Promoting gender balance and inclusion in research, innovation and training: from gender audit to gender equality plan

Prof. Tullia Gallina Toschi

PLOTINA is an EU funded H2020 project that started in February 2016 (total duration: 48 months).

The overall objective of PLOTINA is to enable the development, implementation and assessment of self-tailored Gender Equality Plans with innovative strategies for the RPOs involved. This objective is based on the vision to foster excellence and the social value of innovation, by: stimulating a gender-aware culture change; promoting career-development of researchers to prevent the waste of talent, particularly for women; ensuring diversification of views in research and teaching.

PLOTINA aims at: preventing underutilization of qualified female researchers by removing barriers to recruitment, retention and career progression, allowing the EU to benefit from the talents of all its researchers; improving decision making by addressing gender imbalances; incorporating the sex/gender dimension in research especially where not applied.
Observing the typical pattern for academic careers at UNIBO the **leaky pipeline effect became evident**: the female predominance trend amongst students enrolled (55% women to 45% men in 2016) and graduates (58% women to 42% men in 2016) is inverted for the gender ratio amongst PhD students (47% women and 51% men). These numbers are fully reversed amongst tenured researchers, full professors and associate professors, where male predominance is clearly evident (men in 2016 made up 76% of full professors, women only the 24%).
The integration of Gender in Research

Considering the overall data on the integration of the gender/sex variables in research, it is evident the lack of awareness and sensitivity on gender/sex issues.

A survey delivered to all coordinators of research programs financed in 2015 (66) shows that the majority of respondents do not disaggregate data by sex/gender and do not integrate those variables in research.
• The workplan proceeded in four overall stages:

• **assess the current situation in all Partner RPOs (gender audit);**

• **design self-tailored GEPs for each RPO;**

• **implement and evaluate Actions in the Partner RPOs to address the targets of the GEPs;**

• **create a platform of resources that can be used by RPOs across Europe to implement their own GEPs suited to their own situations.**
UNIBO Gender Audit

UNIBO, coached by PD and EL, started its internal audit in July 2016: Collection of Qualitative and Quantitative Data. The purpose was twofold:

• collecting information on the “state of the art” related to UNIBO personnel’s representations and perception on gender related issues
• collecting feedbacks on the possible positive actions that can be developed and implemented in the Gender Equality Plan.

Almost all the informers (92%) identified by the GAT during the Gender Audit Plan participated in interviews and focus groups and agreed on the necessity of the GEP. As far as the quantitative data collection is concerned, GAT had a good response as well: survey response rate was more than 80% and Departments response rate was more than 75%. The high interest towards the Project made it possible to reach 30 Departments.
A minority of informers showed resistance in addressing gender issues, or portrayed gender equality as a minor issue, casting doubts on the fact that it should be a priority in Academia.

The understanding of “gender equality” varies on the basis of informers differences in political, disciplinary and professional positioning. In some cases, it was a challenge putting together these different visions.

28 out of 33 Departments nominated their PLOTINA Delegates: key role in organizing interviews/focus groups and in facilitating quantitative data collection, in promoting the Project within their Departments.

UNIBO Governance has already undertaken actions to promote gender equality in the Academia (a more gender sensitive language in Unibo directories, the Alma Gender Integrated Research Team, the Gender Report, the 8 seminars cycle on equal opportunities in the workplace). These actions provided a fruitful background for the Gender Audit in that they facilitated and informed respondents participation and contribution.
A Gender Equality Plan is a tool for structural change.

- EC considers a GEP a set of actions aimed at:
  - Conducting impact assessment/audits of procedures and practices to identify gender bias
  - Identifying and implementing innovative strategies to correct any bias
  - Setting targets and monitoring progress via indicators

Plotina has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement (G.A NO 666008).

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With its GEP UNIBO would like to contribute to the achievement of the Sustainable Development Goals identified by UN as key priorities for the 2030. UNIBO has already embraced UN Development Goals, as its Strategic Plan 2016-2018 shows. In particular UNIBO PLOTINA Team will focus on the Goals numbers 5 (Gender Equality) and 10 (Reduce Inequality).
Best Practices from UNIBO GEPs

1.1 the Annual Gender Report publication, to monitor the gender and diversity state of the art in the organization disaggregating quantitative and qualitative data by gender;

1.2 the introduction, in internal research evaluation procedures, of the consideration of maternity and parental leave periods;

1.3 the internal training seminars on the use of sex and gender perspective in research, to foster the acknowledgement of its economic, social and innovation value.
PLOTINA best practice for gendering research

LIST OF GOOD PRACTICES for gender equality and sex and gender perspective integration in research and researchers

Researchers and research: gender equality and sex and gender perspective

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PLOTINA best practice for gendering research

- **EXPECTED OUTCOMES**: the dissemination of gender aware research. Two training seminars at Departmental and Institutional level: Engineering School, Social and Political Sciences Department.

- **IMPLEMENTATION**: with ARIC – Research Area Administrative Division – and Alma Gender IRT the PLOTINA Team fostered the creation of a multidisciplinary group of experts, with STEM and SSH backgrounds. The group met twice and conducted internal seminars in 2017: the first targeting Engineering researchers; the second targeting SSH researchers. Engineering was identified as a privileged Department to start because, in this field, the integration of sex and gender in research is still at the beginning. After the seminars, participants received a pdf document including all the teaching materials used by speakers.

- **RESULTS**: 27 Unibo staff members (researchers, professors, PhD students) participated in both seminars and had the occasion to enhance their knowledge on the use of the sex and gender perspective and on the funding opportunities provided by H2020. An evaluation questionnaire was delivered to participants.

- **EVALUATION**: As for the seminar of the 24th of November at the Engineering School, all participants rated its contents as useful, interesting and stimulating. The 100% of participants think that the seminar’s contents can be applied in their field of research. As for the seminar of the 7th of December at the Social and Political Sciences Department all participants rated it as useful and stimulating, 25% of participants rated its contents as advanced, and 75% as interesting. For both seminars all participants answered that the information acquired met their expectations.

- **LESSONS LEARNT/TRANSFERABILITY/REFLECTION**: Utilising UNIBO human resources competences, skills and knowledge could enable UNIBO to make this action sustainable in the future.
### Recruitment, career progression and retention

**PLOTINA best practice for career progression**  
**LIST OF GOOD PRACTICES for recruitment, career progression and retention**

<table>
<thead>
<tr>
<th>KEY AREA</th>
<th>NAME OF THE ACTION</th>
<th>TYPE OF ACTION</th>
<th>MAIN AIM OF THE ACTION</th>
<th>ORGANIZATION</th>
<th>ORGANIZATION TYPE</th>
<th>LEVEL OF IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment, career progression and retention</td>
<td>Introduction in internal research evaluation procedures of the consideration of maternity and parental leave periods</td>
<td>Positive action/policy</td>
<td>The main objective of this action is to grant an equal evaluation of the scientific production and research of both female and male UNIBO academic staff.</td>
<td>Alma Mater Studiorum – Universita Di Bologna</td>
<td>Higher education institution</td>
<td>Researchers and professors</td>
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PLOTINA best practice for career progression

• **EXPECTED IMPACT:** A more equal evaluation of both female and male academic staff’s research and scientific production; attention to the issue of equal assessment/evaluation as a structural gender policy within the RPO.

• **IMPLEMENTATION:** In 2017 University Research Evaluation (assessing 2016 Unibo academic staff’s scientific production) it has been introduced a clause that takes into account maternity leaves and time off work. On the one hand, some UNIBO key actors and decision makers – namely: the Research Vice Rector; the Guarantee Committee for Equal Opportunities, Employee Wellbeing and Non Discrimination at Work (CUG); the Rector’s Delegate for Gender Equality; Human Resources Administrative Division – will have the responsibility to monitor annually the application/retention of the evaluation criteria that consider maternity and parental leaves in the University Research Evaluation Board procedures. On the other hand, the University Research Evaluation Board have the responsibility to apply the criteria. The UNIBO Plotina Team will monitor the retention of the clause. The Human Resources Administrative Division will monitor the application of the clause.

• **RESULTS:** The action allows a more equal research evaluation system. Women and men who decide to take parental leaves have more time to develop their research records which could lead to a better evaluation of their work. In the short term, women – who often take more caring responsibilities than men – can be evaluated on more equal grounds.

• **EVALUATION:** In the long term, men might be encouraged to take parental leaves and take more caring responsibilities. Women might feel more supported in taking family care responsibilities and might be more likely to be assessed positively (by evaluators acknowledging the time devoted on caring) leading to career development and progression.
# PLOTINA best practices for the governance bodies

**LIST OF GOOD PRACTICES** for the governance bodies, key actors and decision-makers

The governance bodies, key actors and decision-makers

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<tbody>
<tr>
<td>The governance bodies, key actors and decision-makers</td>
<td>Monitoring gender and diversity state of art in the organization, gathering and analysing gender disaggregated quantitatively</td>
<td>Data gathering and analysis</td>
<td>Analysis of the data on the composition of teaching staff, administrative staff and students by gender at UniBo as a whole, as well as broken down by Departments and Schools. This will indicate the situation of vertical and horizontal segregation, and</td>
<td>Alma Mater Studiorum – Università di Bologna</td>
<td>Higher education institution</td>
<td>Researchers/professors and technical and administrative staff, students</td>
</tr>
</tbody>
</table>

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PLOTINA best practice for the governance bodies

• **MAIN AIM OF THE ACTION:** Analysis of the data on the composition of teaching staff, administrative staff and students by gender at Unibo as a whole, as well as broken down by Departments and Schools. This will indicate the situation of vertical and horizontal segregation, and the ceiling glass effect.

• **EXPECTED IMPACT:** First, raising awareness among governing bodies, teaching and administrative staff as well as among students on vertical and horizontal segregation, on glass ceiling and on the urgency to undertake actions to solve them. Second, the monitoring and improving of critical situations, characterized by unequal conditions.

• **IMPLEMENTATION:** An interdisciplinary team collected data manually but mostly in digital format (from Unibo DataWarehouse) to draft the Gender Report. The Gender report was presented and approved in June 2017 by the Board of the University of Bologna, and it was presented during a Conference organised by the CUG held at Unibo in December 2017. Moreover, the Gender Report was presented in other two Conferences held in November and December 2017 at the University of Ferrara and of Padua, in order not only to spread Unibo experience and the results of the data collection carried out, but also to spread the methodology used by Unibo to elaborate the Gender Report. From December 2017, the Gender Report as well as two short versions of it (one in Italian and one in English) are online in the official website of Unibo ([http://www.unibo.it/it/ateneo/chi-siamo/bilancio-di-genere;](http://www.unibo.it/it/ateneo/chi-siamo/bilancio-di-genere;)) ([http://www.unibo.it/en/university/who-we-are/gender-budgeting](http://www.unibo.it/en/university/who-we-are/gender-budgeting)).
PLOTINA best practice for the governance bodies

**LESSONS LEARNT/TRANSFERABILITY/REFLECTION:** A Unibo strength consists of its decision to have an office specifically dedicated to the data collection, ARAG, that centralizes the gathering of information at departmental and institutional level. CUG, through Plotina, required and obtained the resources to allow ARAG collecting data disaggregated by sex and gender. It is important to define specific deadlines to obtain the data. It is crucial to disseminate the document, both internally and externally. Specifically, it is important to enhance the visibility of the document to the governing bodies in order to encourage them to undertake specific actions aimed at improving gender equality where it is necessary.

**CHALLENGES:** The wide range of data to be collected and reported requires intensive work and a great amount of human and financial resources. Data on absences and leaves required specific analysis and a thoughtful reflection on the best way to present them in order to guarantee the anonymity of particular, sensitive situations. The gathering of such an amount of data was possible thanks to the support of a specific unit of the University of Bologna, namely ARAG (Evaluation and strategic planning unit).

**RESULTS:** On the short-term, the Annual Gender Report allows monitoring vertical and horizontal segregation and glass ceiling effects. It provides the evidences to legitimate gender equality policies and to overcome “gender fatigue” and potential resistances. On the long-term, the systematic data collection on gender distribution allows assessing whether and how the situation changes over time due to the GEP.
Beef meat sexing by lipidomics: an alternative approach against food fraud

To apply analytical methods for characterizing the lipid matter of ground beef meat prepared with both male and female beef meat, and to use a chemometric approach for the identification of new possible lipid biomarkers of meat authenticity as related to the sex of animal.
FOOD FRAUD

REPORT RASFF 2017

3832 notifications related to food hazards

184 alerts related to meat and meat products (other than poultry)

Economic aspects

Safety
Forty-two samples (21 males and 21 females) of beef ground meat were randomly selected from 7 different retail stores. Male beef samples were homogenized with female ones at five different ratios, in order to obtain different representative treatments.

- F 100%
- F 75% - M 25%
- F 50% - M 50%
- M 75% - F 25%
- M 100%

The lipid fraction was analysed in depth for the overall lipid classes profile, sterols and cholesterol oxidation products.
Results
Conclusions

On the basis of these results, it can be concluded that the chemiometric approach applied to lipidomics could be a useful tool for identifying the origin and authenticity of ground meat as related to the sex of animal. However, this represents a preliminary study and a bigger sampling, as well as a deeper investigation that includes other breeding and lipid parameters (such as fatty acid composition), is required in order to confirm the actual data reported in this study.
Choice and liking for fat-rich foods: are there gender-related differences?

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1 University of Bologna; 2 University of Florence; 3 University of Basilicata; 4 University of Milan; 5 University of Gastronomic Science, Bra; 6 University of Naples – Federico II; 7 Edmund Mach Foundation, San Michele all’Adige; 8 University of Catania, Italy.

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GENDER RELATED DIFFERENCES IN FOOD STUDIES: a new approach

The mainstream approach takes into account gender differences mainly recognizing a “gender effect”, but factors affecting sensory perception and food preferences, with particular attention to fat-rich products, should be investigated “within” each gender.

This study aims at exploring the role of taste responsiveness, personality traits and attitudes on liking and choice of fat-rich meat-based foods in males and females.
Methodologies

A total of 1208 subjects participated at the study and filled in questionnaires related to psychological traits and attitudes towards foods; additionally, PROP test was administered to participants. Familiarity, stated liking and choice for fat-rich meats were measured and analysed separately for males and females.

- **A choice index** for fat-rich meats was calculated as a sum of the choices of the more fat-rich option using a questionnaire developed to evaluate preferences within a pair of food items (fatter option=1; less fat option=0).

- **Three familiarity indices** were calculated as the sum of the familiarity scores.

<table>
<thead>
<tr>
<th>Fat-rich meat choice index (FI)</th>
<th>( \text{LOW FAT} )</th>
<th>( \text{HIGH FAT} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calf rib</td>
<td>Lamb rib</td>
<td></td>
</tr>
<tr>
<td>Grilled cutlet</td>
<td>Breaded cutlet</td>
<td></td>
</tr>
<tr>
<td>Chicken breast</td>
<td>Sausage</td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>Lamb</td>
<td></td>
</tr>
<tr>
<td>Cooked ham</td>
<td>Mortadella</td>
<td></td>
</tr>
<tr>
<td>Carpaccio</td>
<td>Sliced steak</td>
<td></td>
</tr>
<tr>
<td>Cooked ham</td>
<td>Cured ham</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Familiarity with meat indices</th>
<th>( \text{FAT MEAT} )</th>
<th>( \text{FAT-COLD MEAT} )</th>
<th>( \text{LOW FAT MEAT} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamb</td>
<td>Mortadella</td>
<td>Carpaccio</td>
<td></td>
</tr>
<tr>
<td>Pork</td>
<td>Cured ham</td>
<td>Grilled cutlet</td>
<td></td>
</tr>
<tr>
<td>Beef Rib</td>
<td>Bacon</td>
<td>Chicken breast</td>
<td></td>
</tr>
<tr>
<td>Steak</td>
<td>Spicy salami</td>
<td></td>
<td></td>
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<tr>
<td>Breaded cutlet</td>
<td>Cooked ham</td>
<td></td>
<td></td>
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<tr>
<td>Pork sausages</td>
<td>Salami</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lamb</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Results

Choice of the fat-rich meat option is positively associated with **familiarity** and **preferences** (P) for fat-rich meats and salami, and negatively with preference for less fat meats. In addition, **emotional eating** is positively associated with a higher fat-rich index, while the **price criteria** in buying food is negatively associated with it. This may be explained by the higher cost of fat meats (e.g. lamb, compared to chicken).
As in females, choice of the fat-rich meat option is positively associated with **preferences** (P) for fat-rich meats and salami, and negatively with **familiarity** and preference for less fat meats. **Age** as well is associated with higher fat-rich index. In addition, in males higher **neophobia, sensitivity to reward and general health interest (Health-GHI)** are associated with a lower fat-rich meat index.
Conclusions

- This study demonstrated the contribution of the gender variable in meat-based food preferences and perception, transcending the sex/gender group effect and fostering the disaggregation of data to allow a deeper understanding of the specificity of each gender.

- Specifically, while females are induced to choose fat-rich meat products in relation to their emotional status, this choice is positively related with age in male consumers and negatively with health interest, neophobia and sensitivity to reward.

- Thus, the disaggregation of males and females data applied in this study highlights the importance of personalized strategies and guidelines to help the adoption, by females and males, of specific healthier dietary habits.

https://www.unibo.it/en/university/who-we-are/report-on-un-sdg


Gender Equality plan Unibo: https://www.unibo.it/en/university/who-we-are/gender-equality-plan
Thank you for your attention

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