



Exploratory Workshop Scheme

Scientific Review Group for the Social Sciences

ESF Exploratory Workshop on

**Portrait of a Lady: Women in Science.
Participation, Issues and Perspectives in a globalized
research system**

Rome, 23-24 September 2013

Convened by:
Sveva Avveduto – IRPPS - CNR
and Lucio Pisacane – IRPPS - CNR

SCIENTIFIC REPORT

1. Executive summary

The workshop “*Portrait of a Lady: Women in Science. Participation, Issues and Perspectives in a globalized research system*” took place at the IRPPS - the Institute for Research on Population and Social Policies of the Italian National Research Council in Rome (www.irpps.cnr.it). The workshop was held over 2 days, on September 23th and 24th 2013. A section of the IRPPS website was dedicated to the workshop <http://www.irpps.cnr.it/it/eventi/esf-exploratory-workshop-portrait-of-a-lady>.

The final number of participants was 16 (14 invited speakers and discussants, 1 Convenor, 1 co-convenor) + 1 ESF representative. Workshop convenor and co-convenor came from the same scientific institution (the Institute for Research on Population and Social Policies of the Italian National Research Council) in Rome, while the other participants came from 9 different countries over Europe (15 participants) and one other participant came from Thailand. Interaction between the participants was facilitated by informal conversation during coffee/tea breaks and by the social dinner event that took place in the evening of September 23th.

The workshop started with the welcome of the convenor Dr. Sveva Avveduto, director Institute for Research on Population and Social Policies, and with a short presentation by the ESF Scientific Review Group for the Social Sciences, represented by Prof. Alison Woodward

The 5 workshop sessions were organized in 2 consecutive talks of approximately 35 minutes + 10 minutes of time for the discussant. Few minutes for papers-pertinent questions were left and 5/10 minutes reply was offered to the paper givers in order to answer to the discussant and to participants' questions. After the end of the last session, the workshop closed with a short discussion session, conducted by the Convenor: the presented intention was to set new scientific opportunities of cooperation on the topic. In particular was pushed forward the creation of a common network to be presented at the next call for proposal of Cost Action. The participants agreed to work upon a proposal to be submitted by beginning of November to the Trans-Domain open call of European Cooperation in Science and Technology.

Scientific objectives of the Exploratory Workshop

Recent data and researches (EC She figures 2013; Royal Society, 2012) show that female presence into scientific and academic careers is still unbalanced and that the leaky pipeline still is an appropriate metaphor of the gender gap in STEM. The workshop objective was to analyze recent data and analysis about women researchers in science institutions, and objective/subjective reasons and causes determining gender gap. By starting from the identification of the main problems, the Esf workshop objective was to sketch possible strategies for a better gender balance in the scientific systems, to suggest policy recommendations for scientific and research institutions and to communicate the outcomes of the meeting to specific stakeholders, such as policy makers, academics, researchers, scientific community members, but also to a wider audience.

Agenda of the meeting and scientific content of the event

The first session *Gender Bias in Scientific Careers. Why still so few?* was composed by two paper presentations followed by the reflections of a discussant and free participants questions.

The first paper presentation, titled “*Why still so few women in scientific careers* ” was delivered by Kate Purcell Emeritus Professor from the University of Warwick – Institute for Employment Research, UK. The paper intended to answer to the question why still so few women gain access to scientific and research careers while the number of girls graduating in STEM is increasing?

On the subject Purcell proposes many data on UK higher education in STEM and access to managerial, professional and technical careers, underlying that a gender pay gap still exists even in scientific and research careers. Segmentation in career progress, female under-representation in top jobs in STEM still affect knowledge based society. To better understand and communicate these phenomena Purcell suggests to researchers to differentiate between general and subject/industry - specific variables and universal trends and cultural practices reflecting well-established gender stereotypes and power disparities. The author concludes indicating to policy makers the need to identify specific dysfunctional processes and to develop long term specific anti-discrimination processes.

The second paper, titled “*Breaking Patterns: How Female Scientists Negotiate their Token Role Today*” was presented by Marita Haas, Professor from Vienna University of Technology, Austria. The dissertation was centred on the exams of biographies self narrated by women in STEM, in order to understand the main biographical and structural conditions admitting women to academic and scientific careers.

After conducting in-depth interviews with her research group, Haas noted that biographical pre-conditions such as the absence of family support and an absence of correct male role models, united with structural conditions such as informal networks for hiring and promoting and strong dependence on a sponsor obstruct the effectiveness of European antidiscrimination law on gender equal opportunity in science and research.

Haas work suggests that the effectiveness of gender equal opportunities should be measured on the realistic ground of workplace and life/work balance, rather than in juridical texts and normative documents.

The discussant of this first session was Supakwadee Amatayakul, Professor from Chulalongkorn University, Thailand, currently visiting scholar at Institute for Research on Population and Social Policies of Italian CNR. During her intervention Amatayakul focused on the cultural differences from the European approach on the gender issues in science underlying that sometime also definitional specification could be different. Amatayakul underlined that today research systems keep increasingly to be global and international and this contributes the Asian scientific system to be more and more open to foreign researcher, both male and female. Secondly Amatayakul stressed the

importance of using also qualitative methods to explain the persisting women underrepresentation, that the statistics presented in the session make so clear.

The second session, titled *A political matter. Power, gender and research institutions policy* was composed by two paper presentations followed by the reflections of a discussant and free participants questions and debate.

The first paper, titled *Gender Bias in Peer Review*, was presented by Ulf Sandström, Professor at Linköpings Universitet, Sweden.

The paper was focused on two different aspects of gender bias: inequality in peer review and in awarding excellence grants. Analyzing data about gender bias in classic peer review process, Sandström showed a female under-representation in the selection of the reviewers, in the coverage of the scientific fields and in the practice of indirect evaluation by supervisors. Sandström proposed some corrections to the classic Peer Review process enabling female scholars fairer opportunities of publishing their works. On the other hand data on gender bias in awarding excellence grants show not only a temporary but a long term female over-representation, due to the fact female scholars tend to not re-submit rejected applications, while men do. Sandström warns how this trend may pursue the unintended effect of increasing the under-representation of women in one of the most significant aspect of scientific careers.

The second paper, titled *Power, gender and research institutions policy*, was presented by Christian Suter, Professor at the University of Neuchâtel, Switzerland. The paper was based on an analysis of power in classical and contemporary sociologists and the application of the emerging categories to gender inequality. The question of gender gap was therefore considered in a larger conception of academic and scientific power, considering the remarkable relevance of power structures for specific groups, such as doctoral and postdoctoral scholars. Accordingly to Weber concept of power and its forms (traditional, charismatic, legal-rational) Suter suggests, in order to better represent women in scientific and academic careers, to reducing the impact of the informal and personalised forms of power (traditional and charismatic power) and strengthening rational-legal forms, to formalise academic positions, to release them from clientelistic relationships. Such actions may contribute to a transformation of academic power and to a more adequate gender distribution into research and university.

The discussant of this second session was Nico Pitrelli, researcher from SISSA University of Trieste, Italy. During his intervention Pitrelli noted that Sandström analysis should also take in account the strong power that academic publisher still have. In addition new information technology are changing radically the usual peer review system in same discipline.

The third session, titled *Work and lifetime balance for women in science. Institution and practices supporting female researchers and scientists* took place on September 24th, and was composed by two paper presentations followed by the reflections of a discussant and free participants questions.

The first presentation was given by Dr. Aurelija Novelskaite, Researcher at Vilnius Institute for Social Research, Vilnius Lithuania.

After a complete review of all European policies on gender equal opportunity in research and academy, the paper stress the importance of considering the unequal burden of gender division in household and family care. Solutions to this question should be considered at the level of Member State policies, instead of EU level, because of the involvement of society norms and values. In this sense, more research is needed on the determinants of work–life balance in a wider societal context, proposing solutions such as flexibility, use of new technologies, display of new forms and paradigms of law for family and work conciliation.

In this sense a good set of MS policy recommendation, based on EU policies, could provide a better and fairer distribution of the workload even in family even at work.

The second paper, *Family-or-Science Dilemma: Findings of an empirical study conducted with Bulgarian female early career academics and researchers (work-life balance, dual careers and mobility)*, was sent by Dr. Nikolina Sretenova, researcher from the Bulgarian Academy of Sciences in Sofia, Bulgaria who could not participate to the meeting and was read by Dr. Lucio Pisacane – IRPPS-CNR, who also had the task to discuss it. The paper was based on an analysis of the scarcity of research and literature production on gender and science in Eastern countries. This part of the paper provides review of researches on the topics of ‘Horizontal and vertical segregation’ and ‘Work-life balance’ carried out at the regional level of Eastern countries, including Bulgaria from 1980s onwards and illuminates the changing trends of the research on women and science. The paper also analyse the work-life balance, dual careers, mobility and child-care facilities and flexibility: from gendered private matters to public issues *Family-or-Science Dilemma: Findings of an empirical study conducted with Bulgarian female early career academics and researchers (work-life balance, dual careers and mobility)*.

The discussant of this third session was Dr. Lucio Pisacane researcher from IRPPS-CNR, Rome (Italy). During his intervention Pisacane underlined the complex heritage of Communist period on Eastern country scientific systems that from one side supported women participation to science but did not ensure that women reach power position in scientific institutions. Dr. Lucio Pisacane concluded that on work-life balance the emerging issues are child care facility, support to family mobility and support action to dual carrier.

The fourth session *Communicating women in science. Models and strategies for a better representation of female scientific careers* was composed by two paper presentations followed by the reflections of a discussant and free participants questions.

The first paper was given by Fabienne Crettaz von Roten, Professor at the University of Lausanne, Switzerland. The dissertation was focused on the importance of communicating science for female researcher and scientists. Starting from data Crettaz von Roten shows how public outreach activities, production of materials for general public and “popularization” of science are mostly practiced by male scientists. Women in research and academy have a different, more complex and satisfactory, relationship with the media and conceive the dissemination of their research as risky (it could be misunderstood or misused). Evidence shows that male scientists and researchers, instead, benefit

from a proper communication of their work either in public outreach activities either in popularization. Crettaz von Roten noted that the creation of special permanent institutions within Universities improved women scientists and researchers communication abilities and the dissemination of their researches.

The second paper *On the representation of women's scientific careers: from theory to good practices*, was presented by Dr. Cristina Mangia, researcher at ISAC – CNR and President of the Association Women and Science (Donne e Scienza) Lecce, Italy.

The paper was based on evidence on some of the most common gender stereotypes on women in science in Italian school textbooks. Arguing that a well balanced gender representation of women in science and other professional environment starts from young generations education, Mangia pointed out some strategies and good practices, based on women scientists empowerment, on the dissemination of female scientists biographies as role models and on better implementation of current laws. Italian Women and Science Association developed a specific attention for teachers education on the theme of gender equality in science in every stage of school careers and also developed some positive action (Strega Project) in order to increase women participation in scientific careers. The relevance of these good practices is very high and innovative in a general societal and scientific context where gender equal opportunity is not very much considered as an issue.

The discussant of this fourth session was Dr. Stefan Fuchs, researcher from IAB - Institute for Employment Research - The Research Institute of the German Federal Employment Agency from Nuernberg, Germany. During his intervention Fuchs noted in both papers the preference of small scale solutions instead of social re-engineering. Obtaining a better and different visibility, also using the new social media, is crucial for women scientist in order to gain a better and more coherent public image.

The fifth session, *Next frontier. Exploring programs and policies to promote a new model of gender inclusive science* was composed by two paper presentations followed by the reflections of a discussant and free participants questions.

The first paper, titled *Brain, Sex and Prejudice* was presented by Dr. Catherine Vidal, researcher at Institute Pasteur, from Paris, France. The paper was based on the analysis of the false myth of different lateralization in female and male brain. The recent theories on brain plasticity, introducing the crucial difference from function and structure of the brain, have cleared the field of scientific knowledge by the idea that male and female brains are structurally different. The main differences from brain to brain, regardless of sex, are tied to the social experiences incorporated into our brains. This evolution of neurosciences requires us a fresh thinking about all previous inducted ideas on female and male opportunities to pursue a career in STEM.

The second paper, titled *Innovative Gender. The Polish Norwegian Research Program* was presented by Danuta Tomczak, Professor at Østfold University College in Halden, Norway.

The paper proposed the aim and characters of the just launched InnoGend Research Program, whose final objective is the promotion of mainstreaming gender equality and of work-life balance. The idea behind these 2 lines of research is that innovating in gender policies might be a new source of

progress. The methodology used for measuring the link between innovation and gender is based on comparing two rankings of Competitiveness (2013) and Gender Gap Index (2012). Social and economic innovation might spring out from a more inclusive and participatory social system, where gender equality is one of the social and economic goals to be attained.

The discussant of this fourth session was Dr. Elba Mauléon, researcher from CINDOC-CSIC, from Madrid, Spain. During her intervention Mauléon noted that both the papers were useful for the future research on women in science because of their innovativeness. The first paper offered sound scientific evidence for dismantling social prejudices on women in STEM. The second paper was relevant for its fresh thinking about the connection of gender and innovation, accordingly to a multidisciplinary and comprehensive analysis.

After the end of the last session, the workshop closed with a short discussion session, conducted by the Convenor: the presented intention was to set new scientific opportunities of cooperation on the topic, by creating a common network for a Cost Action proposal.

3. Assessment of the results, contribution to the future direction of the field, outcome

The workshop “*Portrait of a Lady: Women in Science. Participation, Issues and Perspectives in a globalized research system*” had a very positive evaluation from both participants and organizer. The debate on women underrepresentation in science took forward both the analysis on determinant factors and contributed to possible solutions. The causes of these underrepresentation can be found, as it was discussed, in a multiple set of reasons. Gender-based discrimination in scientific hiring and socio-cultural salience of different careers path are some of those, together with lack of institutional policies for women to balance work/personal time and the scarcity of female scientific role models at the top levels of academia and research institutions. The workshop proposed and discussed a number of positive strategies that encompass a greater equilibrium in gender distribution in scientific careers could have positive effects both enabling appropriately-qualified women to achieve their potential and diversifying the STEM workforce and promote greater equality of aspiration among young people.

A COST proposal is foreseen by the institutions participating in the workshop as a possible outcome. In particular was pushed forward the creation of a common network to be presented at the next call for proposal of Cost Action. The participants agreed to work upon a proposal to be submitted by beginning of November to the Trans-Domain open call of European Cooperation in Science and Technology. The proposed network will promote woman participation to science and technology and facilitate higher levels of female recruitment to the STEM careers. The network approach builds upon the already established programs and experiences of participants’ institution to promote practical action for the early awareness of scientific careers for female students.

4. Final programme

Monday, 23 September 2013

- 10.30-10.40 **Registration and Welcome Coffee**
- 10.40-10.50 **Welcome by Convenor**
Sveva Avveduto (IRPPS - CNR - Rome - IT)
- 10.50 – 11.10 **Presentation of the European Science Foundation (ESF)**
Alison Woodward (Scientific Review Group for the Social Sciences)
- 11.10-13.00 Morning Session: Gender Bias in Scientific Careers. Why *still* so few?**
- 11.10-11.40 **Presentation 1**
Kate Purcell (University of Warwick – UK)
- 11.40-12.10 **Presentation 2**
Marita Haas (Marita HAAS - Vienna University of Technology – AT)
- 12.10-12.25 Discussants Commentaries
Discussant: Supakwadee AMATAYAKUL - Chulalongkorn University - TH
- 12.25-12.45 Questions and Discussion
- 12.45 - 14.15 *Lunch*
- 14.15-16.45 Afternoon Session: A political matter. Power, gender and research institutions policy**
- 14.15-14.45 **Presentation 1**
Ulf Sandstrom (Linköpings Universitet - SE)
- 14.45 -15.15 **Presentation 2**
Christian Suter (Université de Neuchâtel - CH)
- 15.15-15.30 Discussants Commentaries –
Discussant: Nico Pitrelli – SISSA University Trieste -IT
- 15.30-15.50 Questions and Discussion
- 15.50- 16.10 *Coffee / tea break*
- 16.10-16.45 **Planary Discussion**
- 19.00 *Social Dinner*

Tuesday, 24 September 2013

09.15-10.45 First Morning Session: Work and lifetime balance for women in science. Institution and practices supporting female researchers and scientists

09.15- 09.45 **Presentation 1**
Aurelija NOVELSKAITE (Vilnius Institute for Social Research - LT)

09.45-10.15 **Presentation 2**
Nikolina SRETENOVA (Bulgarian Academy of Sciences - BG)

10.15-10.30 Discussants Commentaries - Discussant:
Lucio PISACANE (IRPPS CNR – IT)

10.30-11.00 *Coffee /Tea Break*

11.00-13.00 Second Morning Session: Communicating women in science. Models and strategies for a better representation of female scientific careers

11.00-11.30 **Presentation 1**
Fabienne CRETIAZ VON ROTEN (Université de Lausanne –CH)

11.30-12.00 **Presentation 2**
Cristina MANGIA (ISAC CNR – Lecce- IT)

12.00-12.15 Discussants Commentaries - Discussant: **Stefan FUCHS** (IAB - German Federal Employment Agency – DE)

12.15-12.40 Questions and Discussion

12.40-14.00 *Lunch*

14.00-15.30 Afternoon Session: Next frontier. Exploring programs and policies to promote a new model of gender inclusive science

14.00-14.30 **Presentation 1**
Catherine VIDAL (Institut Pasteur – FR)

14.30-15.00 **Presentation 2**

Danuta Tomczak (Østfold University College)

15.00-15.15 Discussants Commentaries - Discussant:
Elba MAULEON (CINDOC – CSIC – ES)

15.15- 15.30 Questions and Discussion

15.30-16.15 **Discussion on follow-up activities/networking/collaboration**

16.30 *End of Workshop and participants departure*

5. FINAL LIST OF PARTICIPANTS (

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Co- Convenor:

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Participants:

A. Paper Givers

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B. Discussants

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research area: physics and science communication

6. Statistical information on participants

Age bracket:

Early stage scholars	Experiences scholars
5/16	9/16

Participants countries of origin

Italy	4/16
Switzerland	2/16
UK	1/16
France	1/16
Lithuania	1/16
Spain	1/16
Thailand	1/16
Austria	1/16
Germany	1/16
Sweden	1/16
Norway	1/16

M/F repartition

Male	Female
5/16	9/16

Scientific specialty

Disciplines involved in the ESF EW
SOC
HUM
MED
PEN

P.S :Note that statistics of this Exploratory Workshop included Dr. Nikolina Sretenova that was foreseen as participant but at last moment could not attend. She is included in this scientific report since she sent a paper that was read during the meeting

Dr. Nikolina SRETENOVA

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