



G.A. No. 611034

Project acronym **TRIGGER**

Project title: **TRansforming Institutions by Gendering contents
and Gaining Equality in Research**

**Seventh FRAMEWORK PROGRAMME
Specific programme 'Capacity'
Work programme 'Science in Society'**

FP7-SCIENCE-IN-SOCIETY-2013-1

Deliverable D. 4.4.

Report on the 1st annual survey on women's publishing activities

Due date of deliverable: 11 /2014

Actual submission date: 11 /2014

Start date of project: 01.01.2014

Duration: 48 months

Organisation name of the WP leader: UPD

Organisation name of lead contractor for these deliverables: UPD

Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013)		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission)	

The action 4.6.2. Annual statistics on women's publishing activities for the 1st year unfolded from June to October 2014 with the collaboration of two departments of the University Paris Diderot involved in the TRIGGER project. This deliverable, which is articulated in three parts, includes a description of the different steps which help us to delimitate the survey, as well as the main outcomes of our works and some perspectives of continuation.

Introduction

The publishing activity is decisive for researchers. In addition to the diffusion of research findings it can be a key element for a career.

In 2009, 38% of lecturers and lecturers-researchers of University Paris-Diderot (UPD) were women¹. But if we look at the sex distribution according to the hierarchical position this share can be quite different: it dwindles as we go up the hierarchy. Thus among the assistant-professors the proportion of women increases to 47 % when among the professors (which is the highest position) they represent only 26 % of the academic staff. This effect, called the glass ceiling phenomenon, is all the more visible in feminized fields. For example in the Applied Languages and Intercultural Studies department (ALIS), women account for 67 % of total staff, 71 % of the assistant-professors but for only 40% of the professors.

Because of this, it seems interesting to see if differences in the publishing activity exist between men and women and if this could explain some career differences.

I – Delimitation of the report through the data collection

To set up a complete analysis, we first decided to work on two UPD laboratories: the Jacques Monod Institute (JMI), a centre for basic research in biology; and the AstroParticle and Cosmology (APC) laboratory.

To get more information on the publication data already available, we met the Research and Innovation Support Department (RISD). This department supports the researchers in different ways: call for projects, publications, research productions at the University etc. They have reliable knowledge about what is available concerning publications at UPD and how to get it. This meeting was very useful to define clearly what could be done for this action and how to be efficient to complete it. They raised two important issues which had not been anticipated at the time of describing the action:

- Publication habits can be very different from one field to another. Several criteria should be taken into account: in Literature, it is more common to write alone or with just another person whereas in science 20 authors (biology) or even 200 (physics) may sign an article; the order of the different authors may be important in some disciplines (medicine) but not in others (physics); for some subjects, only papers written in English are significant (science) and not for others (human sciences); the reputation of the journal may also play an important part but here again reputations vary depending on the field of research
- There is no complete database of UPD publications. Even if the open archive HAL (Hyper Articles en Ligne²) is widely used in France, there is no obligation for researchers to register their publications in it. It would seem that only 15 % of UPD publications are recorded in this open archive. This is why HAL databases are not exhaustive. Furthermore each UPD laboratory is free to choose the way it saves information on its publications: here again, laboratories have no obligation and no

¹ All the figures of the introduction come from a report of the UPD "Statistiques sexuées et temporelles du personnel titulaire de l'Université Paris Diderot (2000-2009)" (2011) on sex statistics in the workforce over the period 2000-2009.

² In French.

homogenous registration is applied. Fortunately, UPD was assessed by the Agency for Research Assessment and Higher Education (ARAHE) in 2012. Each UPD laboratory was asked to give a list of all their members' publications between 2007 and 2011. But these long lists are only available as word files and are not easily convertible into excel files or any another kind of files which could be used to run statistics. After discussion with RISD, we found out that the creation of an excel file using the original word file would occupy one person for over a month for only one laboratory because of all the information given for each publication (authors' names and surnames, title, journal references, publication references etc.). This work has already been done for some laboratories but not for all of them.

Given these new elements we decided to add another laboratory to our analysis. Firstly we used a file which had already been converted into excel, secondly we sought to get information from a field of research with publication processes different from the ones used in biology and physics. Thus we added the data of the History of Linguistics Theories (HLT) laboratory to our sample. As we did not have time to create the whole excel file for JMI and APC, we decided to do it only for the refereed articles³, ie articles with the greatest impact, published by two APC teams and two JMI teams. After preliminary work, a meeting with the TRIGGER focus group, including the director of JMI laboratory, was organized. He informed us that we could be given an easy-to-use list of their publications in 2012 in order to help us make a better study.

With this information on the publications, the idea was to create a ratio of women among authors. But to carry out relevant analysis, we had to find out the ratio of women in the laboratory. Here again the 2012 ARAHE assessment was useful: the RISD was able to give us the academic staff composition by laboratories. Note that the data is only available for 2012.

Table I.1 – Characteristics of the used data

Laboratory	Year(s) of publications	Kind(s) of publications	Number of laboratory teams	Year of the staff composition
HLT	From 2007 to 2011	All kinds	All teams	2012
JMI	2012	All kinds	All teams	2012
APC	From 2007 to 2011	Refereed articles	2 teams (ADAMIS & Théorie)	2012

Table I.2 – Sample size

Laboratory	Number of publications	Number of persons in the staff
HLT	951	78
JMI	126	232
APC	41	63

Note: For APC, as we observed information for only 2 teams, samples are smaller.

II – Analysis of the HLT and JMI laboratories: data on publications and staff

With the collected data, the first step was to calculate the ratio of women among authors for each publication. We must underline here that we only took into account the authors attached to the concerned laboratory, excluding external staff. The second one was to analyze the laboratory's ratios according to the number of women in their staff. Lastly we sought out if

³ Articles in international or national journals with reading committee as identified by ARAHE or in international data bases.

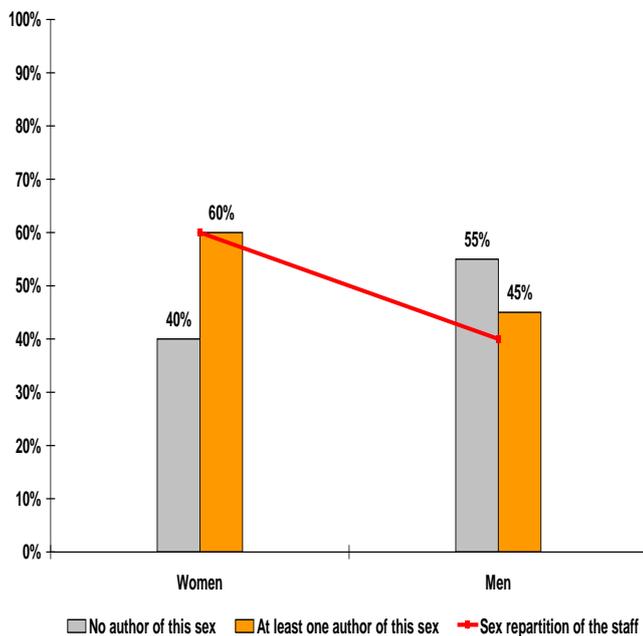
other variables, such as the type of article or the position occupied by women in the staff, could explain the degree of implication of women in writing papers.

To conduct the analysis it is essential to know one thing: the sex of the authors. This information was available for HLT and JMI but not for APC. Indeed in the physics department, we only knew the name and the first letter of the first name of the authors. Thus a supplementary task was necessary for APC to find out the entire first name of each author and to find the corresponding sex, which is not always easy as some first names are used by both sex, and some foreign names are not familiar, which requires further investigations. In the end we could not determine the authors' sex for 9 publications and so the size of the publications sample decreased from 41 to 32. The sample size being too small, we decided to not run statistics on it. We will suggest an alternative way to examine this laboratory in the third part of the deliverable.

In the linguistics laboratory, there are more articles written without any male signatures than articles without a female signature: only 4 out of 10 publications do not include a woman, against over 5 out of 10 for men. This may result from the fact that a majority of HLT academic staff is made up of women (60 %).

In the biology department, results by sex are almost similar: the proportion of publications without one or the other sex is about 30 % in each case. As for academic staff, there are almost as many women (53%) as men (47%).

Graph II.1 – Sex repartition of the authors and staff for HLT laboratory

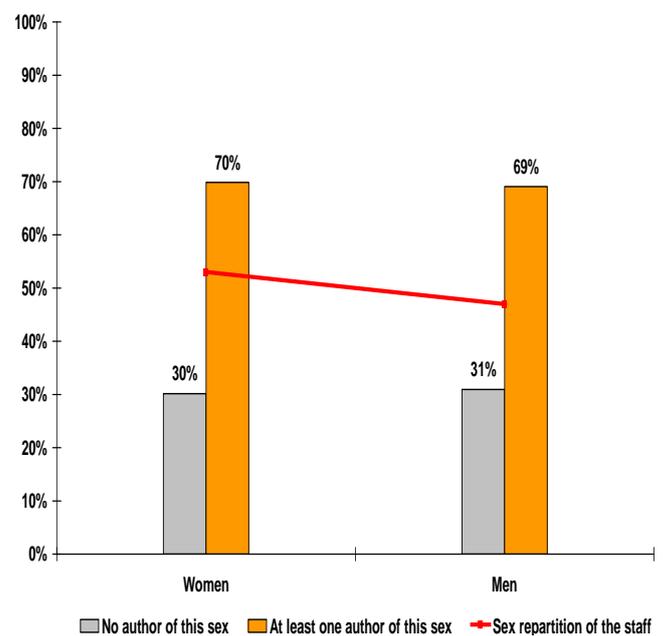


Field: All the 951 publications from 2007 to 2011 and the 78 PhD students, PhD graduate, lecturers-researchers and researchers in 2012 for HLT laboratory.

Analysis: Of the 951 publications, 40 % do not have a single female author and 60 % have at least one woman among the authors. Out of the 78 people of HLT staff, 60 % are women.

Sources: Figures provided by HLT laboratory for the 2012 ARAHE assessment.

Graph II.2 – Sex repartition of the authors and staff for JMI laboratory



Field: All the 126 publications and the 232 PhD students, PhD graduate, lecturers-researchers and researchers in 2012 for JMI laboratory.

Analysis: Of the 126 publications, 30 % do not have a single female author and 70 % have at least one woman among the authors. Out of the 232 people of JMI staff, 53 % are women.

Sources: Figures provided by JMI laboratory for the 2012 ARAHE assessment.

The number of women in HLT is high with a proportion of 60 % of total staff (table 4.1). Despite this representation, women are under-represented in the higher positions. Among the lecturers-researchers, they are mainly assistant professors, not professors. It is the opposite for men: a vast majority of them are professors. The analysis is the same for researchers. Women are both first- and second-class researchers and directors of research when men are only found in the higher position (first class). But we should underline that the number of people in the staff is quite small. So it would be difficult to draw a general conclusion from this.

Over half (53 %) of JMI staff are women (table 4.1). But here again this representation of women is only true in general. The break-down reveals another situation. For lecturers-researchers, women are above all assistant professors, very few of them being professors. There are almost as many male assistant professors as professors. For researchers, women are well represented in all the positions. But we can see that they remain mainly researchers when men are mainly directors of research.

Table II.1 – Proportion of women according to their position in HLT and JMI laboratories, in 2012

Position in the laboratory		HLT laboratory			JMI laboratory		
		Number of women	Number of men	Proportion of women, in %	Number of women	Number of men	Proportion of women, in %
PhD student		13	17	43	18	19	49
PhD graduate		18	3	86	45	36	56
Lecturer-researcher	Assistant professor	5	1	83	12	9	57
	Second class professor (P2)	1	3	25	0	4	0
	First class professor (P1)	0	1	0	3	4	43
	Remarkable class professor (PR)	1	1	50	0	0	0
	Professor emeritus	1	1	50	0	2	0
Researcher	Contract researcher	0	0	0	11	13	46
	Second class researcher (R2)	2	0	100	5	4	56
	First class researcher (R1)	3	2	60	15	4	79
	Second class director of research (RD2)	2	0	100	8	10	44
	First class director of research (RD1)	1	1	50	4	1	80
	Remarkable director of research (RRD)	0	1	0	0	0	0
	Director of research emeritus	0	0	0	3	2	60
Total		47	31	60	124	108	53

Field: All the 78 PhD students, PhD graduate, lecturers-researchers and researchers of HLT laboratory in 2012.

Sources: Figures provided by HLT and JMI laboratories for the 2012ARAHE assessment.

III – Analysis of the APC laboratory: conduct of interviews

As our sample for APC was too small, we tried to find an alternative solution to conduct our study on this laboratory. After discussions with the TRIGGER think tank, which included the director of the physics department and other people of this department, we thought that rapid qualitative interviews with some APC researchers would be a good way to find a perspective for this action concerning the fields without available data.

As there are only 4 female lecturers-researchers in this laboratory, we sought to interview the 4 of them and 4 other male lecturers-researchers with similar characteristics (areas of research, careers etc.). With the help of a female lecturer-researcher, a framework for the interviews was established. It covered several subjects:

- career course since the obtaining PhD
- teaching activities
- publishing activities
- funding activities: application for funding, application for grant etc.
- staff management activities and implication in the different councils of the laboratory
- family life

We managed to meet the 4 women and 2 of the 4 men. Interviews lasted between 30 (for men) and 60 minutes (for women). With them we identified a number of points which appeared interesting to analyze the different positions between the two sexes in addition to the publishing activities:

- the way to apply for a permanent job⁴: women seem to take time before applying and their criteria to apply seem stricter than the ones of men;
- the repartition of the work time: women seem to be more involved in teaching activities whereas men seem to concentrate more on research activities and spend more time in the different councils of the laboratory;
- family life⁵: the impact of having children seems to be different depending on sex.

Conclusion

This preliminary work does not yet give conclusive results but indicates further ways to find out if women and men are differently involved in their work and their publishing activities. It appears that the identification of specific attitudes which lead to specific positions is essential. Finding out if some characteristics by sex exist at work⁶ would also be invaluable. This is why to complete the statistical results we recommend conducting interviews similar to those carried out in the physics department, thus furthering analysis on potentially different attitudes. Furthermore this kind of approach would allow us to study the field where figures are unavailable. Finally, we suggest that an in-depth analysis of publishing activity by sex would require access to the composition of reading committees of refereed journals and the possibility to talk with some of their members.

⁴ MARRY, Cartherine and JONAS, Irène, « Chercheuse entre deux passions. L'exemple des biologistes », in *Sciences, recherche et genre*, La découverte, 2005, p.216

⁵ LHENRY, Sophie, « Les enseignantes-chercheuses à l'université et la norme masculine de réussite », Paris-Diderot University Press, 2011-2012

⁶ See, SCHIEBINGER, Londa, « Meters of Equity », in *Has Feminism Changed Science ?*, Cambridge, MA, Harvard University Press, chap. II, 1999, p. 33-53