is their own acknowledgement of the societal stereotypes that show women in a more negative light than men. Distancing themselves from such stereotypes in an important first step to successful professional self-presentation among young women.

# **Improving the system of prevention of domestic violence in the Republic of Belarus (gender aspect)**

Haurylenka, A., LL.M., Belarus

*Keywords: Gender research, domestic violence, legislation, law enforcement authorities.*

One of the most important and complex issues of the modern Belarusian society is the problem of domestic violence. The development of the law on prevention of domestic violence should be implemented with the use of gender expertise.

## **1. Relevance**

To develop a law that allows for the effective prevention of domestic violence is possible only by using of gender expertise. Currently, in Belarus this fact remains undervalued.

## **2. Aims & Objectives**

- 1) To formulate the proposals to improve the development process of the law on prevention of domestic violence from a gender perspective;
- 2) To demonstrate the importance of gender expertise in the process of lawmaking;
- 3) Promotion of gender studies in the Republic of Belarus.

## **3. Methods**

To accomplish these goals and objectives the legislation of the Republic of Belarus for the prevention of domestic violence were analyzed. In addition, the analysis of media publications was carried out, reflecting the opinion of representatives of the state, judges, prosecutors, police officers, experts and representatives of NGOs to this topic. In addition to the above, the statistics on the issue of domestic violence, publicly available on the websites of the statistical service and law enforcement agencies, was analyzed.

## **4. Results**

The study allowed the following conclusions:

- 1) At present, the Republic of Belarus both the state authorities and elements of civil society recognize the importance of the issue of prevention of domestic violence. There is a consensus on this issue in the modern Belarusian society.
- 2) Both government representatives (administration, courts, prosecutors, law enforcement agencies) and NGOs are in solidarity of the opinion that for the effective prevention of domestic violence in Belarus it is necessary to adopt a special law.
- 3) The representatives of the state bodies responsible for the development of the law appear to underestimate the importance of gender analysis of its projects, including with the involvement of experts from NGOs. To solve this problem, we offer the following activities:
  - a) A comprehensive gender analysis of the draft law on the prevention of domestic violence;
  - b) To involve representatives of specialized NGOs (women's rights, etc.) to develop the draft law;
  - c) To ensure the requirements of gender balance while forming a working group to draft the law, both for the public authorities and by the NGOs;
  - d) To involve researchers in the gender sphere from different fields (sociologists, lawyers, economists, psychologists, doctors, etc.) to develop the draft law,
  - d) Conducting sociological research to highlight gender issues in the facts of domestic violence;
  - e) Ensuring the transparency of the draft law with the help of mass media.

## **5. Conclusions**

The formulated proposals are very topical, since their implementation will allow formulating the law on the prevention of domestic violence based on the gender expertise, which, in turn, will provide the greatest efficiency of the law at the stage of enforcement.

# **Bringing Gender Online: Iraqi women and the internet world**

A. Bahiya

DE Montfort University.UK

*Keywords: (Gender, Internet world, internet use, challenges, empowerment source)*

This paper aims at considering how Iraqi Arab young women involve themselves in the use of the internet as a means of interacting and expressing their identities. Research studies conducted on gender issues particularly the Internet use and the challenges faced by women have been widely studied in the west. However, conducting such studies in the Middle East particularly in Iraq is not that much to answer all the questions about this issue. Through the use of an in-depth interviews with a sample of four Iraqi educated females the generated results showed that the internet world with all its features such as anonymity and privacy provide the users with a secure venues to interact and cross all the cultural, religious and social barriers. Participants use various methods and tactics in order not to be recognized such as using nicknames, conceal their real pictures and using different languages.so that it is worth saying that the emergence of the internet world in Iraq considered as an empowering source and found new liberated spaces for Iraqi women to communicate and express themselves without any physical presence.

## **1. Relevance**

How the internet considered to be as a new liberated space which brings new techniques of self-expression and identity construction among Iraqi females.

## **2. Aims & Objectives**

The impact of internet use on social interaction, the challenges imposed by social boundaries and its effect on the process of using internet.

## **3. Methods**

The method of study adopted in this paper was a qualitative in depth-interviewing methodology. The use of this method and through in depth interviews with research participants helped to reveal and important facts which were not be available to reach through other techniques. The data collected has been coded and analysed to identify the emerged thoughts and experiences. The interviews were conducted in English, and lasted between 30 minutes to one hour.

## **4. Results**

- 1- The use of internet is highly effected by the cultural rules.
- 2-Identify the tactics implemented by Iraqi women to use internet and express their identity.

## **5. Conclusions**

This study revealed the importance of the internet world in finding the liberated venues for women to express themselves and reconstruct their identities online in a way that enable them to cross all the social, religious and cultural boundaries.

## **References**

- [1] Boyd, D. Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social Life. In D. Buckingham (Ed.), MacArthur Foundation Series on Digital Learning Youth, Identity, and Digital Media Volume. Cambridge: MIT Press. (2007).
- [2] Butler, J. Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory. Theatre Journal 40(4), 519-531. (1988).

# Gender Equality Analysis of Belarusian Legislation In The Field of Higher Education

V. Saskevich

Belarusian State University, Belarus

*Keywords: gender equality, higher education, right to education, right to work*

The work is devoted to the legal aspects of gender equality in the field of higher education in Belarus. It determines if the certain legislative acts facilitate direct or indirect discrimination against women or men on the basis of their sex in such issues as admission to university, organization of educational process, internal rules for students, social protection of students, transfer, restoration and expulsion of students, placement of graduates, admission for and undertaking of postgraduate and doctoral studies, main features of legal status of high school teachers.

## **1. Relevance**

Gender equality, equal legal status of women and men in higher education, equal opportunities to the right to education, the right to work are not possible without incorporation into national legislation guarantees, regulations aimed at preventing all forms of discrimination on the basis of sex and creating conditions for gender equality.

## **2. Aims & Objectives**

The work aims at determining whether existing Belarusian legislation ensures gender equality, equal legal status of women and men in higher education, equal opportunities for realizing the right to education, the right to work in this field, taking into account gender differences in the cases when it is necessary.

## **3. Methods**

To conduct the work, the researcher selected the acts of Belarusian legislation that regulates education and related relations, labour relations and provide social welfare. We omitted certain rules and regulations that have no gender content, cannot have any gender impact or have no specific relevance to higher education. To carry out the research several scientific methods were used: legal analysis, linguistic analysis of legal texts from the gender perspective, which focused on defining how a specific legal norm affects women or men, the method of Gender Impact Assessment (with some exemptions caused by the subject of research).

## **4. Results**

The Belarusian legislation on higher education as a whole is free from discriminatory provisions against women or men as it is establishing for them equal opportunities to the right to education. There are, however, some discriminatory provisions of the legislative acts, which regulate labour relation and provides social support to students and teachers of universities. No legal norms aimed at accelerating achievement of effective equality between men and women in specific areas (for certain specialties of higher education, appointments to faculty positions, etc.) have been identified.

## **5. Conclusions**

The results are important for presentation at the Gender Summit because they demonstrate a good experience in solving problems of gender inequality in higher education by legislative measures and create conditions for further improvement of the Belarusian law.



# Fixing the transformative and formative praxis (FTFP): a new model of institutional change to achieve gender equality in universities

D.Balahur and P.Dobrescu

<sup>1</sup>“Centre for Gender Equality in Science”, <sup>2</sup>“Alexandru Ioan Cuza” University, Romania

**Keywords:** *gender equality, institutional transformation, practice based approach, transformative praxis, formative praxis*

Our paper addresses the issue of organizational transformation aiming at promoting gender equality in universities and research organizations. It is based on the *reflective practice* of real structural changes introduced in our university “Alexandru Ioan Cuza” University of Iasi, within the framework of the European FP7 Project STAGES as well as on a meta-analysis of some relevant studies about strategies for achieving gender equality in science. Built on reflective practice a new structural change strategy is defined under the title *Fixing the transformative and formative praxis*. Its main orientation is given by “*Focus on creating new organizational structures and practices (transformative praxis) and by this process developing the participants’ competences for knowing and acting to promote gender equality in science (formative praxis)*” (Balahur, 2013, 2014). Illustrated by concrete innovative actions, this new perspective for approaching gender equality in science, with focus on actual practice of structural change in universities, is proposed as an alternative to the known perspectives: *fixing the women, fixing the organisations and fixing the knowledge production*.

## 1. Relevance

Reviewing the impressive body of knowledge accumulated on the issue of women underrepresentation in science we may observe, based on the facts, (*She Figures, 2013*), that *there is no evidence of spontaneous reduction of gender inequality over time*. That is why it remains to ask (once) again on the causes of this de facto situation so as many talks about it do: “*why so few, why so low, why so slow?*” But an important step could be done through *action aiming at exploring the road from ‘WHY’ to ‘HOW’* can we bring more women in science as well as in science management, leading positions in research bodies and universities. Briefly these series of questions could be synthesized in one: *how can the universities and research institutions practice structural change in order to become a friendlier environment for the underrepresented gender?*

## 2. Aims & Objectives

Our goals aim at: developing a new theory and model on structural change in research organizations and this way to both fill in the gap in knowledge in this field and to improve the practice of change in the real ambit of science organizations.

## 3. Methods

*Methodologically, Fixing the transformative and formative praxis (FTFP) is a complex, multiple-layer model that followed several strategic directions: Involving the whole academic and research community in the transformative practice and this way, by mutual learning and organizational learning, developing proactive attitude towards gender equality in science.*

## 4. Results

We have developed a new model of structural changes called *Fixing the transformative and formative praxis* (D.Balahur, 2013, 2014) that lefts behind the traditional, exhausted models of change embedded in the vocabulary of ‘human deficit’ (Cooperider&Witney) and builds a new, generative (collaborative-participative) one based on the practice of change itself.

## 5. Conclusions

The paper presents a successful experience of structural change in universities that could be metaphorically characterized like “rebuilding our house while still continuing to live in it” (W. McCourt). The model of FTFP could become a good and successful practice in the field institutional transformation to achieve gender equality in science.

# Logical rules underlying a scientific method for gendered innovation

Silvana Badaloni

Dept. of Information Engineering, University of Padua, Italy

**Keywords:** *gender, scientific method, gendered innovations*

In this paper the problem of how to introduce a gender dimension in the contents of the scientific production has been analyzed. In particular, starting from a formal reflection on the scientific method and from a critical analysis of logical rules underlying the method, we show how the falsifying argument, at the basis of the production of scientific innovation, can be the basis of a scientific theory that takes into account the gender. To produce new and advanced science, we have to change the starting theories and re-design the scientific questions. and men.

## 1. Relevance

To introduce the gender dimension in the production of science it is important to understand how can we re-design the scientific theories, to propose new hypothesis taking into account of the gender dimension.

## 2. Aims & Objectives

The main aim is to reason about the logical rules underlying the scientific method. A common belief about science production is that experiments are conducted to test the hypothesis of a theory. If the observations are verified, then the theory is fully demonstrated.

The logical rule that represents these schema goes under the name of confirming argument: it seems well representing the process of innovation in scientific research. But it is a wrong logical rule [1].

## 3. Methods

Science does not proceed for confirming argument and does not advance according to the progressive and continuous accumulation of truth but thanks to the attempts of refutation of the theories proposed, we advance if there are errors in the accepted theory. So the wright rule is called falsifying argument.

## 4. Results

To develop a new science from a gender point of view we have to ask if observations or experiments concerning a certain theory can be realized in a society composed by women and men without taking into account gender (eg medicine vs gender medicine). Evidently not, because 50% of the users of the innovations are women but, as evidenced by a large literature, it is presumable state that the needs of this substantial part of users are not incorporated in the search and the innovation. Hence these observations can be false and the theories of departure, too [2].

## 5. Conclusions

The falsifying argument leads us to say that to produce a new gendered science it is necessary to radically change the assumptions: only a complete redefinition of the method and research model with new applications and new ways of observation can redesign the science in a gender perspective.

## References

- [1] G. Federspil. 2004. Logica clinica. I principi del metodo in medicina. Mc-Graw-Hill, Pub. Group Italia, Milano.
- [2] S. Badaloni. 2015. About falsifying argument: a gender exercise. Proc. Of the Italian Conference Women and Science. In course of publication.

# **The perspective of Gender in the practices to promote health: a research about the representations of the operators.**

L.Portis

Turin University

**Keywords:** *Health promotion, Gender-blind strategies, Victim blaming*

Even if gender is considered an important factor for health (Daykin, Naidoo,1995, Gelb, Pederson, Greaves, 2011) due to the different cultural approaches to health and the different possibilities of interpretation and change of risky behaviors among men and women, the practices to promote health in different contexts do not often consider this fundamental difference (besides other differences as for instance the socioeconomic and cultural conditions).

## **1. Relevance**

Gender perspective should be present in all practices of health promotion, even at school, to avoid the victim blaming process and to unmake gender roles which claim that women are responsible for themselves and for family lifestyles.

## **2. Aims & Objectives**

The aim of the presenter's research is understanding and analyzing the global meanings which give birth to the practices of health promotion and prevention activated by socio medical operators in different scholastic contexts.

## **3. Methods**

For a year I have observed the operators in their daily actions for two projects: "Life Skills" in Middle Schools and "Peer Education" in High Schools, and I have talked to them to understand the meanings they gave to such practices and to some key concepts such as health and risk.

## **4. Results**

The analysis of what I have collected allows me to state that such practices are extremely standardized and they lack of environmental information. The stated and pursued aims do not consider the subject inside the context, do not consider gender differences (Gender-Blind Strategies), cultural differences, inequalities related to their socioeconomic conditions and do not consider the initial health literacy.

One starts on the basis that the subject, who has been informed about a series of risks by somebody who has knowledge, will be able to act in the correct way for his/her health avoiding dangerous behaviors (Lemma, 2005).

## **5. Conclusions**

The lifestyle-choice model, in which people are considered as consumers who have to choose between different health products, implies an individual responsibility that often tends to make women feel guilty because they have not been able to make right choices towards their families (Daykin and Naidoo 1995). I intend to discuss about this issue and to suggest different strategies.

## References

- [1] N. Daykin, J. Naidoo, Feminist critique of health promotion, in *The sociology of health promotion, Critical Analysis of Consumption, lifestyle and risk*, R. Bunton, S. Nettleton, R. Burrows , Routledge, London, 1995
- [2] K. Gelb, A. Pederson, L. Greaves, *How have health promotion framework considered gender?* 2011
- [3] P. Lemma, *Promuovere salute nell'era della globalizzazione. Una nuova sfida per «antiche» professioni*, Unicopli, Milano, 2005

## **HEALTH, HUMAN RIGHTS AND GENDER**

A Human Rights Assessment to Examine HIV/AIDS and Gender policy in Mauritius

Author: Sattiatvattee Hurry and Co-Author: Dr Rajendra Parsad Gunpath

University of Mauritius, Le Reduit, Mauritius.

E-mail: umahurry@gmail.com

Abstract

*Keywords: Health policy and gender, Women human rights, law and regulations*

Gender and structural determinants of health show how legal and political systems help to explain mechanisms underlying women's and men's health. Policy often creates or redresses gender inequalities in health distribution and predicts how men and women live up their biological endowment. Human rights and gender approach becomes more explicit to policy, when analysing the gaps in institutional structures based on social roles that construct male and female identity. Mauritius being the signatory of CEDAW has come up with Domestic violence Act and Equal Opportunity Act to protect gender equality. The objectives of the research is to assess how gender-neutral policy creates human rights burden in the protection of public health and to evaluate how government by protecting right to health violates other rights of PLHIV.

**Methodology:** 90 respondents (PLHIV) were interviewed of whom 54 (60%) were male, and 36 (40%) female in Mauritius, employing snowball and respondents driven sampling. The gender distribution of the respondents reflects the HIV epidemic in Mauritius which is (n= 4,526, 78.5 %) male and (n= 1,242, 21.5 %) female by 2013. A questionnaire-based interviews were carried out. The statistical software SPSS was used for data capture, processing, tabulation and analysis.

The research found that HIV/AIDS policy is not articulated to PLHIV and it is not well-targeted to achieve its intended goals. Being gender-neutral, the policy failed to address gender equity, gender mainstreaming, and gender planning in health that in turn violates women fundamental rights. The policy being both under-and over-inclusive creates discrimination and classification that violates the rights of sex workers, female prisoners and Injection Drug Users (IDUs). To control HIV, the policy deprives both men and women (PLHIV) of their fundamental rights and fails to provide a fair public hearing as it has no procedural safeguard to ensure fact finding process. Women living with HIV felt that their rights are violated by law, regulations and nature of HIV policy.

**Recommendations:**

1. To formulate and support gender-sensitive policy with dynamic legal and structural system, affirmative action, gender sensitive agenda, and human rights standards that protects public health and preserve justice.
2. Accountability and transparency, political commitment and international co-operation, and government obligation to protect other human rights as much as right to health.

# Gender and Coaching

## Heli Aaltonen

Heli Aaltonen, Ph.D., Finland

**Keywords:** *gender, coaching, clinical supervising, intersectional, gender know-how.*

Majority of professional coaches assumes that being professional means denying your gender. I propose that an awareness of the coach concerning the large scale of significances of gender in a coaching process is crucial for successful results.

### **1. Relevance**

Professional coaching and clinical supervision in Finland have stayed nearly untouched by the feminist research. Coaches who work with gender know-how and gender sensibility produce more satisfied employees and managers in work organisations.

### **2. Aims & Objectives**

My aim has been to research how gender, age, education, traditions, religion, place of living etc, correlate with gender awareness and gender related practices in a coaching process of a professional coach or a clinical supervisor.

### **3. Methods**

I sent a survey to the 1.800 members of the Finnish Supervisors' Association and to the 400 supervisors of the Evangelical Lutheran Church of Finland and interviewed 12 coaches/supervisors. The interviewed persons have also kept a diary of their observations concerning gender during two months. Finally, I analysed the material with an intersectional method known from gender research.

### **4. Results**

Statistically 80% of the coaches in the Finnish Supervisors' Association, and 60 % of the Church supervisors are women and a majority of their clients are women, mostly from the health and social sectors and the church. Quite few of the supervisors are aware of the significances of gender in their praxis.

### **5. Conclusions**

Is it so that low paid women coaches coach low paid women to stay in their hard work situations and well paid male business coaches coach male CEOs to make more money? The results are guiding in that direction, but need more research. However, gender awareness and gender know-how should be added to every coach and supervisor training in Europe. In my view we still have many areas in science and work life, where being a professional means to deny your gender. This leads to gender blindness with negative consequences.



# Impact of Gender Segregation in Public Transport

S. Parashar

Graduate from School of Planning and Architecture, New Delhi, India

**Keywords:** *gender, transport, safety*

As simple as it may sound, the right to access a city's public spaces, which are open to the general public, is not enjoyed in its true sense by many in cities. A large portion of the female population is still made to feel uncomfortable while being in a public space. Transportation is a significant public space which is an inevitable part of the daily lives of men and women in urban areas.

The socio cultural system of gender power play in public spaces has been described in this paper by examining the behaviour of women in these places. A recent attempt to curb the increasing cases of sexual harassment in the public transport in India was segregation of female (women only) spaces which has been welcomed by women commuters.<sup>1</sup> This, however, is seen as a short term solution by feminists considering the ideology that women need to be separated from men for their own safety. This paper attempts to study the mind-sets of women in a traditionally patriarchal society like India along with pros and cons of transportation measures like gender segregation. Qualitative analysis of user experiences is the primary medium of this study.

Although it is argued that gender segregation might not lead to a healthy society, men and women in India, both seem to support it. Contrary to the experts' view, women want their travel comfortable and hassle free which they believe can only be possible away from the male glare especially in a conservative society like India.

The domination of the public space by a single gender has always been a reason for its unequal use. There are various social systems and notions that support gendered division of space and further encourage this ideology which has now become deep rooted in the mind-set of many people. Segregation of women only areas is further leading to an unofficial division of spaces. By having women and general compartments in a train, the general compartments are subconsciously becoming 'men' compartments. Transportation being a significant part of daily life is contributing to this divide and encouraging domination of spaces by a single gender.

---

<sup>1</sup> In 2010, Delhi Metro Rail Corporation (a major public transport organisation in New Delhi, India), introduced women-only coaches in its trains.

# The treatment of gender-related asylum claims in the Belgian asylum procedure

Fanny Desvachez

Maastricht School of Governance and United Nations University, Netherlands

**Keywords:** *gender-related asylum claims, Belgium, women, refugee law, gender-sensitivity*

When women flee persecution in their origin country and seek protection in Europe, they may have been persecuted for reasons connected to their gender. It can include sexual violence, intra-familial violence, forced marriages, female genital mutilations, forced sterilization or abortion. Based on a consensus that women and girls face gender-specific challenges in accessing a fair and just assessment of their claims, a number of legislative tools have been developed by international, European and national bodies. However, in the 1765 Resolution, the European Council (2010) denounces the fact that women continue to be discriminated in comparison to men, including in the way their asylum claims are treated.

This research demonstrates existing gaps between legal tools developed to secure a fair and just treatment of gender-related asylum claims and their implementation. The objective is therefore to examine the way in which gender-related asylum claims are treated in the Belgian context and thereby unravel the paradox why women who have (or fear to) experience(d) gender-related forms of persecution do not necessarily receive protection. Semi-structured in-depth interviews with different stakeholders – immigration judges, legal representatives, NGO practitioners, asylum instances personnel – were conducted to collect data on how gender-sensitivity is interpreted and applied in the Belgian asylum procedure. Tribunal appeal's arrests are used to include the voice of female asylum claimants and provide an additional source of evidence for claims reported in the interviews.

This research concludes that the development of gender-sensitive legislation is significant—but insufficient—to secure the adequate protection of women who have experienced or fear to experience gender-related forms of persecution. Indeed, gender-related asylum claims are not being treated in a legal vacuum but rather in a specific and interacting social, cultural, discursive and political context. Four different themes that demonstrate a discrepancy between existing legal tools and their implementation are presented. The first major theme discusses how despite the autonomy of asylum authorities, experts and asylum instances are limited by political influences in their ability to provide a fair and just treatment of gender-related asylum claims. The second theme talks about the lack of harmonization between the French- and Dutch-speaking jurisprudence when it comes to the treatment of gender-related asylum claims. The third theme highlights the reasons why despite the expectation of the asylum procedure, women might not disclose their gender-related problems to asylum instances spontaneously and in a full, accurate and credible manner. The last theme shows how the right for (accompanied) women to be assessed individually is not always respected. As a consequence, women's files tend to be treated as a complement to their husbands' claims or as a way to test the husbands' credibility.

While considerable progress has been made and there might be a sufficient amount of gender-related legal instruments existing, an appropriate implementation that secures a fair and just treatment of gender-related asylum remains a challenge that requires proactive, critical and continuous effort in a context of constantly changing realities.

## References

- [1] Council of Europe, "Gender-related asylum claims", in Resolution (1765), Parliamentary Assembly (2010).



# Pioneer women in architecture

M. Bostenaru Dan<sup>1</sup>

<sup>1</sup> “Ion Mincu” University of Architecture and Urbanism, Romania

**Keywords:** *architecture, mobility, pioneers, role models, society*

The early and mid-twentieth century architecture was a period of revolution in architecture, with changing ideas in aesthetics, technology etc. This time also women entered the architecture field, being able to graduate as pioneers. But graduating was a first step, depending on society requirements. Being able to practice once graduating was a second step, depending apart of the wider society also from the narrow family conditions. Many of these pioneer architect women were married to fellow architects or civil engineers.

Looking to the works of women architects in different countries, the differences are minor, because the global society already begun in the first half of the 20<sup>th</sup> century: these women were mobile. In our contribution we will use for comparison a few examples of mobile women architects from today, namely those having a fellowship specifically for architecture and those having a general fellowship such as Marie Curie.

## 1. Relevance

I am myself a mobile woman architect and was motivated by the fact that the first mobile Romanian woman architect was mobile between Romania and Italy, like myself with the Marie Curie fellowship, architect to which I dedicated a comprehensive study [1] [2].

## 2. Aims & Objectives

I want to learn lessons from the pioneers for architecture today, as beautifully reformulated for my reintegration grant several years ago: “Building the future on lessons from the past”. Also, I want to raise awareness on the works of these early women architects which are sometimes in danger of demolition, as 100 years ago they might not have been approved to be built because of bias.

## 3. Methods

I did a classical architecture research, with field studies, archive research, literature research, then, after the data (photographs and plans of the buildings, biographies of the architects, a list of literature for all of them) were collected, I did comparative research between them. For mobility I created network maps.

## 4. Results

This part of my work deals with women as experts in the design process, they are architects. But architecture influences women also as users and as investors. Therefore women are more likely to design an architecture which is women friendly. Specific architecture programs where this is visible include housing, but also public programs such as spiritual architecture.

## 5. Conclusions

The results are important in shaping mobility programs for women architects, seen as either an artist or a researcher by providing role models validated by history. Several current EU programs deal with the issue of women and architecture/cities such as the COST action genderSTE and the MOMOWO project. Also national projects, for example in Austria, look at both historical and contemporary models. This research presents a national project to be integrated in the wider international framework, as the careers of the pioneers were.

## References

[1] <http://virginiaharet.blogspot.ro/>

[2] M. Bostenaru Dan, Virginia Haret, Review of European Studies, 5 (5), 2013.

## PARTNERS

**Elsevier** is a world-leading provider of information solutions that enhance the performance of science, health, and technology professionals, empowering them to make better decisions, deliver better care, and sometimes make ground-breaking discoveries that advance the boundaries of knowledge and human progress. Elsevier provides web-based, digital solutions — among them ScienceDirect, Scopus, Elsevier Research Intelligence and ClinicalKey — and publishes nearly 2,200 journals, including The Lancet and Cell, and over 25,000 book titles, including a number of iconic reference works.

**The Robert Bosch Stiftung** is one of Europe's largest foundations associated with a private company and continues the charitable pursuits of Robert Bosch (1861 - 1942), the founder of both the company and the Foundation. It invests approximately 70 million euros annually in supporting approximately 800 of its own as well as third-party projects in the fields of international relations, education, society and culture, as well as health and science. Since its founding back in 1964, the Foundation has used more than 1.2 billion euros for charitable activities.

**NordForsk** is an organisation under the Nordic Council of Ministers that provides funding for and facilitates Nordic cooperation on research and research infrastructure. NordForsk seeks to enhance the quality, impact and efficiency of Nordic research cooperation, thereby helping the Nordic region to become a world leader in research and innovation.

**Portia Ltd** (co-founders of the Gender Summits) designs and implements effective, evidence-based strategies for advancing quality of research and innovation through gender. Our work covers gender equality issues in STEM and gender dimension in the content, process and impact of science (STEM) endeavours. Portia co-founded the Gender Summits in 2011 as part of a project we co-ordinated, genSET.

**The Committee for gender balance and diversity in research (KIF)** is appointed by the Norwegian Ministry of Education and Research. The committee is in its fourth period. KIF shall support and give recommendations regarding measures that promote the integration of gender balance and ethnic diversity activities at universities and research institutes. Its activities also encompass promoting gender and ethnic diversity perspectives in research. This is done through counseling academic institutions, arranging seminars, disseminate research and doing advocacy work. [www.eng.kifinfo.no](http://www.eng.kifinfo.no) provides news, research and tools. Follow KIF on Twitter and Facebook.

**The Swedish Secretariat for Gender Research, University of Gothenburg.** The central aim of the Swedish Secretariat for Gender Research is to strengthen the impact of research and knowledge about gender and gender equality in academia and the rest of society. We interact closely with the gender research community and follow the developments in research policy in order to integrate a gender perspective both nationally and internationally. The Secretariat provides, as commissioned by the Swedish Government, a support structure for gender mainstreaming in 41 governmental agencies from a wide range of sectors.

**The DaVinci Institute** is a think tank and consultancy specialising in collaborations for smart, creative & sustainable innovation. We act as a facilitator for innovative, trans-disciplinary activities in the field of research, culture and policy that aim to effectively address societal challenges. As a think tank, the DaVinci Institute initiates discussions, engages in conversations and curates information on innovation-focussed collaboration. Through its network of experts, the DaVinci Institute supports European organisations, projects and collaborations through tailored management, training and dissemination services.

PARTNERS



Robert Bosch **Stiftung**



MEDIA PARTNERS



Stay up to date with the mobile guide!

Scan the QR code with your mobile device or visit:  
[m.twoppy.com/gse/](http://m.twoppy.com/gse/)