GARCIA WORKING PAPERS 15
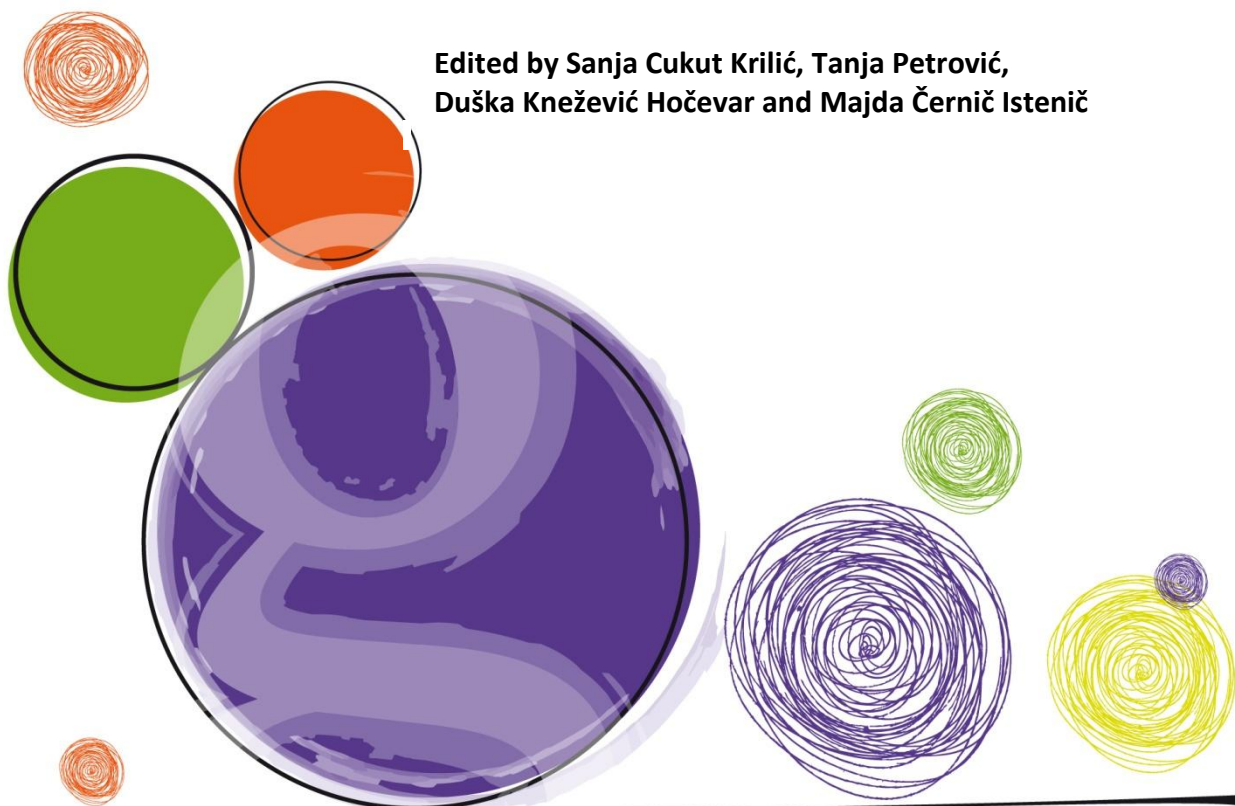
Organisational culture and everyday working life: Quantitative and qualitative analysis in six European Countries

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Summary

Executive Summary

The *Report on Quantitative and Qualitative Data* aims to provide an insight into the ways quantitative data from European institutions and research centres intersects with the views and experiences of researchers in the early stages of their careers obtained through semi-structured interviews. The GARCIA project is targeted towards combating gender inequalities in academia and research centres through the implementation of measures undertaken at cultural and structural levels in organisations, with particular focus on researchers in the early stages of their careers and researchers with temporary positions. Since this is a phenomenon not yet well known and studied, it was deemed necessary to start with thorough analyses of the problem at different levels. This report is based on the premise that an ethnographic and personalised approach provides a glimpse into the complexity of organisational practices and their impact on gender equality in research and higher education that may remain hidden if only quantitative data are considered.

The quantitative analysis was conducted in each University and research centre involved in the project and was based on data on positions, incomes, full-time/part-time jobs, etc. The data were disaggregated by sex, age, having children or not, etc. The quantitative analysis resulted in statistical indicators of gender differences in research. The aim of the quantitative analysis is to find out how statistics vary between different disciplines in the same university/research centre and between different European universities/research institutions.

Semi-structured interviews were conducted in two selected departments – one from STEM and one from SSH for each beneficiary – with academic staff both with non-tenure-track and tenure-track positions. Interviews focused on the biographical trajectories of individuals (professional and private) and on the everyday life in the departments where research is done (working environment, informal decision-making processes, relationships with management and colleagues, working conditions, availability of technologies, etc.). 20 interviews were collected for each beneficiary (10 from STEM and 10 from SSH). The analysis of these interviews offers an insight into the researchers' understanding of organisational gender cultures and the micro politics in the everyday working environments.

The report consists of six national reports for STEM and SSH institutions (Belgium, Iceland, Italy, the Netherlands, Slovenia, and Switzerland). Each national report is divided into three main parts. The first part is the report on quantitative data, divided into the following three fields: 1) Gender Equality in Working Conditions; 2) Gender Equality in Career Development; 3) Gender Equality in Research and Teaching; and 4) Family/Work Balance. For all these fields, summaries for STEM and SSH are provided, followed by a comparative conclusion. This part is followed by a section that addresses statistical indicators of gender equality. The third part is a qualitative analysis report. It is divided into the following fields: 1) Individual Trajectory; 2) Organisational Culture and Everyday Working Life; 3) Well-Being and Work/Life Balance; 4) Career Development; and 5) Perspectives on the Future. For all these fields, summaries for STEM and SSH are

provided, followed by a comparative conclusion. The analysis of the ethnographic interviews highlights specificities regarding the gender (male/female) of researchers, their age, type of contract (temporary/permanent position) as well as their position within the institution (non-tenure/tenure-track position) in both SSH and STEM.

ITALY

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1. INTRODUCTION

1.1. The University of Trento and the two selected departments.

The University of Trento (UNITN) is a medium-sized university for the Italian context, with more than 16,000 students, and about 600 faculty members and 600 staff personnel. The University of Trento was founded in 1962. In 1982, the University (until then private) became public, with a statute that guaranteed self-government. In July 2011, the Italian government approved a legislative decree which devolved to the Autonomous Province of Trento (PAT) the national normative and administrative functions pertaining to the University of Trento (d. Lgs. 142/2011). This transition increased the levels of autonomy of the University from the national regulation. The Devolution of the UNITN was finally implemented in 2012, with approval of the new Statute of the University and the official introduction of the new Departments (Statute of the University of Trento, D.R. 167, April 23, 2012).

Since 2012, the institutional structure has consisted of 13 organisational units, which bring together teaching and research: 10 Departments and 3 University Centers[1], among which there are the two Garcia beneficiary departments: the Department of Information Engineering and Computer Science and the Department of Sociology and Social research

The **Department of Information Engineering and Computer Science (DISI)** was founded in 2012 after the last national university reform in 2010 (the so-called "Gelmini Reform") and the introduction of the new Statute of UNITN in 2012 DISI replaced the Department of Information and Communication Technology (DIT), founded in 2002. The Department includes two primary areas of the ICT: Computer Science and Telecommunications. The aim of DISI is to develop these disciplines individually, but also to promote interdisciplinary approaches in order to strengthen the entire spectrum of skills required to develop the advanced technologies that underpin innovative applications and services. The DISI is organized into eleven research units and offers 3 BA degrees; 2 MS degrees; 3 Double/Joint Degrees; 1 Doctoral School.

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[1] The list of the departments comprises: 1) the Department of Economics and Management; 2) the Faculty of Law ; 3) the Department of Sociology and Social Research; 4) the Department of Humanities; 5) the Department of Psychology and Cognitive Science; 6) the Department of Physics; 7) the Department of Civil, Environmental and Mechanical Engineering; 8) the Department of Information Engineering and Computer Science; 9) the Department of Industrial Engineering, 10) and the Department of Mathematics. The inter-departmental centers are: CIBIO – Centre for Integrative Biology; CIMEC – Centre for Mind/Brain Sciences; and SSI – School of International Studies.

The new **Department of Sociology and Social Research (DSRS)** was launched on 29 October, 2012, after approval of the new Statute of UNITN. The new DSRS replaced the old Department of Sociology and Social Research, the Department of Theory, History and Social Research, and the Faculty of Sociology. The DSRS is the oldest department of sociological studies in Italy: the first faculty of sociology was established in 1962 in Trento. The DSRS's scientific areas span across different disciplines and approaches (theoretical and empirical research): sociology, political science, history, economics and anthropology. The Department hosts nine research units, and offers 3 BA degrees; 3 MS degrees; 2 Double/Joint degrees; 1 Doctoral School.

1.2 Some information on data collection at the organizational level.

At the University of Trento, data and indicators on academic staff are mainly managed by the University Statistical Office (Ufficio Studi), which arrange also the main statistical data on the published by the Italian Ministry of Education and Research every year. Since 2009, the Equal Opportunity Commissions (CPOs) has published data on the gender compositions of the University community at all levels. Other information on gender asymmetries among students and academic staff are available in the reports on university research and teaching activities produced by the University Evaluation Group.

From the University Statistical Office is possible to obtain data disaggregated by sex, citizenship, classes of age. But, such information disaggregated by sex is available mainly at the university level and not to the departmental one because of the limited number of observations (and women) in some categories and/or positions.

Moreover, different departmental rules and practices make difficult to collect comparative data. For example, obtain comparative data on teaching across departments is quite problematic because each department follows different rules and practices to organize teaching activities, the thesis supervision, tutorship, the arrangement of the teaching hours and so on.

Data on research projects were obtained by the administrative offices at the Departmental level. In both cases the administrative staff made important efforts in order to re-organize the data on the research projects including all the asked information and to share it with the Garcia project.

Finally, the Human Resources Office shared with the project the data collected in 2013 during the first phase of the Family Audit process, which contains administrative information on the academic teaching staff and on the administrative staff such as: demographic information (sex, year of birth, citizenship), their career development within the University of Trento (year of entry in the organization, mobility across positions), and job condition (work time, gross wage, maternity or other leaves). The main limit is that the database does not contain any information on postdocs or other fixed-term collaborators.

About the availability of data over time, it has to be noted that at the departmental level data are fully comparable only since 2012. From 2010 to 2012 the UNITN underwent a radical structural re-organization. The Faculties, which managed the teaching activities had been suppressed. The Departments, which managed only research activities, now oversee also teaching activities. Some departments were unified and other were divided

in separate structures. The DSRS derives by the merger of two departments. On contrary, the DISI, that is now an autonomous department, until 2011 was part of a bigger Department of Engineering. The separation involved the loss of part of the previous affiliated academic staff.

1.3 Brief methodological overview on the Garcia Interviews at the UNITN

In the University of Trento, the study population has consisted of a sample of 20 people (4 women and 6 men at the DSRS and 4 women and 6 men at the DISI). Interviews were realised with early career researchers, and in particular

- Twelve postdocs currently working at the DISI (6) and at the DSRS (6).

- Eight assistant professors without a tenure track currently working at the DISI (4) and at the DSRS (4).

At the moment of the interviews, conducted from November 2014 to March 2015, there were only 3 male assistant professors and one male postdoc with children at the DISI department, and 2 assistant professors (one men and one woman) and 2 male postdocs in the DSRS department (see the table below). Therefore, we were not able to interview female postdocs with children in none of the two departments under study (Table1).

Table 1. Interviewees by position, sex and presence of children in the STEM and SSH departments.

	Male	Female	Total
STEM Department			
Assistant Professors with children	3	0	3
Assistant Professors without children	0	1	1
Postdocs with children	1	0	1
Postdocs without children	2	3	5
Total	**6**	**4**	**10**
SSH Department			
Assistant Professors with children	1	1	2
Assistant Professors without children	1	1	2
Postdocs with children	2	0	2
Postdocs without children	2	2	4
Total	**6**	**4**	**10**
Total Interviewees	**12**	**8**	**40**

In constructing the sample, inclusion criteria considered also the research units in the selected departments, with the aim to have an overview of different research groups. The interviewees accepted to participate in our study once having been fully informed of the research objectives and methodology.

A common interview guide was used for the interviews of all the target categories: postdocs and fixed-term assistant professors.

In conducting the interviews, two different temporal perspectives have been explored. The first one was chronological, related to biographical life-lines and focused on past professional trajectories and expectations for future. The second one concerned the everyday life, looking both at work and other different life domains. More specifically, five key areas were explored: 1) individual trajectory; 2) organisational culture and everyday working life; 3) well-being and work-life balance; 4) career development; 5) perspectives on the future. The interview guide was translated in Italian, in order to interview Italian PhD holders in their mother tongue. In order to avoid to interview colleagues working in our same departments, we took advantage of the collaboration of two external researchers.

At the end of the interview, several socio-demographic characteristics have been collected: academic fields; sex; age; nationality; educational degree of parents; profession of parents; relationship status (in couple/married, single, etc.); housing (rented or owned); co-habitation (living in couples, with friends, colleagues, parents, etc.); children (number and age); partner's employment (type of work; part/full time; type of employment contract); partner's income (net monthly); interviewee's income (net monthly). Due to the small organisational size of the Department of Sociology and Social Research, these data are not included in the report, in order to avoid the risk not to respect interviewees' confidentiality and anonymity. We faced the same problem also for the Department of Information Engineering and Computer Science, but only for the data related to the assistant professors.

The interviews lasted between 50 minutes to 2.5 hours and were entirely recorded and then transcribed. Narratives collected were used for a thematic analysis, by adopting an inductive approach. At the same time, a deductive research design was also used, by following the guidelines elaborated within the GARCIA project, in order to make possible future comparisons between the empirical material collected in the different universities and research organisations involved in the project. The gathered material was organised and coded using the software Atlas.ti.

2. REPORT ON QUANTITATIVE DATA

2. 1. GENDER EQUALITY IN WORKING CONDITION

2.1.1 STEM

In 2015 the Department of Information Engineering and Computer Science, counts overall 43 members in its academic staff of which only 5 are women (2 associate professors and 3 assistant professors). There are no women among full professors. The presence of women is relatively higher among postdoc research fellows: 13 females out of 57 postdoc researchers (Table 2).

The total number of postdocs has almost doubled between 2012 and 2015. This growth has been fed by the number of male postdocs, while the number of female postdocs has remained almost stable over time. Because post-doctoral positions are financed by local, national and international funding, the growth of research fellows reflects the considerable capacity of this Department to be involved in research networks and

projects at all levels. In 2013 the DISI hosted 169 active research projects (Table 2). Interestingly, since 2013 the postdocs outnumbered the members of the academic staff. In 2015 postdocs research fellows were 12 units more than the academic staff.

Table 2. Men and women in a typical academic career at the Department of Engineering and Computer Science of the University of Trento (2012-2015).

	Department of Engineering and Computer Science											
	2012			**2013**			**2014**			**2015**		
	M	**W**	**TOT**	**M**	**W**	**TOT**	**M**	**W**	**TOT**	**M**	**W**	**TOT**
Academic/teaching staff:												
Permanent positions												
Full prof. (a)	11	0	11	10	0	10	10	0	10	10	0	10
Associate prof. (b)	17	2	19	18	2	20	22	2	24	22	2	24
Assistant prof. (c)	8	2	10	8	2	10	4	2	6	4	2	6
Fixed-term positions												
Fixed term assistant professors (d)	4	0	4	4	1	5	4	1	5	3	1	4
Total Academic/teaching Staff (a+b+c+d)	***40***	***4***	***44***	***40***	***5***	***45***	***40***	***5***	***45***	***39***	***5***	***44***
Temporary research staff												
Postdocs research fellows (e)	24	14	38	39	11	50	48	12	60	44	13	57
Total Scientific/Research Staff (a+b+c+d+e)	***64***	***18***	***82***	***79***	***16***	***95***	***88***	***17***	***105***	***82***	***18***	***100***
Phd students	121	39	160	121	43	164	116	39	155	113	38	151
Students	nd	nd	nd	1097	150	1247	1120	147	1267	1178	177	1355

Source: Unitn statistical office and Italinan Ministery of Education & Research database.

Finally, this Department has an unusual high presence of PhD students. In 2015, they were 151, which represent almost one fourth of the overall doctoral students hosted at the University of Trento in 19 doctoral courses. Some of the PhD grants are awarded by research centres and businesses. Given the high number PhD students, the Doctoral School's committee, made up of doctoral student advisors, consists of 60 participants from other Italian and foreign universities or research centres (Murgia et al 2015).

The presence of women along the career ladder draws a "non-scissor pattern". The proportion of women among students is only 13% while it rises 23% among PhD students and 25% among postdocs research fellows, and decreases to 11% among the overall academic staff (the sum of full, associate and assistant professors).

The DISI is a young department considering the Italian standards (Tab 3 and 6). In 2013, most part of full and associate professors were younger than fifty years old. 52 members out 95 of the research staff (55%) were younger than 40. Of these only 3 had a permanent position (2 assistant professors and 1 associate professor). On contrary, among the staff older than 40, only 6 members had a non-tenured position while the other 37 occupied a permanent one. Only 1 full professor out 10 was older than 60, and the other 9 were younger than 55.

Table 3. Research staff by age. Department of Engineering and Computer Science, 2013.

Department	[25 - 30]	[31 - 35]	[36 - 40]	[41 - 45]	[46- 50]	[51-55]	[56-60]	[>60]	Totale
Full prof.				2	4	3	0	1	**10**
Associate prof.			1	7	8	2	2		**20**
Assistant professors		1	1	7	1				**10**
Fixed term ass. prof.	1	3	1						**5**
Postdoc	12	24	8	5	1				**50**
Total research staff	**13**	**28**	**11**	**21**	**14**	**5**	**2**	**1**	**95**

Source: Unitn statistical office.

2.1.2 SSH

The academic staff of the Department of Sociology and Social Research is composed by 32 men and 15 women. There are only 2 women out of 15 full professors, and 7 out of 20 associate professors. Between 2013 and 2015 there have been consistent upward mobility within the permanent teaching staff. All the nine permanent professors who got the national scientific qualification[2] were involved in career advancement between 2013 and 2014, and between 2014 and 2015 one women has obtained the full-professorship (Table 4) (Bozzon et al. 2015; Murgia et al. 2015).

The distribution of men and women occupying temporary positions at the DSRS is quite balanced: at the end of 2015, on 9 fixed-term assistant professors, 4 were women. At the same time, women outnumber men among postdoc research fellows: on 8 postdoc research fellows, 5 were women.

It has to be noticed that, between 2012 and 2013 the number of postdoc positions doubled from 7 to 15, while between 2014 and 2015 they shrank from 13 to 8. Such trend is mainly connected to the end of some research projects and to the limited availability of new external funds.

At the same time, in conjunction with the economic crisis, severe cuts to university public funding have been established by law and the chance to obtain research funding at national and local level have been drastically reduced both for post-doc researchers and for the permanent teaching staff (Bozzon et al. 2015). The consequences of such trend are more evident in humanities and social science research fields.

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[2] According to the Italian university law, to move up to a professorship position, a researcher needs first to get what is called *idoneità* (i.e. a scientific qualification); that is, he/she has to apply for a national competition in order to be acknowledged 'idoneo' (employable, or fit for service) by a national committee within a specific "research field" (settore disciplinare). Once the national committee has provided the list of 'candidati idonei', those candidates can proceed to the second step and apply for a position at a local university, within a period of four years. If the candidate does not get a position within this period, s/he must apply again for the 'idoneità'. Candidates who do not pass the national competition have to wait for two years to re-apply.

Table 4. Men and women in a typical academic career at the Department of Sociology and Social Research of the University of Trento (2012, 2013, 2014, 2015).

	Department of Sociology and Social Research											
	2012			2013			2014			2015		
	M	W	TOT	M	W	TOT	M	W	TOT	M	W	TOT
Academic/teaching staff)												
Permanent positions												
Full prof. (a)	15	2	17	14	2	16	11	1	12	13	2	15
Associate prof. (b)	9	3	12	9	3	12	16	9	25	13	7	20
Assistant prof. (c)	10	10	20	9	9	18	1	2	3	1	2	3
Fixed-term positions									0			
Fixed term assistant professors (d)	3	1	4	5	3	8	5	4	9	5	4	9
Total Academic staff (a+b+c+d)	**37**	**16**	**53**	**37**	**17**	**54**	**33**	**16**	**49**	**32**	**15**	**47**
Temporary research staff												
Postdocs research fellows (e)	3	4	7	6	9	15	5	8	13	3	5	8
Total scientific/research staff (a+b+c+d+e)	**40**	**20**	**60**	**43**	**26**	**69**	**38**	**24**	**62**	**35**	**20**	**55**
Phd students	11	12	23	7	9	16	10	9	19	9	10	19
Students	620	1341	1961	592	1270	1862	542	1225	1767	526	1174	1700

Source: Unitn statistical office and Italinan Ministery of Education & Research database.

The age structure of the department in 2013 displayed that the DSRS is any old department: 15 out 69 members of the research staff (1/5) were older than 60. Among full professors 8 out 16 were older than 60 and only 1 was younger than 50 (Table 5). The research staff younger than 40 counted 21 members. Of these only 4 had a permanent position while the other 17 occupied a non-tenured position (5 fixed term assistant professors and 12 postdocs).

Table 5. Research staff by age. Department of Sociology and Social Research, 2013.

	[25 - 30]	[31 - 35]	[36 - 40]	[41 - 45]	[46- 50]	[51-55]	[56-60]	[>60]	Total
Full prof.					1	3	4	8	**16**
Associate prof.				3	3	2	0	4	**12**
Assistant prof.			4	5	4	1	1	3	**18**
Fixed term ass. prof.			5	2			1		**8**
Postdoc	2	4	6	1	2				**15**
Total research staff	**2**	**4**	**15**	**11**	**10**	**6**	**6**	**15**	**69**

Source: Unitn statistical office and own analysis on Family Audit database, 2013.

2.1.3 Comparative conclusions

Both departments are strongly unbalanced in terms of sex distribution along the academic ladder. The lack of women is particularly visible among the top positions: at the DISI there are no female full professors while at the DSRS they were only 2 at the end of 2015. Moreover, in both cases, the level of feminization of the academic staff is systematically lower than the national average of the related academic fields (Bozzon et al. 2015).

Focusing on the early stages career phases the DISI shows a higher presence of postdocs and PhD students than the DSRS, respectively 57 versus 8 and 151 versus 19 in 2015. This gap is mainly explained by the higher capability of the STEM department to obtain financial resources from the private sector, and to be involved in virtuous international research networks.

Table 6. Mean age of the teaching staff. Department of Engineering and Computer Science, Department of Sociology and Social Research, University of Trento and Research fields and Italy 2013.

| | Mean age | | | | | |
| | | | | Research field | | |
Positions	DISI	DSRS	UNITN	Social and political sciences	Information technology and industrial engineering	ITALY
Full professors	49.8	60.8	57.9	61.7	57.4	59.3
Associate professors	47.1	52.9	50.3	54.3	50.0	53.5
Assistant professors	42.1	47.5	45.4	45.4	41.7	46.1
Fixed term ass. prof.	33.2	40.9	37.5	39.3	36.2	37.8
Total academic/teaching staff	**45.0**	**51.6**	**49.8**	**51.0**	**48.1**	**51.0**

Source: our analysis on Family Audit database 2013, and Miur data 2013. Note: data are not disaggregated by sex because of the low presence of women in certain positions at the departmental level.

The two departments have different age structures. The DSRS is the oldest of the University of Trento with an average age of the teaching staff around 51.7. On contrary, the DISI is the youngest department. In 2013, the mean age of the DISI teaching staff was 45, about 5 years lower than the UNITN and Italian averages. Interestingly, the mean age of the DISI full professors was 49.8, the same of the UNITN overall teaching staff (Table 6).

2.2. GENDER EQUALITY IN CAREER DEVELOPMENT

2.2.1 STEM

The analysis of the doctoral students at the DISI show that the PhD students involved in the department increased by 29 units between 2009/10 and 2012/13 (from 135 to 164 students), while in 2013/14 the number of PhD students decreased of 9 units (155). The doctoral school has a very high level of internationalization, indeed 60% of PhD student

come from abroad (Murgia et al. 2015). The gender composition in quite stable over time: there is 1 female out 4 PhD students. The proportion of women among PhD graduates is slightly higher then PhD population. More precisely, in 2014, 1 out 3 PhD graduates were women. This could suggest that female students are slightly faster than male to obtain their degree (Table 7).

Table 7. PhD ongoing, newly entering by academic year and PhD graduates by year at the DISI

PhD	2009/2010		2010/2011		2011/2012		2012/2013		2013/2014	
	M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
N of PhDs (ongoing)	56	19	62	19	69	26	80	27	80	24
N of newly entering PhDs	47	13	39	16	52	13	41	16	36	15
	2010		**2011**		**2012**		**2013**		**2014**	
N of PhDs obtained	29	12	26	9	21	6	28	11	23	13

Source: Miur (http://statistica.miur.it/scripts/postlaurea/vpostlaurea.asp)

Focusing on postdoc selections (Table 8), it was possible to obtain only data from the beginning of 2011 because the postdoctoral positions opened when the DISI Department was part of the Faculty of Engineering are not available (Peroni et al. 2015). Table 7 shows that the number of calls open every year varies significantly across time. In 2014 were open 39 research fellows' positions while in 2015 the number of calls drop of 10 units. The number of women among applicants is quite limited. Interestingly, while between 2011 and 2013 the number of applicants correspond to the number of newly post-doc entering, in 2014 and 2015 the number of applicants overcome the number of newly entering. This suggests that in the recent competition there were more than one competitor (Peroni et al 2015).

About the selection for fixed-term assistant professors, only 2 selections were open between 2011 and 2013. The winners were a men and a woman. No women took part to the selection committees. In this selection processes, the committee is composed by three full or associate professors, one from the Department and two from other Universities (Table 9).

Among permanent position, between 2013 and 2014, 4 male assistant professors entered the position of associate professor. Given the relative young age of the department permanent staff, no exits from that positions have been registered (Table 2) (Murgia et al. 2015).

The high number of postdocs and PhD student at the DISI is connected to the number of external funds. At the DISI there is a very high ability to attract external funding and to be involved in a wide range of international, national, and local networks. In 2013 at the DISI there were 169 active projects (Table 10). Of these, 96 were funded by international institutions, 22 by national institutions, and 51 by local organizations. Also in this case there is a low presence of women among principal investigators and scientific coordinators, which mirrors the lack of women in the departmental academic staff. Only in 5 cases (1 international project and 4 local projects) the responsible for the project within the department was a woman (an assistant and an associate professor). The low presence of women explains also their limited involvement in the selection committee

and among the committee chairs. The selection of postdocs is directly managed by who coordinates the project at the departmental level.

Table 8. Postdoc selections, DISI 2011-2015

Post-doc	2011		2012		2013		2014		2015	
N. of calls	*40*		*22*		*28*		*39*		*29*	
	M	F	M	F	M	F	M	F	M	F
N of applicants	29	11	14	8	28	3	32	8	36	6
N of newly post-doc entering	28	11	14	8	28	3	29	7	25	3
N of the members of selection committee	114	6	62	4	143	4	na	na	na	na
Committee chair	38	2	21	1	25	3	37	3	26	5

Source: our analysis on data from the administrative office of DISI and DISI website.

Table 9. Fixed term assistant professor (without tenure) selections, DISI 2011-2013

	2011		2012		2013	
N. of calls	1		0		1	
	M	F	M	F	M	F
N of applicants	1	0	0	0	0	2
N. short listed	1	0	0	0	0	1
N of newly entering	0	0	1	0	0	0
Members of selection committee	3	0	0	0	3	0
Cometee chair	1	0	0	0	1	0

Source: our analysis on data from the HR office Unitn /See also D7.1 "Report on gap formal-actual criteria at organizational level"

Table 10. Funded research projects, DISI 2013

	International		National		Local	
	M	F	M	F	M	F
Full professors	34	0	10	0	18	0
Associate professors	49	0	11	0	22	4
Assistant professors	6	1	0	0	0	0
Fixed term assistant prof.	1	0	1	0	3	0
Visiting professors	3	0	0	0	2	0
Administrative staff	2	0	0	0	2	0
Total	95	1	22	0	47	4

Source: our analysis on DISI Administrative office database.

2.2.2 SSH

The analysis of the flux of PhD students in sociology and social research at the DSRS shows a quite irregular trend over time. The number of PhD students has almost halved between 2009/10 and 2013/14 from 37 to 19. The gender composition is quite balanced: in some year male students outnumber female by 1 or 2 units, and in other years, female students outnumber male by few units. Among the PhD graduates between 2010 and 2014 women outnumber men, with the exception of 2014 when there were 4 male and 2 female PhD graduates (Table 11).

Between January 2010 and December 2015 there have been 26 selections for post-doc positions. Applicants for postdoc positions are more frequently women: from 2010 to 2015 there were 39 female applicants and 21 male applicants. From 2010 to 2015, on 26 selections, the women appointed have been 14 and men appointed have been 12.

Interestingly, committee chairs were more often women, 16 on 26 selections. This because in the case of the DSRS, women professors are more frequently the holder of research funds. It has to be noticed that since 2011, all the announcements of postdoctoral research fellowships have been related to specific projects financed by the EU or national/local funding (Peroni et al 2015) (Table12).

Table 11. PhD ongoing, newly entering by academic year and PhD graduates by year at the DSRS

PhD	2009/2010		2010/2011		2011/2012		2012/2013		2013/2014	
	M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
N of PhDs (ongoing)	9	17	11	11	7	7	6	5	4	8
N of newly entering PhDs	4	7	3	1	4	5	1	4	6	1
	2010		**2011**		**2012**		**2013**		**2014**	
N of PhDs obtained	2	6	1	9	4	6	2	6	4	2

Source Miur data (http://statistica.miur.it/scripts/postlaurea/vpostlaurea.asp)

Table 12. Postdoc selections, DSRS 2010-2015

Post-doc	2010		2011		2012		2013		2014		2015	
N of calls	*2*		*4*		*6*		*5*		*6*		*3*	
	M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
N of applicants	2	8	1	4	12	10	2	5	2	11	2	1
N of newly post-doc entering	0	2	3	1	4	2	2	3	1	5	2	1
N members of selection committee)	4	2	8	4	15	5	7	8	na	n.a	n.a.	na
Committee chair	2	0	2	2	3	3	1	4	1	5	1	2

Source: our elaboration on data from the administrative offices DSRS, and from the Unitn website

Focusing on fixed-term assistant professor calls, only 6 selections were open between 2010 and 2013. The winners were 3 males and 3 females fixed term assistant professors. Only 3 out of 18 professors who take part to the 6 selection committees were women. In these selection processes, the committee is composed by three full or associate professors, one from the Department and two from other Universities. Out 6 selections only in one case the committee chair was a woman. Also in this case, the lack of women mirrors the limited presence of women among full professors (Table 13).

Considering the movements within the permanent staff, between 2014 and 2015 there were several retirements and a consistent upward mobility from the position of assistant professor to the position of associate professor: all the permanent assistant professors who got the national scientific qualification were involved in a career advancement (Murgia et al. 2015; Bozzon et al. 2015).

At the DSRS in 2013 there were 39 research projects covering different issues (health system, organizational wellbeing, inequalities, migration etc). Of these, 15 include gender related issues (Murgia et. Al. 2015). Male professors and researchers coordinated 17 projects, and female professor and researchers 22. Interestingly, in 6 cases the scientific coordinator of a local research project were postdocs (1 male and 6 females) who obtained from local institutions (mainly the Province of Trento and a local bank foundation) the funds for their own research. This implies that among the 15 postdocs who worked in the department in 2013, more than one third financed their position with their own funding. This happened more frequently among women. In fact, out of 9

female postdocs 5 financed their position with personal funding, while on 6 male postdocs only 1 financed his position with personal funding (Table 14).

Table 13. Fixed term assistant professor selections, DSRS 2010-2013

Fixed term assistant professor	2010		2011		2012		2013	
N. of calls	2				4			
	M	F	M	F	M	F	M	F
N of applicants	18	24	0	0	42	36	0	0
N. of short listed	7	10	0	0	14	12	0	0
N of newly entering	0	0	1	1	0	0	2	2
Members of selection committee	**5**	**1**	0	0	**10**	**2**	0	0
Sex of the chair	**1**	**1**	0	0	**4**	**0**	0	0

Source: our analysis on data from the HR office Unitn - See also D7.1 "Report on gap formal-actual criteria at organizational level"

Table 14. Funded research projects, DSRS 2013

	European		National		Local	
	M	F	M	F	M	F
Full professors	0	2	2	0	5	3
Associate professors	0	0	2	0	1	1
Assistant professors	0	1	1	0	2	10
Fixed term assistant prof.	1	0	1	0	1	0
Postdoc					1	5
Total	**1**	**3**	**6**	**0**	**10**	**19**

Source: our analysis on DSRS Administrative office database.

2.2.3 Comparative conclusions

Data presented in the previous paragraphs confirmed some critical issues related to the University organization and well documented in several internal reports and policy statements (Strategic Plan; Affirmative Action Plan). The main problems in the composition of its scientific/research staff at the University of Trento are: a) the strong unbalance between men and women and between permanent and non-tenured staff, b) and the difficulty to promote young researchers in more stable positions. They are problems inherited from the past, difficult to overcome given the budget constraints imposed to universities in times of fiscal consolidation.

However, after the publication of the national scientific qualification results, the Academic Senate approved (March 2014) an extraordinary promotion plan for assistant professors who obtained the qualification in associate professor positions and introduced an (financial) incentive to promote the gender balance in academic positions (Murgia et al. 2014).

Given the general lack of promotion over the previous years, both the DSRS and the DISI in 2014 supported the career advancement of a set of permanent assistant professors. However, the spaces for career advancement available differ between the two departments.

In the case of the DSRS, the recent retirements due to the high age of the permanent staff, made possible the promotion of all permanent assistant professors who obtained

the national scientific qualification (9) and such transitions involved men and women in the same proportion. As explained by the DSRS Director: "It was not an equality choice, they all had the requirements and we had enough resources." (Murgia et al. 2014). However, the high number of retirements among the permanent teaching staff should allow to open new positions and foster a reduction of the gender gap among top positions in the very next future.

On contrary, at the DISI, only 4 male researchers were promoted. The young age of the DISI, and the lack of retirements among the academic staff, limits the space to employ or promote new tenured researchers. The main consequence is that, at the DISI, it will be very difficult to increase the presence of women among top academic positions (full and associate professors) and to open more stable academic positions, at least in the short run.

In both departments, the lack of female full and associate professors limits the possibility to involve women in selection committees and the number of women who can formally coordinate committees and research projects. In this regard, postdocs and – less frequently - fixed-term assistant professors often are not eligible as principal investigators in several research programs (mainly at the national level). As we will see in the qualitative analysis this is a strong critical issue for the career development of precarious researchers.

Focusing on selection processes at early career stages, the comparison between the two departments shows some interesting differences. At the DSRS the number of female who applied for the selections are usually higher of male candidates, but the newly enter postdocs and fixed term assistant professors are quite balance between men and women. On contrary, at the DISI women remain strongly under represented both among applicants and newly entering.

Finally, the two departments differ significantly in the capacity to attract external funding. The DISI shows a stronger ability to attract international, national and local resources both from the public and the private sector. In the case of the DSRS, there is a significant number of female assistant professors and postdocs who are entitled of local research funding. The presence of women researchers is often connected to their ability to obtain external autonomous financial supports to their career development.

2.3. FAMILY/WORK BALANCE

Data on family and work balance available on the UNITN research staff limited and their interpretation is quite problematic.

Firstly, data on work and family balance collected during the Family Audit process[3] represent an important attempt to integrate information on working condition of the

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[3] In 2008, the Autonomous Province of Trento (through its Agency for Family, Fertility and Youth Policies) initiated the Family Audit Certification. This project started in 2012, following national pilot experiences. The family audit is based on a well6developed methodology. A working group is set up with the organisation, which is advised by an external consultant. After carrying out an audit, each organisation develops a three-year Family Work-Life Balance Plan listing actions that the organisation plans to take in

UNITN staff with some more detailed information on their current family condition (presence of dependent children younger than 16), maternity and parental leaves and other kind of leaves for health other personal problems. This information was gathered only for the teaching staff (permanent full, associate assistant professors and fixed term assistant professors), and the administrative staff. During the first phase of the Family Audit process, postdocs and other temporary collaborators were not included in the analysis because they were not considered part of the University community. In this regard, the launch of the GARCIA project fosters the inclusion of postdocs and precarious researchers in the further steps of the family audit process as well as in the implementation of the first Affirmative Action Plan of the University of Trento. More precisely, it has led to the inclusion of researchers with non-permanent contracts as beneficiaries of actions and policies of equal opportunities; moreover, it has affected the decision to include some of them as members of the work team in charge of these policies (e.g. two precarious researchers participated in an action plan on the family audit in order to highlight their specific work conditions) (Murgia et al. 2015: 22). However, no data on work-family balance are available on postdocs and other fixed term collaborators.

Secondly, gathered and interpret data on leaves and other work-life balance measures are quite problematic in the case of the teaching staff. In fact, only maternity leaves can be considered a reliable information because they are mandatory and all mothers have to take them. On contrary, all other leaves or absences (for health of other issues) are not mandatory and teaching staff is not obliged to communicate them to the Human Resources office. Professors have not a fixed working time, they do not have a timecard and the university organization is relatively flexible in this case. During the teaching period, they can organize and (re-)arrange the timetable of the lessons according to their needs/problems. This implies that professors can communicate their absence to the students and to the office which manage the classroom reservation. But these arrangements do not always involve the Human Resources office.

Finally, we briefly present three tables based on the Family Audit database, which summarize gender differences in the presence of children younger than 16 in the UNITN academic/teaching staff, which is a proxy of their family binds. The main evidence is that the presence of young children is more common among male professors. While among female professors 73% do not have children younger than 16, this proportion rise to 56.9% among male professors (Table 15).

Tables 16 and 17 compare the distribution of the presence of children younger than 16 across the different academic positions and age classes.

It is interesting to noticed that among fixed term assistant professors the situation of man and women is quite similar: "childless" researches are about 64%. The situation is quite different among permanent position, where the proportion of "childless" women is considerably higher than men.

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six areas (work organisation, work-family balance culture, communication, fringe benefits and services, family district, new technologies). An external evaluator monitors its implementation.
http://www.trentino.familyaudit.org/?q=system/files/IT_Family%20Audit_final_EIGE.pdf

Finally, the comparison of male and female professors by age classes confirm the previous results. Among the teaching professors younger than 40, only 36.4% of women have children while such proportion rise to 44.4% among men. Among professors aged 41-50 the gap between male and female professors is even wider: women with children younger than 16 are 45.4% while men are 65.2%.

Table 15. Academic/teaching staff of the University of Trento with children younger than 16. Man and Women, 2013

N of children younger than 16	Men	Women	Total
0	56.9	72.8	61.2
1	21.3	13.3	19.2
2	18.8	12.0	17.0
3	3.0	1.9	2.7
Total	432	158	590

Source: our analysis on Family Audit database 2013.

Table 16. Academic/teaching staff of the University of Trento with children younger than 16 by job position. Man and Women, 2013

N. of children younger than 16	Full Professors			Associate professors			Assistant professors			Fixed term assistant prof.		
	M	W	Total	M	W	Total	M	W	Total	M	W	Total
0	69.9	86.4	71.0	46.1	79.6	54.1	51.0	66.7	57.3	63.2	65.4	64.1
1	18.1	4.6	16.5	25.5	11.4	22.2	22.5	15.2	19.5	15.8	19.2	17.2
2	11.6	9.1	11.4	24.8	9.1	21.1	22.5	16.7	20.1	15.8	7.7	12.5
3	1.3	0.0	1.1	3.6	0.0	2.7	4.1	1.5	3.1	5.3	7.7	6.3
N.	155	22	177	141	44	185	98	66	164	38	26	64

Source: our analysis on Family Audit database 2013.

Table 17. Academic staff of the University of Trento with children younger than 16 by age classes. Male and Women, 2013

N. of children younger than 16	<40			41-50			51-60			>60		
	M	W	Tot	M	W	Tot	M	W	Tot	M	W	Tot
0	55.6	63.6	58.9	34.8	54.6	39.7	62.3	94.9	70.2	94.0	100.0	95.2
1	20.6	25.0	22.4	25.6	14.6	22.8	27.1	5.1	21.7	4.8	0.0	3.9
2	17.5	4.6	12.2	34.8	30.9	33.8	9.8	0.0	7.5	1.2	0.0	1.0
3	6.4	6.8	6.5	4.9	0.0	3.7	0.8	0.0	0.6	0.0	0.0	0.0
N.	63	44	107	164	55	219	122	39	161	83	20	103

Source: our analysis on Family Audit database 2013.

3. STATISTICAL GENDER EQUALITY INDICATORS

Sex-disaggregated data is a minimum standard for planning, implementing, monitoring, and evaluating all types of organizational situation and career development conditions and policies.

At the UNITN, there is a long-lasting practice to produce sex-disaggregate data on the staff composition. Since 2009, the Equal Opportunity committee of the University of Trento have published a report on the gender compositions of the university community at all levels: teaching staff (full, associate ad assistant professors), administrative staff,

students, PhD students and postdocs. In the last two years, the committee decided to include new data in the report with the aim to obtain deeper insights on the diversities within the university community. More precisely, some data on the composition of the student population by citizenship, as well as a brief analysis of the academic and teaching staff according to the age have been included.

However, monitoring gender gaps in some emerging processes in academic careers remains quite problematic. There is still an overall lack of systematic information on both the numbers and the composition of some types of temporary research and temporary teaching positions. In this regard, it is crucial to foster data collections which allow to monitoring the flows of non-permanent positions, such as postdocs, research and teaching collaborators. In turn, such lack flows directly from the extreme fluidity/instability of these contracts.

Moreover, it is important to obtain a more dynamic representation of the UNITN community in order to shed some lights on some relevant phenomena such as: gender asymmetries in selection/entering processes at all levels, from students to top academic positions, gender asymmetries in the access to financial resources at the departmental and central level, (PhD) students' dropouts, retirements or other kind of exit flows. This involves:

a) To collect and systematize more information at the individual level, adopting a longitudinal perspective, considering the timing of crucial events which compose the individual career development (recruitment and career advancement transitions, publications, research projects) and also some information on family transitions (i.e. childbirths). In this direction, the University has developed a longitudinal data collection on student's career development coordinated by an ad hoc research committee.

b) To collect and arrange more information on the selection processes – recruitment, career advancement and funds allocation - carried out at the departmental and university level considering both the (gender) composition of the selection committees and the information on applicants, short listed and selected individuals.

c) And to develop and include in the university yearly statistics indicators focused on the enter and exit flows at UNITN, between departments, and along the hierarchical ladder.

4 REPORT ON QUALITATIVE DATA

4.1 Individual trajectory

4.1.1. Summary for STEM

Postdocs

The postdoc women and men exhibited different patterns of career development. As regards the women, for some of them the professional path had been rather fragmented, and work interruptions after the doctorate induced them to project themselves towards the business world. They thus sought professional continuity and income also outside academe. Most of the men, however, stated that they had followed a linear path from the doctorate to the postdoc position, without experiencing any period of unemployment:

*"[After the doctorate] there were no immediate prospects, and I left. Then I was unemployed for seven months. I had an interview with *** [University] but it didn't go well. I then started working in the company. The DISI reopened positions in around May. In July I had the interview, and in September I was accepted, and I began to do a postdoc in Trento" (Female postdoc, DISI).*

"I finished my PhD at the beginning of April 2012, after three years and a half. Basically, after finishing my PhD I started a postdoc right away with the same professor, at the same university and everything; basically it was continuing the work I was doing for my PhD, just continuing after my PhD [...]" (Male postdoc, DISI).

Contrary to the accounts relative to career development, the narratives of male and female postdocs tended to converge in terms of recruitment within the department analysed. In fact, all of them emphasised the importance of making one's work known to the members of the department to which one wanted to apply:

"I wrote a paper for a small conference, a workshop. There I met this professor who was looking for people, and because he knew me, and also knew that I was good, we talked. He told me about the project and asked me to come. So I did" (Female postdoc, DISI).

"During my doctorate, my supervisor became a professor here, and at some point he told me that it was time to follow him to Trento [...]. I told him that it depended on what he had to offer. But I came to Trento. So, apparently, he offered the right thing" (Male postdoc, DISI).

As regards the postdoc positions, therefore, as already pointed out within the GARCIA Project (Peroni et al. 2015), the recruitment process is first activated through informal channels by resorting to one's own academic network. It is then formalized with a call for applications relative to the project financing the position.

Assistant professors

One notes first from the interviews conducted with the assistant professors in the STEM department that women were a minority among those who held this position. Only one woman among the interviewees, in fact, was an assistant professor at the DISI, and her professional trajectory appears to have been linear and without periods of unemployment:

"I got my PhD degree in 2010, in fact just ten days after I moved to Italy directly to this department. And for the first three years I was working as a postdoctoral member of my research group, where I'm now working as an assistant professor. So, more or less one and a half years ago I had my new position" (Female assistant professor, DISI).

Her career had not been marked, as in the case of a significant number of the female postdocs interviewed, by a multiplicity of different contracts. On the contrary, after her doctorate she had been immediately recruited – on a postdoc grant – into the research group in which she currently works. Also the stories of the male assistant professors described a linear career never interrupted by periods of unemployment. Most of the interviewees described their work trajectories by dividing them into specific phases: PhD, postdoc abroad and in Italy, and finally participation in the competition for a position as assistant professor:

"So, on completing my doctorate ... I graduated in November 2008. After my doctorate I spent a period away and then returned to Trento for a postdoc [...]. Then what happened? Not much, because essentially I participated in the competition for a fixed-term post as a researcher at the end of 2009, and in early 2010 I started. In February 2010 I started my career here as a RTD-a" (Male assistant professor, DISI).

There were various assistant professors who had not obtained a doctorate at the University of Trento. But all of them had already had a previous contact with the DISI through a postdoc or research assistantship. Indeed, it was through networks kept alive over the years that the interviewees had learned about the call for applications at Trento University:

"I'd always kept contacts active, in the sense that there were publications in progress, so there were contacts [...]. When I applied for this position I felt fairly confident, at least I had a good chance of winning it ... there is never certainty, of course, but the theme was the one that I'd been working on, so I felt pretty confident, yes" (Male assistant professor, DISI).

The majority of the male interviewees said they had heard that they had a chance of obtain the post advertised through contacts with the department, but especially because the profile required by the call for applications was consistent with their competences.

Comparison between postdocs and assistant professors in STEM

Analysis of the interviews conducted with postdocs at the DISI yielded a picture of career development patterned differently according to gender. The female postdocs, in fact, recounted careers more fragmented than those of men. They were marked by a multiplicity of contracts (not only in the academic sector) and periods of unemployment.

In the case of the assistant professors, however, all the interviewees, including the only female assistant professor, had career paths similar to those of male colleagues, i.e. a linear path until the time of recruitment within the department. However, an important aspect to consider, which highlights the difference between the professional trajectories of female and male assistant professors, concerns having children or otherwise. This aspect is discussed extensively in the next sections, but it seems appropriate to point out here that the female assistant professor was the only one of the four assistant professors interviewed who did not have children.

As regards the recruitment process, it is interesting to note that the female assistant professor adopted the discursive practices most similar to the postdocs, both men and women, by stressing the importance of networks and contacts with the Department as a competitive advantage in obtaining the position for which she had applied. The male assistant professors, by contrast, while recognizing the importance of prior contacts with the department, placed more emphasis on the match between their career and the professional profile required by the call for applications, and the fact that they were the best candidates for that position.

4.1.2. Summary for SSH

Postdocs

The female postdocs interviewed at the DSRS stated that, on completing their doctorates, they had not experienced periods of unemployment, but had immediately obtained research assistantships. Such assistantships, however, cannot be considered part of a linear career development:

"I got a doctorate in *** and soon after I was asked to participate in a selection procedure to work on a project funded by *** [...]. When the project was concluding, an opportunity arose to join a consortium for a European project [...]. In the meantime, ever since my degree course, I'd continued to work with the research staff at the University of *** on a whole range of topics [...]" (Female postdoc, DSRS).

As regards the male postdocs, although some of them had followed 'traditional' trajectories – having been recruited within the same department immediately after receiving their doctorates – the others described the non-linearity of their career paths and the difficulty of ensuring continuity of income:

"I completed my doctorate in March 2010, and I found myself, like everyone else, in need of work [...]. I looked around, and what I found was an assistantship with *** [...]. There were four or five months of working on data analysis [...]. But I maintained contacts with Trento, and after this brief period elsewhere, I returned to the department with a postdoctoral grant" (Male postdoc, DSRS).

In regard to the recruitment process, only one female postdoc had started work within the DSRS on obtaining external financing. In the majority of cases, the recruitment was facilitated by previous contacts with members of the faculty and by activation of the network among them:

"My first recruitment with the department came about through the doctorate [...]. After that [the doctorate] I obtained two grants" (Female postdoc, SSH).

"One day I contacted a professor at Trento whom I knew [...]. He told me: 'Come here, because I have some things in hand and there's a post that you might like' [...]. So, basically, I used my network of acquaintances within the scientific community and then got this post at Trento" (Male postdoc, SSH).

Also in the case of the DSRS, therefore, the majority of postdocs, both women and men, seem to have been recruited thanks to contacts with lecturers responsible for project funds.

Assistant professors

The narratives of the assistant professors, compared with those of postdocs, exhibited the most marked differences between men and women. The female assistant professors described a trajectory characterized by discontinuity and a multiplicity of collaborations before winning the competition, sometimes interspersed with periods of unemployment. The male assistant professors, by contrast, reported a linear career path in which, after the doctorate, they obtained a postdoc position, not always in Trento, then returned to Trento and participated in the competition for an assistant professorship.

"I finished my doctorate in 2008, and for several months I worked on a project in this department. I then left for a postdoc experience at ***. In September, I won a Marie Curie, and I went for two years to the University of ***" (Female assistant professor, DSRS).

"I did my doctorate at ***. I'd previously had work contacts at Trento through collaborations [...]. When I was about to complete my doctorate, I was offered this postdoc position on a European project with a two-year contract. But it wasn't renewed the following year because in the meantime there'd been a selection for temporary researchers here. I'd participated and won" (Male assistant professor, SSH).

It was on the selection process for the position of assistant professor that the rhetorics of women and men tended to coincide. Their narratives evidenced that an important factor in favouring the choice of a candidate was if s/he had had previous work experience in the department:

"The entire network of people that I'd met during my doctorate was important. I presented myself in the RTD competition as an ex-doctoral student, though in the meantime I'd been working at ***. Some professors and the staff of the University knew me already" (Female assistant professor, SSH).

"There was a very good match between my profile and the position. There was an interest by Trento, which had rightly looked at the profiles that might be interesting. It wasn't like participating in a mega-selection, where there are a hundred thousand people and you are candidate number 123. It was different. There was this opportunity, and opportunities of this kind obviously don't appear in the Gazzetta Ufficiale: you're invited to participate, and then you see how it goes" (Male assistant professor, SSH).

Comparison between postdocs and assistant professors in SSH

The rhetorics mobilized by women and men at the SSH department subtended differences especially in regard to the career path.

The first important aspect to consider is that the professional trajectories of women, both postdocs and assistant professors, appeared to be fragmented, characterized by a multiplicity of contracts and collaborations. Whilst for the assistant professors this discontinuity meant periods of unemployment, which the interviewees sought to fill by doing research even outside the academic context, for the female postdocs it sometimes meant distancing themselves from their research to ensure continuity of income. However, it was among the men interviewees that the main differences were apparent. In fact, while some of the male postdocs reported a fragmented career path – albeit to a

lesser extent than the women – the assistant professors described fairly linear careers without periods of interruption.

It is the aspect of recruitment in the department that, instead, does not show substantial differences between men and women, whether postdocs or assistant professors. Almost all of the respondents, in fact, stressed the importance of having already collaborated with the department, both through doctorates and membership of research groups.

4.1.3. Comparative conclusion

In light of what has been described in the previous sections, now apparent are the differences and similarities between the interviewees at the two departments analysed.

The first important aspect to consider is the distinction between DISI and DSRS in regard to the professional trajectory. In fact, whilst among the male DISI postdocs it was more common to obtain a postdoc position almost immediately after receiving the doctorate, the accounts of the male DSRS postdocs tended to resemble more closely those of their female colleagues, who described fragmented careers in which they had worked also outside the Trento academic context. The female postdocs of the two departments, however, reported very similar histories characterized by career fragmentation and a multitude of activities. The aspect differentiating them concerned periods of unemployment and jobs in the private sector. In fact, unlike the female DSRS postdocs, those at the DISI had not experienced a discontinuity of income and had worked in contexts external to the university – especially companies.

Regarding the assistant professors, profound differences emerged between the two departments. First, it has been seen that the trajectory of the only female assistant professor at DISI was distinct from that of the DSRS women. Whilst the former reported a linear career path similar to that of her male colleagues, the DSRS women recounted more fragmented professional histories. The professional trajectories of the male assistant professors at the DSRS instead tended to coincide with those at the DISI, characterized by a linearity of career and the absence of periods of unemployment.

As regards the recruitment of both postdocs and assistant professors, both men and women in the two departments emphasised, and to an even greater extent at the DSRS with respect to the DISI, the importance of previous collaborations with members of the department.

Finally, one of the main gender differences among the interviewees concerned the reconciliation of work and family. In fact, as we shall show in the next sections, unlike men, women saw the construction of a family, and especially having children, as one of the main obstacles to an academic career.

4.2. Organizational culture and everyday working life

4.2.1. Summary for STEM

Postdocs

The stories of the respondents were characterized by substantial homogeneity with respect to the arrangement of everyday work times. It appears, in fact, that the DISI's organizational culture was based on an academic model – widely shared – that requires total dedication from researchers. This seems to have a major impact on choices in private life, especially those related to parenthood:

"You're in a situation that may force you to work on Saturdays and Sundays or in the evenings. Just imagine taking five months off. It is clear that there's a clash [...]. There's work that must somehow continue and therefore won't allow you ever to withdraw entirely, not even on holiday" (Male postdoc, DISI).

However, in most cases this was not perceived as problematic. The same interviewees reported a very positive departmental climate, not characterized by a marked hierarchy between seniors and juniors:

*"There's an extremely positive climate here. My experience has been very good because both *** and *** and his colleagues have let me carry out my research without interference. They treat me like a colleague without impositions because I'm a postdoc and they are full professors. I think this is extremely important because from an intellectual point of view we work substantially as peer" (Female postdoc, DISI).*

Among the various everyday activities, a difficulty encountered by both male and female postdocs was that they could not appear formally as supervisors of doctoral theses or among the authors of a project proposal:

*"I've supervised four or five students who did their doctorates according to what I told them; We had meetings with ***, but in fact they worked more with me [...]. But this isn't recognized. We can't write on our CVs that we've supervised doctoral students. It isn't allowed because we don't have a tenure position" (Male postdoc, DISI).*

"For example, I'm coordinating the drafting of a European project, which is mine. The project is mine: the networks are mine, the topic is mine. All they [the full or associate professors] do, is sign it" (Male postdoc, DISI).

Assistant professors

As regards the organizational culture, as for the postdocs, so for the assistant professors that of the DISI was characterized of a total commitment to work which did not permit interruptions. In this regard, the female assistant professor said that she had chosen to postpone motherhood because she was worried about the period of work stoppage that it would imply. For their part, the male assistant professors, all of whom had children, pointed out that their work inevitably permeated family life:

"What is valued in research and academia is also a certain continuity, especially in terms of publications. Mine have diminished somewhat compared with the past because of the family ... But I can't slow down at this stage of my career if I want to have some chance of

stabilization. And of course everyone is sorry that I have no time to devote to my little girl, my wife, or for going out" (Male assistant professor, DISI).

Instead, as regards the organizational climate, both the male and female assistant professors perceived themselves as integral parts of the department and on an equal footing with the professors. They recounted a departmental environment characterized by a climate of friendship. The high degree of competitiveness present in the department, in fact, was seen as a positive factor:

"The climate in the department is competitive, yes, in the sense that competitiveness is also quite healthy, I'd say. Among colleagues, if someone brings in a project for so many millions of euros, it's clear that you'd like to succeed to the same extent. So this virtuous circle is created whereby you try to do more and more" (Male assistant professor, DISI).

Unlike postdocs, assistant professors were recognized as the authors of project proposals. However, some cases were reported in which greater visibility was enjoyed by full professors in charge of projects, although many of the activities were carried out by early career researchers:

"I've been both the overall head of a project and only scientific coordinator, and I've had these roles formally recognized ... There are contracts on which my name appears as the project head" (Male assistant professor, DISI).

"All the projects I've worked on, sometimes as an informal manager, were directed by the head unit. It often happened that I did most of the work, keeping contacts with the research partners. But it was formally the head of my research group that appeared responsible for everything" (Female assistant professors, DISI).

The last aspect on which the interviewees concentrated, and on which there was a convergence of opinion between men and women, concerned the supervision of undergraduate theses, and the recognition associated with that work. In fact, at the DISI there were mechanisms in place for assistant professors to be acknowledged as co-supervisors even though they did not have a permanent position.

Comparison between postdocs and assistant professors in STEM

Research dominated the everyday lives of the DISI postdocs and assistant professors. This induced the women to postpone starting a family for fear that it might hamper their professional development. On the other hand, the male assistant professors, who instead had children, said that they devoted little time to their families because of work commitments. However, all the interviewees agreed that the departmental environment was positive and serene, with very little hierarchization.

As regards the activity of supervisor, the assistant professors, men and women, stated that they could formally appear as supervisors – or more often co-supervisors – of PhD students, but it was not permitted for postdocs. Among the latter, whilst men reported that they had been supervisors of students on undergraduate or master degree programmes, this had not been formally recognized for the female postdocs interviewed. Also in terms of the writing and management of projects, differences were observed as regards both the academic position and gender.

4.2.2. Summary for SSH

Postdocs

Among the DSRS postdocs interviewed, both men and women, the majority labelled themselves as outsiders. Also reported, in most of the interviews, was a marked hierarchy within the research groups.

> "There are no particular relations in the department [...]. There's a broad base of weak and formal relationships whereby people say 'good morning' and 'good evening' but it stops there" (Female postdoc, DSRS).

> "What has been lacking a bit, and which I feel still lacks in my group, is collaboration between who is part of the academic teaching staff and postdocs or PhD students [...]. People often do quite isolated activities that don't encourage us to interact, and I think this is a further downside" (Male postdoc, DSRS).

Another element to consider is the division of tasks that defined the internal organizational hierarchy within the department. As observed at the DISI, an aspect on which the interviewees placed particular emphasis, and which revealed significant gender differences, had to do with the supervision of student theses. It was mainly the female postdocs, in fact, who received little recognition for this work. Instead, in regard to the writing and management of research projects, both male and female postdocs reported that their work was often invisible because it was formally attributed to their supervisors:

> "Then there's this issue about recognition in projects ... For example, together with a colleague I've written projects which have taken up a great deal of time and resources. Despite these efforts, however, our names can't appear on the proposals because we don't have tenure position" (Female postdoc, DSRS).

Gender differences were instead observed, among postdocs, with reference to requests to perform administrative tasks:

> "In some cases, at least in groups where there are colleagues that I know, the women are entrusted with more administrative and organizational tasks, like deciding who to invite to a seminar, finding a restaurant, or dealing with accommodation. There's a tendency to reproduce the traditional image of the woman as better suited to caring for the research group, the invisible infrastructure ... You know, those "patient things", she's a bit dim but she's a woman and tidy, so she knows what to do" (Female postdoc, DSRS).

Assistant professors

Contrary to what was observed at the DISI, the assistant professors at the DSRS felt only marginally involved in departmental life, especially because their role was not recognized as important when decisions were taken.

> "Our opinion is totally marginal. Even when there are decisions to take, we're not personally involved, and most of the time we're told about problems only when the decisions have already been taken [...]. Just because we are not permanent figures ... It's all wrong because we could make some important suggestions" (Male assistant professor, DSRS).

In terms of organizational climate, both men and women described the department as particularly marked by conflict:

"There's a high level of conflict in the department. People are very competitive, and there's very little transparency and cooperation, even in areas where communication could be easy [...]. There are numerous small groups with different values which are expressed on a number of issues" (Female assistant professor, DSRS).

"There are so many different areas of interest…. Everyone has their own area, each group has its own. And there's a certain amount of fragmentation and often explicit conflict in relationships and interactions with different areas. There's no cooperation among the different groups. Each of them minds its own business" (Male assistant professor, DSRS).

As regards the activities performed by the interviewees in the DSRS department, the assistant professors of both genders emphasised a work overload in terms of thesis supervision:

"There's a very unequal distribution of tasks from this point of view, and there's no advantage in doing lots of theses: it takes a great deal of time and there's no recognition of the work" (Female assistant professor, DSRS).

Moreover, as already reported at the DISI, also at the DSRS both female and male assistant professors perceived as highly problematic the impossibility – due to ministerial rules, not those of the department – of appearing as the PI of a project:

"The most grotesque thing happened to me on a PRIN project a couple of years ago. As a fixed-term researcher, I was not formally eligible to be head of a local unit: I found myself doing all the work, and I asked a colleague, who did it with pleasure, to feature as head of the unit... He acted solely as a dummy" (Male assistant professor, DSRS).

Comparison between postdocs and assistant professors in SSH

Apparent from the foregoing analysis are the similarities and differences between postdocs and assistant professors. Neither of the groups interviewed felt involved in departmental life, and both groups perceived the department as somewhat conflict-ridden.

Gender differences were apparent in the distribution of activities. While the male postdocs were always involved at least as co-supervisors of theses, the same did not apply to female colleagues, who, moreover, often took on numerous administrative and organizational tasks.

Finally, neither assistant professors nor postdocs – women and men – received recognition for the writing of projects, so that their remained invisible.

4.2.3. Comparative conclusion

As evidenced by the above analysis, there are marked differences between the two Departments. The first concerns participation in departmental life.

At the DISI, postdocs, and especially assistant professors, of both sexes, are considered an integral part of the department, which is characterized by a positive climate. The interviewees reported on the one hand a high degree of collaboration within their groups, and on the other, a lack of cooperation with other units in the Department.

At the DSRS the situation was different, and the assistant professors, and even more so the postdocs, did not feel fully involved in departmental life. Collaborations were developed within the research group, which was nevertheless often experienced as hierarchical.

Turning to the recognition given to the interviewees for their work, substantial differences, also gender-based, are apparent between the two Departments. The first difference concerns recognition of the work involved in thesis supervision. Among postdocs, at the DISI the problem arose only in regard to the supervision of doctoral theses, whereas at the DSRS it also arose for master theses. Although at both the DISI and the DSRS it is not possible to appear as a thesis supervisor without holding a tenured position, at the DISI both women and men stated that there was a mechanism – not present at the DSRS – whereby one could be recognized as a co-supervisor (different from the 'counter-supervisor' who reads and discusses the thesis but does not supervise the research and writing work). Among assistant professors, also reported at the DSRS was an unequal distribution of thesis-related tasks among the various members of the Department, and which created an overload for the early career researchers.

We can therefore say that the postdocs at the DISI were generally satisfied with the responsibilities given to them and the attendant recognition. At the DSRS, by contrast, the majority of the interviewees, both men and women, perceived themselves as being in a more invisible position not consistent with the responsibilities assigned to them. Instead, the assistant professors at both Departments seemed largely satisfied with their current work situations, since these placed them on a career path with prospects of stabilization – although they did not guarantee it. However, in particular at the DSRS, the assistant professors expressed a desire for greater involvement in decision-making.

In conclusion, analysis of the interviews showed that the stories of the women and men of the two departments differed from each other, and so did the stories of postdocs and assistant professors. In regard to everyday work in the Department, this seems to have received greater recognition at the DISI than at the DSRS – and especially for men – while at the DSRS both postdocs and assistant professors wanted more recognition. Instead, the dominant organizational culture appears to be similar in the two Departments for both postdocs and assistant professors, who described an organizational environment which required increasingly exclusive investment in the career and ever greater competitiveness. It is therefore not surprising that this organizational model results in disinvestment by researchers, and particularly women, in family life, since the path leading to an academic career is impracticable for those who reject the "long hours culture" (Currie et al. 2000) which currently characterizes the university system.

4.3. Well-being and work-life balance

4.3.1. Summary for STEM

Postdocs

At the DISI, both male and female postdocs gave a twofold connotation – positive and negative – to the working-time flexibility of researchers in regard to the harmonization of work and private life. In fact, whilst on one hand this translated into total investment in

the work, on the other, not having fixed schedules or obligations concerning presence in the office made it possible to merge the different spheres of life:

"In our group, particularly, you don't get demands like 'You need to be in the Faculty seven hours every day' and that kind of thing, so you can perfectly well stay at home and work [...]. If you don't have a deadline you can work in a more relaxed way, but when you need to deliver, it doesn't matter if it's the weekend, it doesn't matter if it's late or night, you have to finish something [...]. I work from home all afternoon because at the same time I take care of my children" (Male postdoc, DISI).

The interviewees also stressed organizational policies and the services made available by the university. Only one male postdocs among those interviewed said that he had not been able to use any of the university services. There was a day nursery attended by numerous children of university staff (though not managed by the university), but the interviewee had decided to use another nursery because it was closer to his home:

"We got the offer to take him to the kindergarten or nursery here in Povo […] with a lot of children of people who work at the University. But we didn't take him, we just went with the normal one that is near home. In the end it was the same, but we chose the one that was closest to home" (Male postdoc, DISI).

Assistant professors

As regards the assistant professors at the DISI, while all the men had children, the only female assistant professor had none.

The male assistant professors considered the working-time flexibility of their jobs to be a factor enabling them to manage work and family commitments autonomously. Total working-time freedom was viewed rather differently by the female assistant professor, who, being childless, devoted all of her time to work:

"In the last days it is like I'm here at around 8:00 and leave around 20.00 or 21.00. All the days during the week I'm here. I don't have any other life during the week because I just go home, I have dinner and sleep. Wake up, come here, go home and sleep. It's not so easy this kind of life but this is what I have selected for my life [...]. I had some problems last year and the doctor suggested that I find time for myself to go into the mountains and do some sports. I take time for myself during the weekend but just one day because now I'm fully devoted to research" (Female assistant professor, DISI).

Another factor emphasised by the interviewees and which influenced the balance between work and private life was geographical mobility. Many of the male assistant professors, in fact, lived in different cities from the one in which they worked, and this had repercussions not only on the work itself but also on the ability to reconcile it with family commitments:

"I like the work that I do. Of course, so what is the downside? I'm not a trentino from Trento, so I'm a provincial but I don't live in the city. So, on average, I spend an hour and a half or two hours in the car, every day. Fortunately, both me and her have parents who help us with the child. This is important support ... I pay the price of the road?, but for us it's worth it" (Male assistant professor, DISI).

The support that parents offer by helping with children was perceived as extremely important, especially by those interviewees forced to be commuters. For them, the

presence of parents had also influenced the choice whether or not to use the parenting support services provided by the University, such as the nursery. To be noted, however, is that even though this service is available, it has very few places (just over twenty) and is regulated by a ranking list which – at the time of the interview – penalized those who did not have a tenure position, compared with permanent academic and administrative staff:

"The university nursery didn't take our first child. They've said that the second one is more likely to be accepted, although the places are still limited [...]. Also for personal reasons we'd prefer to send him to the nursery close to home. And if they don't take him, in any case we've also applied to the university nursery, and there are also the grandparents who help, and are also happy to do so" (Male assistant professor, DISI).

Comparison between postdocs and assistant professors in STEM

The main gender differences in relation to conciliation between private life and work emerged in reference to the support received for the professional choice. Whilst the men, both postdocs and assistant professors, said they have been supported in their choices by both the family of origin and their partners, the women pointed out that their decision to embark on an academic career and devote themselves more to work – at least at this stage of the career – was not well accepted by the family of origin, and sometimes even by their partners, who instead wanted them to be more concerned with parenting.

Finally considered were the services and policies used to facilitate the balance between work and private life. The few interviewees with children relied on the help of their family or the local nurseries, since the university nursery was not easily accessible, both because of the paucity of the places available and the criteria used in the ranking lists, which penalized those without a permanent position.

4.3.2. Summary for SSH

Postdocs

Male and female postdocs had different opinions concerning harmonization between private life and work. Whilst the male postdocs considered the great flexibility in managing their work to be an absolute advantage for their private lives, which could be organized according to needs, the majority of the women stressed the difficulties caused by not having a working life demarcated in time and space:

"I start work at around 7:00 and carry on until I'm hungry ... it may be 14.00, 16.00 or 20.00. In this tour de force I frequently lose track of time, I work so much and I don't even notice it [...]. Working most of the time from home, I merge my work and private life. This mixture means that everyday life never starts and the work never ends. Even in the evening when we're on the sofa, I often send e-mails. I really never stop working" (Female postdoc, DSRS).

Another element highlighted by the postdocs was geographical mobility, which they saw as an obstacle to the work/private life balance also in regard to future parenthood plans:

"I have a clear separation between private and professional life, so that my friendship networks are mainly external, and my life with my partner actually takes place in another

city. I'm in a vertical part-time couple, and I have a vertical part-time job from Monday to Wednesday because my private life starts after 20.00. At present, I make the two dimensions coexist by sharply separating cities and days of the week" (Male postdoc, DSRS).

"I live in a town – 400 kilometers from Trento – distant from my family and from my husband. We both work far away, and we don't have a family that could take care of a child while we're away ... and this is one of the reasons why we don't yet have children [...]" (Female postdoc, DSRS).

In regard to the issue of parenthood, to be emphasised is that only one male postdoc among all those interviewed had children. However, due to the few places available at the university nursery, the rigid selection criteria – which exclude parents without tenure position – and a home in a city different from Trento, he was unable to use this service.

Assistant professors

Turning to the assistant professors, of interest is the divergence of narratives between those who had children and those who had none. It appears, in fact, that those without children, both male and female assistant professors, tended to standardize their work schedules and presence in the office, and not to work at home or at the weekends – except for specific exigencies or upcoming deadlines – thus creating space for themselves and well managing their work. Those with children instead organized their work days according to family commitments:

"I organize my workday on the basis of conciliation, according to whether my children are all at school or whether there is one or more of them at home, both during the school year or during the holidays, or whether one is ill. Basically I work here in the morning. In the afternoon I'm mostly at home to cover the after-school activities, and I resume work in the evening from 21.00 to 00.00 / 01.00. So my working hours are very variable. There are periods when I'm here every day, periods when I'm at home and come here for the least time possible. I really appreciate the total freedom" (Male assistant professor, DSRS).

One aspect to which particular attention was paid was the support given by parents and partners, both in professional choices and in conciliation. It seems that all the interviewees had been supported in their career choices by both parents and their partners:

"My parents have supported me in everything I've done, but I'm not part of a family that has connections with the academic world. My parents aren't graduates and I was the first in the family to graduate [...]. My partner admires what I do, she knows that I like my job, and even if there are times, especially under deadlines, which are particularly stressful, she supports me and understands me" (Male assistant professor, DSRS).

It is especially the statements of the female assistant professors with children that show how geographical proximity with the parents has a positive impact on the work/family balance:

"I am lucky to have my parents living close by. This is a great help. There are times when I have so many things to do, and I can't concentrate fully with the children at home. If I panic in dealing with the children, my father is retired and I can call him without any problems. In fact, he's very happy to spend time with them, and so I'm able to work" (Female assistant professor, DSRS).

Finally, with regard to the organizational policies used by the assistant professors to reconcile private life and work, the interviewees with children – who unlike the postdocs are employees of the university – cited the support given them by the university nursery and economic aid received from the university for each dependent child:

> *"The university and the organization have helped me with the nursery, because with my first child I was able to access the nursery, and I've benefited from a small – but better than nothing – grant which the university gives employees with young children. It's not life-changing, but those 50 euros a month for the nursery fee make a bit of difference at the end of the year" (Male assistant professor, DSRS).*

Comparison between postdocs and assistant professors in SSH

As observed at the DISI, also at the DSRS the first element to highlight is that there were no woman with children among the postdocs. Being a parent had a great influence on the interviewees' lives, and most of them considered having children a factor which increases the difficulty of balancing work and private life.

The assistant professors, both women and men, as well as the male postdocs, considered the high degree of working-time flexibility and the non-compulsory presence in the office as favourable for conciliation. This was especially evident for the assistant professors with children, who organized their days according to family commitments.

Another important element that brings out the differences between postdocs and assistant professors concerns the question of mobility. While the majority of postdocs were commuters and did not spend every day in the Department – sharply separating the work and private dimensions – the assistant professors lived permanently in Trento, and this had a positive influence also on conciliation. The topic of the support received in professional choices from parents and partners divided the interviewees. Both postdocs and assistant professors of both sexes said that they had been supported by their parents in decisions about their careers, while the same could not be said of their partners, especially in the case of the female postdocs.

Finally cited were the services and organizational policies that the university provided for work/private life conciliation by its employees. The assistant professors stressed the importance of the nursery and the grant offered them by the university for each dependent child. The nursery was instead difficult to access for the postdocs, who were also entirely excluded from the grant given to employees with dependent children.

4.3.3 Comparative conclusion

It is useful to compare the statements by the STEM and SSH interviewees in regard to well-being and work-life balance.

It is primarily the support received from family and partners in professional decisions that highlights the differences between the two Departments. Whilst the male and the female postdocs at the DSRS tended to receive support from their families, the female postdocs at the DISI had not been encouraged by either the family or by the partner, who reasoned according to a traditional gender division of labour. An entirely different scenario was described by the male DISI postdocs, who said that they had always been supported both by the family of origin and their partners, who, moreover – in the

majority of cases – worked in academe. Also the narratives of assistant professors differed in this respect. In fact, whilst women and men at the DSRS, as well as the male DISI assistant professors, had received support from both partners and the family of origin, the female assistant professor at the DISI emphasised that her work was viewed as an obstacle by her partner, who wanted her to devote more time to the couple's life together.

Also geographical mobility and commuting were regarded as detrimental to conciliation.

The third and final aspect concerns the services provided by the university for conciliation. These services penalized or excluded postdocs, but were instead accessible to assistant professors who, despite having fixed-term contracts, were recognized contractually as employees of the university.

4.4. Career development

4.4.1. Summary for STEM

Postdocs

Male and female postdocs at the DISI had the same opinion of the ingredients necessary for career development in the department in which they worked. They all emphasised the importance of fundraising and scientific production, in particular in terms of publications in international journals:

"What I've seen is that there are some things which are particularly valued in this department. Fundraising is very important here, that's for sure. An ability to procure added value and attract funding is greatly valued ... publications matter, especially if they are of a certain level, though perhaps less than the ability to bring in research projects which get funded" (Female postdoc, DISI).

As regards publications, however, there were differences between male and female postdocs. Most of the women stated during the interviews that they did not have a great deal of autonomy in managing publications. They reported issues in creating a profile for themselves distinct from the scientific interests of their supervisor, a problem which hampered career development. It seems, however, that the scenario was different for the male postdocs interviewed, who had more autonomy in choosing their lines of research:

"The only thing that I can't really handle are the publications, which are primarily with a PhD student. Sometimes we can manage them. But other times, when our boss butts in, there are differences of opinion. The autonomy diminishes a little, and we have to agree to do what he says [...]. Most of my latest publications are on this topic and it is not one that drives me crazy, you know" (Female postdoc, DISI).

"We used to write a lot together, and this helped me get myself known ... lately he's had other interests, so if I can manage things on my own, he's pleased. He doesn't push like he used to, he pushes more in other directions. But that's fine by me: he doesn't push, and I do what I want. I publish on things that interest me and he publishes more on his things" (Male postdoc, DISI).

Assistant professors

The assistant professors, both men and women, said that one of the most important elements for career advancement was linked to objective and measurable criteria concerning publications:

"In our sector, what counts is the number of publications in international scientific journals; this is a major parameter [...]. My supervisor said, 'I don't have sponsors, so if I can justify your ability with numbers I'll make every effort, but if we don't reach those numbers, you can forget your position. Numbers are irrefutable" (Male assistant professor, DISI).

Thus it appears that the criteria for career advancement are linked to the amount of publications, especially if of international scope. The majority of interviewees also stressed that obtaining recognition in the scientific community – which is intrinsically bound up with scientific production – had enabled them to qualify for the post of associate professor.

Second, also the assistant professors interviewed, of both sexes, cited the ability to attract funds from outside the university. A distinctive feature of the DISI is that it does not rely for funding solely on national, European and/or international projects; it also receives commissions from companies:

"If we want to grow and also have a certain type of profile, what we must do is obtain funding so that we can do research which gets us recognition from the rest of the scientific community [...]. One of our financing sources consists of companies or firms from outside. At a time of crisis like the present, being able to attract funding is crucial. It creates new opportunities to pursue your interests" (Male assistant professor, DISI).

Comparison between postdocs and assistant professors in STEM

The interviews with assistant professors and postdocs registered a shared narrative on aspects valued in the organizations for which they worked. Two elements were most frequently cited as favouring career development: fundraising and publishing. More specifically, whilst for the postdocs fundraising was of primary importance, because it guaranteed future work with which to build their scientific profiles, for assistant professors of both sexes the key to professional development was publishing.

4.4.2. Summary for SSH

Postdocs

The postdocs interviewed at the DSRS emphasised various elements contributing to development of the professional career, and there were no differences between what the women and men stated. The three factors cited in interviews were (i) having one's work known and appreciated within the department, (ii) the quality of scientific production, and (iii) the ability to attract funds:

"It's essential to fit in and be recognized within a group ... this increases or decreases your chances of getting a position [...]. Besides a set of objective criteria, evaluation is always made by the Department Council, which is made up of people with their own schemes, their likes and dislikes" (Female postdoc, DSRS).

"For promotions you should have a constant and quantitatively significant international production, very focused and strategic, and preferably in peer-reviewed journals. Then it is clear that the ability to win major projects makes the difference; but I believe that above all it's the ability to publish well, internationally, in journals considered core that makes the difference" (Male postdoc, DSRS).

"It's the ability of research groups to bring money to Trento for research that makes the difference. Considered important is not innovation as such, but the fact that an institution external to the department and to the university has decided to recognize research carried out at Trento as quality research" (Female postdoc, DSRS).

Internationalization was considered essential in regard not only to publications but also the scientific profile and project experience. However, there were partly different opinions among the postdocs on fundraising. Whilst on the one hand there was widespread concern over the lack of resources, on the other, there were interviewees who maintained that European projects are opportunities to open up research internationally, and those who believed that this mechanism was excessively invasive of the department's scientific autonomy.

Assistant professors

Turning to the assistant professors at the DSRS, both women and men, as already recorded at the DISI, considered scientific productivity to be vital for their career development. However, as widely evidenced both in Italy and internationally, the 'publish or perish' dynamic causes difficulties for those with care responsibilities, and especially female researchers with children.

"I feel a bit more pressure from the point of view of publications. But my path has been interrupted by events related to my family. So it's obvious that compared with others I'm a bit more disadvantaged" (Female assistant professor, DSRS).

"Extremely important is the international dimension of peer-reviewed publications in journals of a certain level, possibly with a significant impact factor, or with a certain degree of recognition in the peer group, colleagues who work in the area" (Male assistant professor, DSRS).

Also the ability to attract external funds to the university was considered a 'springboard' to stabilization. Especially the male assistant professors emphasised the increasingly important role played by the ability of researchers to raise funds. But in this case, too, there were more or less critical opinions on the importance of the capacity to attract external funds:

"We are in a transitional period [between two epochs] where previously there was this production chain with loyalties, and there was the designated heir who would become a professor. Now there's this neoliberal method whereby you build a career, not because you're loyal to someone, or because they need someone and you have the right qualifications, but because you win contracts and bring in money" (Male assistant professor, DSRS).

Comparison between postdocs and assistant professors in SSH

Among the DSRS interviewees, both women and men had the same opinions on the steps necessary for career development. However, there were some differences between the two groups.

The postdocs primarily cited the importance of having one's work known and appreciated within the department. The assistant professors, however, and especially the men, pointed out that the university was undergoing major structural changes which had weakened the logic of cooptation in selection and recruitment processes.

All the interviewees instead agreed that publications were extremely important, especially ones of international scope. Publishing activity, however, was likely – if evaluated in purely quantitative terms – to penalize particularly women with care responsibilities.

4.4.3 Comparative conclusion

Analysis of the interviews conducted at the DISI and DSRS showed general agreement on the areas in which to invest to develop an academic career.

A first element concerned publications, especially at international level. In particular, the assistant professors at the DISI saw objective and measurable criteria – such as the number of publications, the personal H-index, and the impact factor of the journals – as guarantees of a future academic career. At the DSRS criticisms were made of the 'publish or perish' mechanism. Also emphasised was the potential gender discrimination related to care responsibilities that this system is likely to reproduce and fuel.

Finally, attention turned to the growing importance assumed by fundraising activities. This is because current cuts in research eliminate not only prospects for future work but also for participation in European and international research partnerships.

4.5. Prospects for the future

In this section we concentrate on the actions proposed by interviewees in the two Departments to improve their quality of life and work. The focus will be on two aspects: (i) the measures which, at national level, could improve the employment situation of those with temporary posts at university; (ii) actions that could be implemented at the organizational level.

4.5.1. Summary for STEM

The problematic factors and the elements in which to invest from the beginning of the career were cited in a similar way by the interviewees, both men and women, both postdocs and assistant professors. Whilst most of the proposals concerning the national level were made in similar manner by the postdocs and assistant professors, some differences were apparent in the measures proposed at the organizational level.

Postdocs and assistant professors

As regards national-level policies that could improve the quality of postdocs' work, one of the elements recurrent during the interviews concerned the type of contract for these figures in Italy, which does not recognize research as work:

"Well, I think the first thing is social security. The first thing of all, because it's absurd that if you finish a work contract, which is not an employment contract but a grant – which is another absurdity – it happens that you no longer have a job from one day to the next" (Male postdoc, DISI).

The fact that in Italy a postdoctoral fellowship does not correspond to a job, but to a grant, and therefore does not give entitlement to social benefits of any kind, means that many of the critical issues raised by the interviewees referred to the lack of rights such as sickness leave, social security, or even the possibility of a mortgage:

"There's this thing about mortgages. For example, the fact that with your contract you can't go to the bank and get a mortgage is a problematic issue. The bank won't grant me a mortgage. They told me that they were sorry because my income was good, but they couldn't give me a mortgage because they had no guarantees" (Female postdoc DISI).

Also some of the assistant professors said – even though they had more stable jobs than the postdocs – that they did not have the same rights as granted to tenured researchers. However, the factor most frequently cited in their interviews concerned scant professional independence:

"The problem is that we can't be the PIs of projects. In these years I've had a PRIN – actually, not as PI because I couldn't be, but I was mostly responsible for it. Not being able to sign the projects that you write is a recurrent issue for RTD-as. It's not a mechanism that has to do with the individual. It's the system that means you can't be PI in these projects" (Male assistant professor, DISI).

Regarding the policies to be implemented at organizational level, the postdocs and assistant professors agreed on the inadequacy of the services provided by the Department to guide young researchers in career development, and the lack of services giving clear information on how to be competitive in the academic jobs market:

"A sort of career advisor: when I was preparing for interviews for the assistant professorship, I sought suggestions on how to write the letter of presentation, the research statement, and description of teaching activity. And these things I found by myself. There was no one to help me" (Female postdoc, DISI).

During the interviews, however, some differences emerged in regard to the organizational policies deemed necessary. In fact, whilst the postdocs wanted to acquire skills related to everyday research practice, such as abilities related to writing scientific papers or projects, the assistant professors preferred to improve and increase skills useful for teaching activities:

"It would be useful to have courses on how to write articles, or also on how to work on projects, such as writing projects or applications for funding, and things like that" (Female postdoc, DISI)

"I know people who'd never taught before. No one had told them how to behave in the classroom. Obviously, the comments by their students on the first courses weren't very

nice, and the assessment is included in your portfolio for promotion. I think it would be much better if you already knew how to deal with these things through training given by the department" (Male assistant professor, DISI)

Comparison between postdocs and assistant professors in STEM

As is apparent from the interviewees' words, the postdocs and assistant professors – both women and men – expressed similar ideas on how policies, both at national and organizational level, could improve their working conditions.

As regards national policies, most postdocs focused on the inadequacy of the contract, which took the form of a scholarship and did not give entitlement to welfare benefits. The assistant professors instead placed greater emphasis on the impossibility of appearing as Principal Investigator of a project, with the result that their work went largely unrecognized.

As regards the actions to be proposed at university level, both postdocs and assistant professors cited interventions such as a career advisory service providing information on opportunities for career development, and skills seminars. But on this latter aspect there were differences between the two groups of interviewees related to academic experience. In fact, whilst the postdocs felt the need for training to improve the writing of scientific papers and projects, the assistant professors wanted to develop soft skills, especially ones to do with student management.

With respect to work/family conciliation, no particular requests were addressed to the University. This was probably also due to the fact that only few interviewees had children, and the majority of these could make use of family networks.

4.5.2 Summary for SSH

The arguments of the interviewees at the Department of Sociology and Social Research on policies to be implemented partly mirrored those of the interviewees at the STEM department. Once again, they were similar for men and women, both postdocs and assistant professors.

Postdocs and assistant professors

As at the DISI so at the DSRS, especially recurrent in the stories of the postdocs interviewed were issues concerning their contractual status:

"The contracts should be entirely different because we're figures objectively at risk, and objectively we're not freelances [...]. But this doesn't depend on Trento. It depends on the entire national system [...]. It would be better to frame these hybrid figures in a contractually definite manner" (Female postdoc, DSRS)

Also the assistant professors emphasised the aspect of work precariousness. And also in this case, as already seen for the DISI, specific reference was made to the impossibility of obtaining a mortgage:

"It's absurd that a forty-year-old person with a fixed-term contract – and this is no longer an exceptional case – decides to buy a house and is told by the bank that it wants his father's and mother's pensions as surety [...]. There's nothing like this in other European countries, where there's even a minimum wage, or benefits if you have spells of

unemployment. In Italy, only certain categories already insiders in the system are entitled to them" (Male assistant professor, DSRS).

Moving from the national to the organization level, most often reported was a lack of information about postdocs, their rights and their duties:

"Knowing the regulations, your rights and your duties. They should explain who you are and what the rules of the game are. This would be very important for transparency" (Female postdoc DSRS).

As regards the initiatives that the Department should promote, there were differences of opinion, albeit minimal, between postdocs and assistant professors. Whereas the postdocs wanted initiatives to help them choose the most prestigious journals in which to publish, the assistant professors were more concerned about international publications and recruitment processes:

"Basic training in the field, like which journals to choose for publications and why, or what alternatives there are. Understanding what publication policies are, the journals which the Department prefers. Specific training to develop writing skills would be good" (Male postdoc, DSRS).

"For people like me, the Department could encourage publication in international journals, and could explain the mechanisms of recruitment in a highly competitive environment like the academic one" (Female Assistant Professor, DSRS)

Again with reference to international publications, both assistant professors and postdocs emphasised the support that the Department should provide for the revision of articles written in English:

"I know English, but I must also spend funds on proofreading by a native speaker of the things that I write. The Department might think about this, if it indeed sees internationalization as one of the objectives and as a research excellence" (Female assistant professor, DSRS).

"Then there's this dictatorship of English, which makes publishing very complex because you have to pay for revisions. They cost a lot of money. Although I know English, I need to have what I write revised by a native speaker" (Female postdoc, DSRS).

Moreover, both assistant professors and postdocs wanted study periods abroad to be facilitated. This is because mobility – both participation in conferences and periods as visiting scholars at other universities – helps to construct academic networks. However, at the DSRS there were frequent situations in which postdocs had no mobility, not even for attendance at conferences:

"Clearly, if there was a support for international mobility, conferences, and transfers ... that would be nice ..." (Female postdoc, DSRS).

"For us, however, since we're researchers, though at the initial stage, it would be necessary to facilitate, much more than happens now, international mobility, which means periods in departments around Europe and the world. This is because it would strengthen our network, and because our CVs could include these experiences, which today are essential to obtain a somewhat more stable position" (Male assistant professor, DSRS)

Moreover, both postdocs and assistant professors complained about the lack of services supporting career development and providing clear information about future job opportunities for researchers:

"There should be somewhat clearer planning of what your career possibilities are. There should be moments when they say: this is your pathway, this is the debate which you could enter, these are the possibilities of mobility or scholarships" (Female postdoc, DSRS).

"Information about careers possibilities, calls, competitions, and positions – this kind of support isn't available [...]. The idea of what places to have as references for the kind of research that I do, direct contacts with international researchers working on my topics. What is lacking is precisely this support for research" (Male assistant professor, DSRS).

A final issue – cited by the female assistant professors – concerned implementation of services to ensure a better balance between work and family life:

"Support for child care, and therefore a series of internal university services: not only the nursery, but also babysitting services, a list of child-minders who can be called in the case of illness. Or the opening times of the day nursery could be more flexible" (Female assistant professor, DSRS).

Comparison between postdocs and assistant professors in SSH

As we have seen, there were no substantial differences between what women and men wanted in order to improve the quality of the work of early career researchers.

As regards national policies, both postdocs and assistant professors indicated the need to rethink the contractual form of a postdoc fellowship – which was framed as a scholarship and not as an employment contract – so that at least income support during periods of unemployment could be granted.

Instead, differences emerged in regard to departmental policies that could be activated. These differences of expectations can be easily explained by the fact that the two categories of interviewees were at different stages of career development. While the postdocs wanted practical help on how, for example, to write an article for an international journal, the assistant professors felt the need to be guided by expert figures in their search for career opportunities, also abroad.

Another interesting aspect mentioned by the female assistant professors was the need to increase conciliation services. The postdocs did not mention this aspect, also because there were no postdocs with children.

4.5.3 Comparative conclusion

In this part of the report – focused on the needs expressed in terms of national and university policies – postdocs and assistant professors have been treated jointly because the interviews with them did not reveal substantial differences; instead, the issues cited were quite similar, both at the DISI and the DSRS, for both men and women.

One of the issues most frequent raised during the interviews concerned the type of contract on which the postdocs and assistant professors worked. Whilst at the DISI the postdocs concentrated on their contractual status, which did not provide access to any type of welfare benefit, at the DSRS the focus was mainly on the fact that, after expiry of

the contract, there were no resources to cover periods of unemployment economically. This is probably also due to a substantial difference in pay between the postdocs at the STEM and SSH departments.

Again with reference to their contractual status, the assistant professors at both departments particularly emphasised the limitations placed on them in developing research independently – because a fixed-term researcher cannot appear as the Principal Investigator of a project.

The main differences between the two departments emerge in the policies deemed necessary at university level.

Whilst the DISI postdocs felt the need to acquire skills relative to the writing of scientific papers, and especially projects, lacking at the DSRS was not only training on how to publish in international journals, but also – in contrast to the DISI, which is much more internationalized – services making it possible to cover the costs of proofreading.

The assistant professors at the DISI, on the other hand, felt the need to acquire teaching skills, which seemed to be well developed at the DSRS, where what was instead wanted above all was mobility – both for visiting periods and to attend conferences. The assistant professors at the two departments agreed on the need to establish a career advisory service informing and counselling on the possibilities for future careers.

The final aspect that warrants attention concerns the reconciliation of work and family life. At the DISI neither the postdocs nor the assistant professors thought that it was necessary to increase childcare services, while this was particularly felt at the DSRS, especially among assistant professors with children.

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BELGIUM

Farah Dubois-Shaik, Grégoire Lits, Bernard Fusulier

1. INTRODUCTION

In 1968 the Catholic University of Leuven split into the Dutch-language Katholieke Universiteit Leuven (KUL), which stayed in Leuven, and the French-language Université catholique de Louvain (UCL), which moved to Louvain-la-Neuve in Wallonia, its main campus. UCL has satellite campuses in Brussels, Charleroi, Mons and Tournai. UCL educates around 27,000 students per year from more 120 nationalities in all areas of studies at its different campuses. The UCL is Belgium's largest French-speaking university.

In January 2010, UCL reformed its organisation distinguishing a teaching structure (faculties and schools) and a research structure (institutes). Faculties and institutes are part of three sectors: Human Sciences, Health Sciences and Sciences and Technology (see Fig. 1).

An institute can articulate its policies around research centres, or research poles. Institutes and centres are supported by technological platforms bringing together the technical and administrative staff around a coherent set of scientific and technical equipment (testing laboratory, archive centre or translation...). They can be integrated in an institute, or co-managed by several independent institutes. The platforms also support teaching and service to social activities. Alongside these structures, research centres bring together members of one or more institutions around a common project. The aim is to encourage interdisciplinary research, high level and stimulating temporary grouping of people around disciplinary objects or common themes.

GARCIA project in UCL has been focused on two institutes: ELI for the STEM sector, and IACCHOS for the SSH sector.

The SSH Institute for the Analysis of Change in Contemporary and Historical Societies (IACCHOS) is a scientific confederation consisting of 12 research centres entirely or partially inter-rELIant: these are organized either according to specific variations on a topic; or as interdisciplinary centres; or as inter-sector centres; or as network centres. There are approximately 200 junior and senior researchers and academics working in IACCHOS, which are from sociology, anthropology, history, psychology and educational sciences faculties and around 20 administrative coordinators. The management of the institute is headed by the president, and has governing organs that are the council of the institute, the bureau of the institute and the management board of the institute. The Institute of Change in History and of contemporary Societies is born in 2010 in response to a realization of the development plan of the UCL, which is inscribed in the philosophy of interdisciplinarity.

Fig. 1. - UCL's organisation chart

Boards					
(eg. Rectorate and University Council)					
Direction and offices					
Sectors					
(Faculties, Research Institutes and Technology Platforms and 1 Cross-sector Institute)					
Human Sciences Sector		Health Sciences Sector		Science and Technology Sector	
5 Faculties + the Louvain School of Management (Teaching)	9 Institutes (Research)	4 Faculties (Teaching)	5 Institutes (Research)	3 Faculties + the Louvain School of Engineering (Teaching)	6 Institutes (Research)
Schools	Centres	Schools	Centres	Schools	Centres

The STEM Earth and Life Institute (ELI) consists of five research poles. These five research poles are again organised into (inter) sectorial, inter-institute and institutional platforms. The five research poles are Agronomy (ELIA), Biodiversity (ELIB). Earth & climate (ELIC), Environmental sciences (ELIE) and Applied microbiology (ELIM). The institute, presided over by a currently male professor in Bioengineering, assembles more than 430 members, of which 50 are professors, more than 260 researchers and PhDs and around 120 technicians and administrative personnel. This institute holds more than 300 senior and junior scientists – bioengineers, physicists, agronomists, ecologists, geographers, and microbiologists – in order to study together the evolution of the agro-systems, the ecosystems, the water cycle and the climate and to develop new production methods and biotechnologies for a sustainable development. The governing organs are the council, the bureau and the management board of the institute. The website of UCL states two main missions/objectives for ELI: Reducing the uncertainty/ To understand the functioning of our planet and to contribute to sustainable development and solutions.

In order to elaborate tools to collect and extract relevant statistics, the Belgian Garcia researchers took help from the HR services of UCL, of which we initially had a meeting with the head. With him, we discussed the strategy of proceeding in order to assemble/create the data required. After this, we were assigned two administrative workers within the HR department, who are responsible for dealing with personnel profile data and configurations. Around 5 to 6 joint work sessions with a Garcia researcher and these two HR workers were then undertaken to assemble/generate the required data, where this was possible via the UCL HR web system, and to create a table. These data were highly confidential and we did not have indiscriminate access to the profiles of researchers, and had to be in company of the HR workers in order to generate/process the information extracted. We have encountered some hurdles in

assembling data on researcher/academics in the UCL case as the HR data bases were not always accessible to us for anonymity or technical reasons. In collaboration with two HR service workers however, we were able to create new sets of data concerning the profiles of researchers/academics, figures on exits, employment status, promotions, leaves etc. This data assemblage/creation was quite a lengthy process and not always easy for the HR service workers helping us, as they did this during their working hours and needed to liberate themselves (without any remuneration). Moreover some data on teaching corps and numbers of Postdocs/PhDs were not available for the two departments and could only be assembled on the level of all of the institution if at all or the sectorial level (STEM and SSH).

The qualitative analysis was extracted from the WP4 interviews conducted in our two departments/institutes SSH, the Institute of Analysis of Contemporary Changes in History and of Society, and STEM, the Earth Life Institute. The compositions of the interviewees are 26 WP4 present postdocs (and some docs), permanent lecturers and researchers. We conducted semi-structured interviews of around 2h, during which questions were asked about a) chronological and biographical events, b) everyday work and life experiences, and c) perspectives for their future. More specifically, five key areas were explored: 1) individual trajectory; 2) organisational culture and everyday working life; 3) well- being and work-life balance; 4) career development; 5) perspectives on the future.

Interviewee type	Institute	Female	Male
WP4 postdocs	IACCHOS	2	2
WP4 newly tenured	IACCHOS	4	4
WP4 postdocs	ELI	3	2
WP4 newly tenured	ELI	4	4

2. REPORT ON QUANTITATIVE DATA

2.1 Gender inequality in working condition

This section addresses the question of the sex composition of staff member and Phd students in UCLouvain and in the two research Institutes under scrutiny (ELI - STEM and IACCHOS - SSH).

2.1.1. UCLouvain

Data on the sex composition of the academic and scientific staff of Belgian French speaking universities are made available on a yearly basis by the CREF (Conseil des recteurs)[4]. The most recent data available for UCLouvain covers the 2013-2014 academic year. And are presented in table1 and figure 1 below.

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[4] Available on www.cref.be

Table 1: UCLouvain staff members (academic and scientific) by category and sex

	Men	% Men	Women	% Women	total
Financed PhD students	455	52%	425	48%	880
Teaching assistants (PhD student)	250	52%	229	48%	479
Sessional lecturers (appointed by course)	222	74%	80	26%	302
Assistant professors (part time)	372	68%	179	32%	551
Assistant professors (full time)	79	65%	42	35%	121
Associate professors (part time)	120	78%	33	22%	153
Associate professors (full time)	123	72%	48	28%	171
Full professors	207	86%	33	14%	240

Data: Annuaire statistique CREF (Conseil des recteurs), academic year 2013-2014

Fig. 1: UCLouvain staff members by category and sex – Leaky pipELIne Scissor Curve
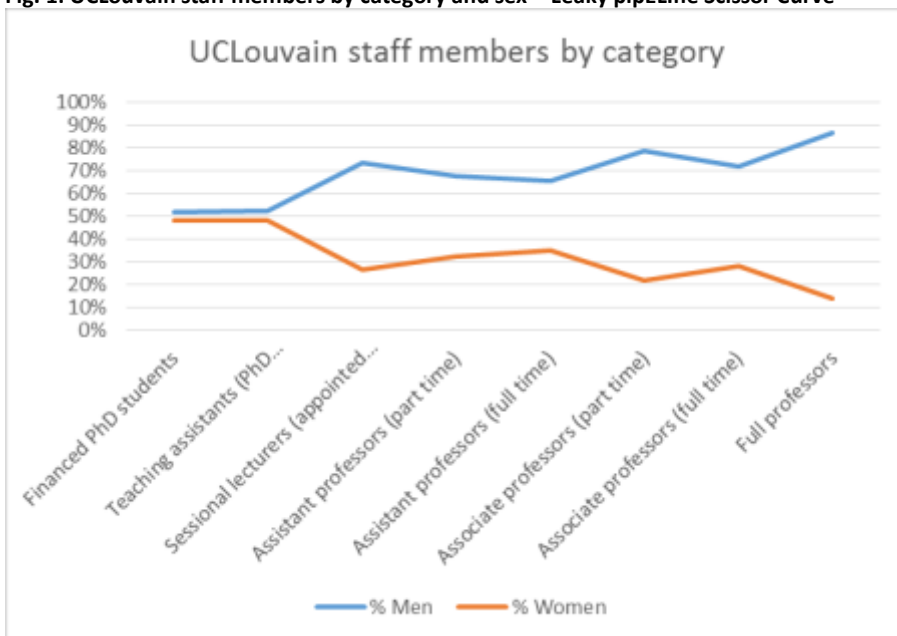
It is worth noting that the distribution of men and women according to academic rank in UCLouvain follow the pattern of the "scissor-shape curve" characteristic of the leaky pipELIne phenomenon and the "evaporation" of women as they advance in the career (Alper 1993: p. 409‑411 ; Dubois-Shaik et Fusulier 2015:).

Regarding part-time work, we have data for assistant, associate and full professors. According to the CREF statistics, part-time-work does not exists for full professors at UClouvain. Part-time work is however important for assistant and associate professors (see Table 2). It applies to 82% of assistant professors and 47% of associate professors. Notably, a small difference exists among men and women, rate of part-time work are slightly less important for women in UCLouvain, especially at the rank of associate (tenured) professor (see fig. 2).

Table 2. Part-time work for professors at UCLouvain

	Men	Women	Total
Number of associate professors	243	81	324
Number of part-time associate professors	120	33	153
% of part time associate professors	49%	41%	47%
Number of assistant professors	451	221	672
Number of part-time assistant professors	372	179	551
% of part time assistant professors	82%	81%	82%

Fig 2. Part-time work for professors at UCLouvain
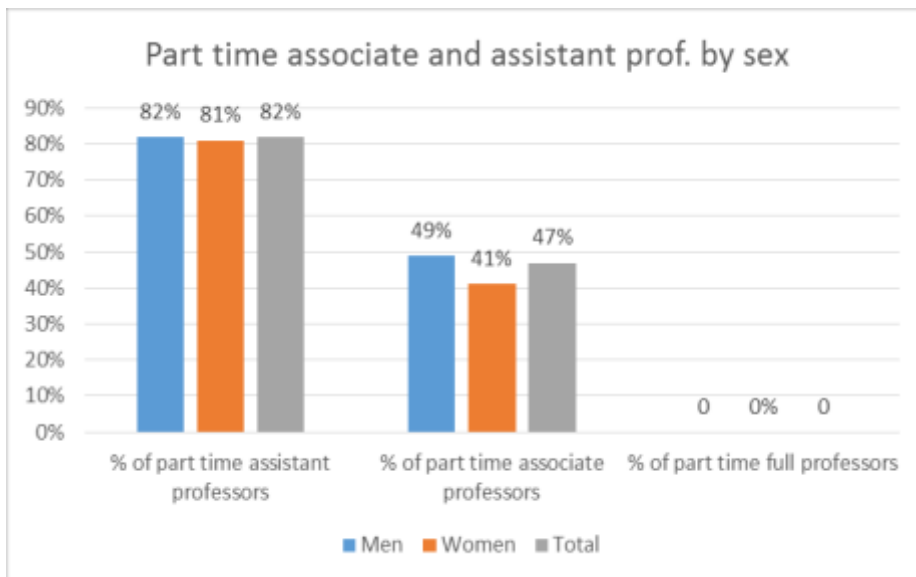
2.1.2. STEM department (ELI) and SSH department (IACCHOS)

The situation regarding sex composition of IACCHOS and ELI staff members and PhD students is contrasted. As shown in table 3 and illustrated by the figure 3, while 53% of IACCHOS professors and Phd Student are women, this proportion falls to 37% in ELI (with a proportion of 38% in all UCLouvain).

33% of untenured professors in UCLouvain are women. This proportion rise to 48% in ELI and 69% in IACCHOS. Only 20% of the UCLouvain tenured professors are women, ELI with a frequency of 23% of women, stays close to the UClouvain average, but IACCHOS with a frequency of 40% of women amongst tenured professors performs better in term of gender balance.

48% of funded PhD students in UCLouvain are women. We can distinguish here two category of funded Phd student. (1) Firstly "Teaching assistant" (TA) are staff members of the university. They have compulsory teaching duties to perform accounting for 50% of their working time. The other 50% of their working time is dedicated to the completion of a PhD. TA contracts are 6 years fixed-term employment contracts with the university. 48% of UCLouvain TA are women. This frequency rise to 63% in IACCHOS and falls to 35% in ELI.

(2) The second category of PhD student are "Funded Phd students". They are students that are granted a 3 or 4 years grant that allows them to complete a PhD. They are official members of the university staff but generally do not have the status of employee. They are considered as student by the Belgian fiscal administration, which is not the case for TA (that have the status of employee). 48% of them are women in UCLouvain. Among funded PhD students, 55% are women in IACCHOS and 42% in ELI.

The situation in ELI is particular. If the proportion of women that are tenured (23%) or untenured (48%) professors is higher that the propositions for the whole university (20% ; 33%), the proportion of women Phd students is (significantly) lower (35% of women TA against 48% for UCLouvain and 63% in IACCHOS).

It is also remarkable that nor in IACCHOS or in ELI the distribution of women in career stages follow the scissor-curved distribution of the leaky pipELIne. In ELI, the proportion of women amongst assistant professor is higher that the proportion of women amongst PhD student. In IACCHOS, women are overrepresented in almost all categories, and even more, the higher you climb, more women you will encounter (until the rank of tenured professor) (see fig. 4 and 5).

Table 3. Professors and PhD students in ELI, IACCHOS and UCLOUVAIN

ELI	Men	% Men	Women	% Women	Total
Funded PhD students[5]	33	58%	24	42%	57
Teaching assistants (PhD student)	26	65%	14	35%	40
Assistant professors (untenured)	15	52%	14	48%	29
Associate and full professors (tenured)	30	77%	9	23%	39
Total	**104**	**63%**	**61**	**37%**	**165**
IACCHOS	Men	% Men	Women	% Women	Total
Funded PhD students	26	45%	32	55%	58
Teaching assistants (PhD student)	9	38%	15	63%	24
Assistant professors (untenured)	9	31%	20	69%	29
Associate and full professors (tenured)	32	60%	21	40%	53
Total	**76**	**46%**	**88**	**54%**	**164**
UCL	Men	% Men	Women	% Women	Total
Funded PhD students[6]	455	52%	425	48%	880
Teaching assistants (PhD student)	250	52%	229	48%	479
Assistant pofessors (untenured)	451	67%	221	33%	672
Associate and full professors (tenured)	450	80%	114	20%	564
Total	**1606**	**62%**	**989**	**38%**	**2595**

Fig. 3 Percentage of women according career stage in ELI, IACCHOS and UCLouvain

% of women by institut and career stage

UCL IACCHOS ELI

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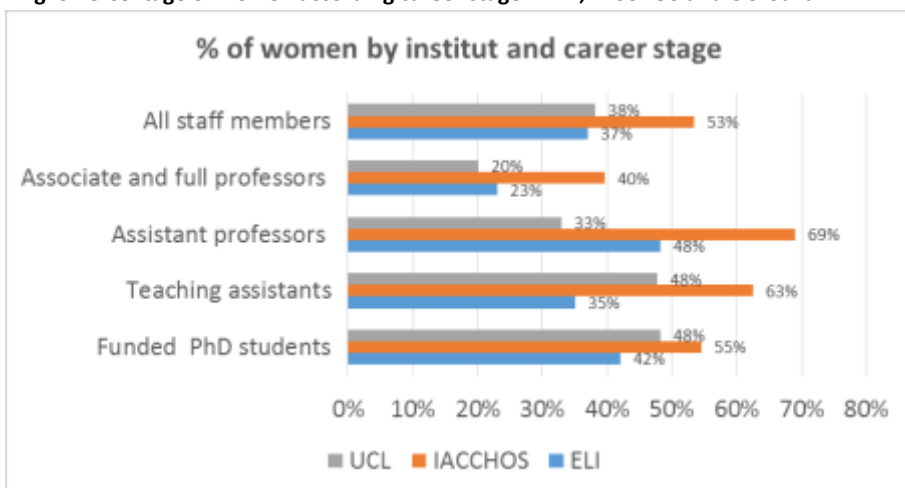
[5] Data for PhD students in ELI and IACCHOS are for the academic year 2015-2016. Data for professors are for the academic year 2013-2014. Data for ELI and IACCHOS are internal data from UCLouvain.
[6] Data for all UCL source: CREF 2014. All data (PhD student and professors for the academic year 2013-2014.

Fig. 4 and fig. 5: the leaky pipeline scissor-curved graph in ELI and IACCHOS
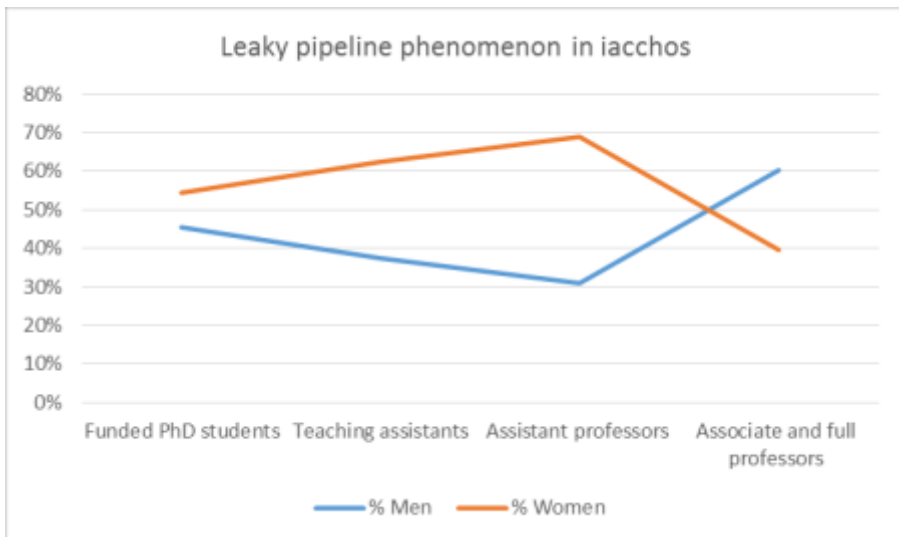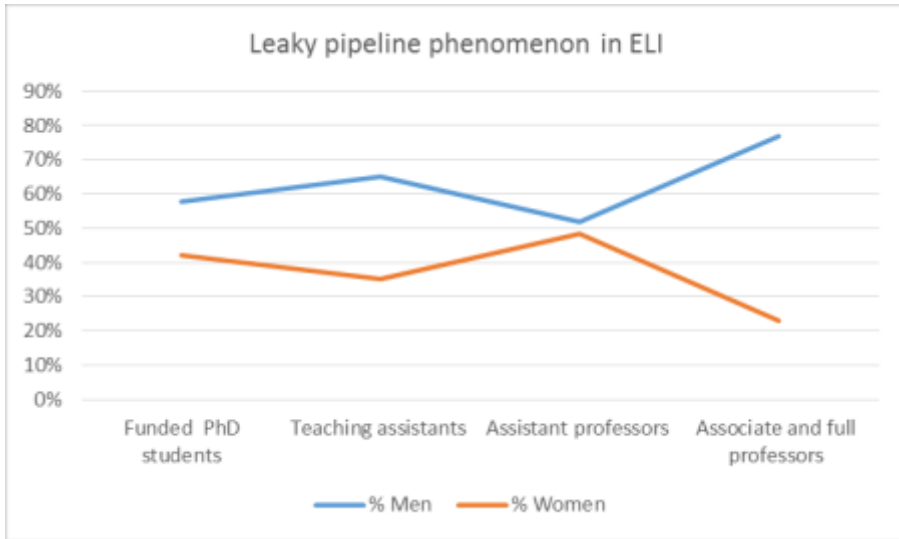
2.2 Gender equality in career development

In this section, we will address the question of career development and promotion at different career stages.

2.2.1. Evolution of gender balance in career stage at ELI and IACCHOS (professors)

In the year 2011-2013, the proportion of women slightly decreased in every categories of professor (tenure and untenured) in both institute (see table 4).

Table 4. Evolution of professorship 2011-2013 in ELI and IACCHOS

	2011			2012			2013		
IACCHOS	**M**	**F**	**% of F**	**M**	**F**	**% of F**	**M**	**F**	**% of F**
N of tenured professors	28	20	42%	30	20	40%	32	21	40%
N of untenured professors	7	21	75%	7	23	77%	9	20	69%
ELI	**M**	**F**	**% of F**	**M**	**F**	**% of F**	**M**	**F**	**% of F**
N of tenured professors	29	9	24%	30	9	23%	30	9	23%
N of untenured professors	14	14	50%	11	15	58%	15	14	48%

2.2.2. Sex composition of PhD (ongoing, newly entering, and obtained).

For this analysis we have to distinguish funded PhD students (students that are paid by UCLouvain or an external grant office for doing their PhD) and non-financed PhD students.

Non-financed PhD students are not officially (or administratively) attached to an institute. We thus do not have statistics for this category of PhD students at the level of institutes. We however have a repartition of paid and unpaid PhD students by programme of studies. The first table (Table 5) present the repartition by doctoral program of study that are linked to our two institutes.

We can see in the table 5 that among PhD students in the political and social sciences in UCLouvain, 54% of funded students are women. This proportion falls to 47 % for not-funded students. This is not the case in bioengineering and in science. In natural science, 29% of funded student are women, while, this proportion rise to 37,3% for unpaid PhD students. In bioengineering, 41% of paid students are women this proportion rise to 47% for unpaid students.

If we observe now the situation for the two institutes, we only have data for funded students (as unpaid students are not officially affiliated to an institute). For ELI the only statistics we have are the number of funded PhD students by year and by sex (Table 6).

Table 5. Repartition of men and women funded and not-funded PhD students by study programme.

				Sex		Total
				Women	Men	
Funded PhD students	Programm of studies	AGRO 3 D/ (bioingeneering – linked To ELI)	Count	39	55	94
			% within Code Offre	41,5%	58,5%	100,0%
		POSO 3 D/ (political and social sceinces – linked to IACCHOS)	Count	43	37	80
			% within Code Offre	53,8%	46,3%	100,0%
		SC 3 D/ (natural science) linked to ELI)	Count	50	124	174
			% within Code Offre	28,7%	71,3%	100,0%
Not funded PhD students	Programm of studies	AGRO 3 D/ (bioingeneering – linked To ELI)	Count	42	43	85
			% within Code Offre	49,4%	50,6%	100,0%
		POSO 3 D/ (political and social sceinces – linked to IACCHOS)	Count	45	50	95
			% within Code Offre	47,4%	52,6%	100,0%
		SC 3 D/ / (natural science) linked to ELI)	Count	28	47	75
			% within Code Offre	37,3%	62,7%	100,0%
	Total (tous programme)		Count	396	498	894
			% within Code Offre	44,3%	55,7%	100,0%

Table 6. Proportion of women among funded PhD student in ELI 2013-2016

				Sex		
				Women	Men	Total
ELI	Year	**2013-2014**	Count	50	60	110
			% within year	45,5%	54,5%	100,0%
		2014-2015	Count	48	52	100
			% within year	48,0%	52,0%	100,0%
		2015-2016	Count	38	59	97
			% within year	39,2%	60,8%	100,0%

We can observe that 54,5% of funded PhD student in ELI are men in the year 2013-2014. This proportion rise to 60,8% for the year 2015-2016.

Regarding the situation in IACCHOS we achieve to gather more accurate data on the exits and arrivals in PhD's population. The table 7 shows the evolution for the academic years 2013-2014, 2014-2015 and 2015-2016.

Table 7. Exits, arrivals and graduations in IACCHOS 2013-2016

	Men		Women		Total
2013-2014 count of financed PhD students	27	40%	41	60%	68
2014-2015 count of financed PhD students	28	39%	43	61%	71
2015-2016 count of financed PhD students	35	43%	47	57%	82
2014-2016 (total financed PhD students)	**48**	**42%**	**67**	**58%**	**115**
Graduations 2013-2016	8	40%	12	60%	20
(in % of 2014 nrb. students)	30%		29%		
when funded by UCL	6	60%	4	40%	10
(in % of 2013-2014 students)	22%		10%		
when not financed by UCL	2	20%	8	80%	10
(in % of 2013-2014 students)	7%		20%		
2016 Ongoing Phd loosing funding since 2014 (or dropped out)	5	33%	10	67%	15
(in % of 2013-2014 students)	19%		24%		

Between 2013 and 2016, 115 PhD students were (or are still) funded in IACCHOS. The proportion of women is steady through the years and is about 60%. Between 2013 and 2016, 20 PhD students graduated. Among graduates, 60% are women and 40% are men.

Generally PhD students are funded for 6 years (Teaching assistants) or 4 years (other grants). It is common that students do not achieve to finish their PhD during these periods. It is interesting to see if this is more the case for women that for men.

8 men (30% of the student's population of 2013-2014) graduated between 2014 and 2016. Among them, 6 were still funded (22% of male student's population of 2013-2014) and 2 (7% of male student's population of 2013-2014) finished without funding granted by the UCLouvain.

12 women graduated in the same time. Among which, 4 (10% of women student's population of 2013-2014) were still funded and 8 (20% of women student's population of 2013-2014) lost their funding and took generally one more year to graduate.

We can thus observe that, if men and women graduate at the same rate in IACCHOS, the odds to finish the PhD without funding is much higher for women that for men. Among students that finished their PhD after that their contract has ended, 80% are women.

We also have the number of PhD students that, in 2016, have dropped out, or are still doing their PhD when having lost their grant or employment contract. Among them, 67% are women and 33% are men.

2.2.3. Sex composition of assistant and associate professor's evaluators

Assistant and associate professors are regularly evaluated in order to be promoted at the rank of associate or full professor. The evaluation commission in UCLouvain are composed of full professors and are organised by sector of research (SSH, STEM and Health science). According to the year the number of commission within a sector can change. In table 8, we present the sex composition in STEM and SSH commission from 2009 to 2014.

We can see in table 8 that the gender balance of evaluation commission has strongly evolved over time in the SSH sector. In 2009. 7% of commission member are women and 0% of president. In 2013. 54% of commission members are women and 50% of women.

In STEM commissions, there is no women in the commission in 2009. In 2013, the commissions are composed of 14% of women (1 out of 7 members). No women are president of a commission.

Table 8. Composition of promotion commission for assistant and associate professors

		SSH (5 and the 4 commissions)				SST (3 and then 1 commission)			
		Men	Women	% of Women	Total	Men	Women	% of Women	total
2009	count of members	13	1	7%	14	12	0	0%	12
	among which president	4	0	0%	4	3	0	0%	3
2010	count of members	15	4	27%	19	10	2	17%	12
	among which president	4	1	25%	5	3	0	0%	3
2011	count of members	16	3	19%	19	6	1	14%	7
	among which president	3	1	33%	4	1	0	0%	1
2012	count of members	14	5	36%	19	6	1	14%	7
	among which president	3	1	33%	4	1	0	0%	1
2013	count of members	16	4	25%	20	6	1	14%	7
	among which president	2	2	50%	4	1	0	0%	1
2014	count of members	13	7	54%	20	6	1	14%	7
	among which president	2	2	50%	4	1	0	0%	1

2.2.4. Sex composition of recruitment commissions of assistant professors (post-doctoral level) and number of applications

Recruitment of assistant professors not only depend of institute as ELI and IACCHOS, but also of the faculty in which they will perform their teaching duties. As faculties and institute do not have the same perimeter it is impossible to provide recruitment data only for institute. We show in table 9 the composition of the recruitment commission in SSH sector and SST sector in UCLouvain from 2009 to 2013.

Particiation of women in recruitment commission in SSH sector remain steady at a level of varying between 27% in 2010 and 36% in 2013. In STEM sector this proportion is lower with variation between 8% in 2010 to 17% in 2011 and 2012.

Table 9. Composition of recruitment commissions of professors

		SSH			SST		
		M	W	% of W	M	W	% of W
2009	Committee members	56	10	15%	35	4	10%
	of which x presidents of committees	10	3	23%	7	0	0%
2010	Committee members	80	29	27%	59	5	8%
	of which x presidents of committees	15	4	21%	12	0	0%
2011	Committee members	59	15	20%	31	3	9%
	of which x presidents of committees	11	3	21%	5	1	17%
2012	Committee members	59	27	31%	29	3	9%
	of which x presidents of committees	13	5	28%	5	1	17%
2013	Committee members	46	26	36%	36	6	14%
	of which x presidents of committees	7	7	50%	7	1	13%
2014	Committee members	54	16	23%	24	1	4%
	of which x presidents of committees	12	2	14%	5	0	0%

2.2.5 Frequency of responsible rules (heads, boards and committees) of research units/groups/centers) distributed between genders

Table 10 shows the composition of the most important governing and legal organs of UCLouvain. Only 9% of UClouvain research institute have a female president. This is not the case in IACCHOS, nor ELI.

It is worth noting that in all the most important decisional organs (the administrative council, the academic council, the rectoral council), the proportion of women is close to 20%. UCLouvain has never had a women rector.

The legal organs have a better equity in terms of representations of women and men. However, it is noteworthy that within the Councils (research, enterprise), the women representatives are largely to be found in worker or staff reps, or in the place of supplicants. There is however an equal number of women dedicated to the council for prevention and protection of work, as syndicate reps or members, or counselors.

Table 10. Composition of governing organs in UCLouvain

		M	W	Total	% of W
	The governing organs				
	Le Conseil d'administration – Administrative Council	18	5	23	21,73%f
	Le Conseil académique – Academic Council	35	11	46	23,91%
	Le Bureau Exécutif – Executive Bureau	14	5	19	26,3%
	Le Recteur - Rector	1		1	0%
	Le Conseil Rectoral – Rectoral Council	9	2	11	18,18%
	L'Administrateur général – General Administrator	1		1	0%
	The organs of sectors, of faculties and of institutes				
	Bureau de secteur – Bureau of sector	25	7	32	21,87%
	Doyens - Deans	13	1	14	7,14%
	Présidents d'institut	19	2	21	9,52%
	Responsables des commissions d'enseignement Heads of teaching commissions	10	0	10	0%
	Legal organs				
	Le Conseil de recherche	?	1	?	
	Le Conseil d'entreprise	31	23	54	42,59%
	Le Conseil pour la prévention et la protection au travail	21	21	42	50%

2.2.6. Funding of research in IACCHOS and ELI by sex

We do not have access to the data linked to the distribution of salaries of the researcher and professor of IACCHSO and ELI. We however have some interesting information about research funding granted to IACCHOS and ELI by different funding agencies (European, national or local projects).

Table 11: Number of funded European – national – local research projects received by full or associate professors by sex and institute, in 2013

Institute	STEM/ELI		SSH/IACCHOS	
Year	2013		2013	
Sex	Male	Female	Male	Female
N of funded **European** research projects Full professor	17	0	4	1
N of funded **European** research projects Associated professor	1			
N of funded **national** research projects Full professor	2	4	2	0
N of funded **national** research projects Associated professor	1			
N of funded **local** research projects Full professor	48	7	6	3
N of funded **local** research projects Associated professor	1			

The figures for women getting research grants are very slim, especially in SSH in all three constellations, European, national or local projects. The difference between men and women in terms of numbers in STEM is quite striking, especially for European and local project funding.

2.2.7. Comparative conclusion on gender equality in career development

Regarding gender equality in career development, the situation of IACCHOS (and in the SSH sector) could be better evaluated that the situation in the STEM institute (and in the STEM sector) in UCLouvain.

The situation of women at the level of PhD student is very different in IACCHOS and in ELI. In IACCHOS the majority of funded students are women. 63% of the teaching assistants (who have the best work conditions regarding duration of contract and social assurance benefits) are women in IACCHOS. Among the beneficiaries of PhD research grant 42% in IACCHOS are women. In ELI, only 35% of TA are women and 42% are students with a grant.

If we look to the situation of non-funded PhD students, the situation of women in IACCHOS is also better than in ELI. In doctoral programs linked to IACCHOS the proportion of women among funded student (53,8%) is higher than the proportion of women among non-funded PhD student (47,4%). In ELI related doctoral programs, we observe the opposite pattern. Among bioengineering funded student, 41,5% are women against 49,4% of women among non-funded student. In natural science PhD programs, 28,7% of funded student are women, this proportion rise to 37,3% for unfunded students. The gender ratio funded-non funded is positive (for women) in social and political sciences and negative in natural science and bioengineering.

This does not mean that the situation of women is excellent in IACCHOS. We have seen in table 7 that it is more difficult for women to finish a PhD in the time frame allocated by the work employment contract or the research grant the student succeeded to secure. Among PhD students who completed their PhD while still being funded, only 40% are women (for a rate of 60% of female among graduate in IACCHOS). In the same line, among students that completed a PhD after having lost their funding, 80% are women.

The situation of tenured and untenured professor is also different according to the institute. We cannot observe an evolution during the year 2011-2013. The proportion of women tenured and untenured in IACCHOS and ELI remains steady on this period.

The situation is more favourable to women in IACCHOS with approximately 70-75% of untenured professor being women, and 40% of tenured professor. In ELI the proportion of untenured women falls to 48-58% (this proportion is thus higher that the proportion of female among PhD students in ELI). Only 23-24% of tenured professor in ELI are women.

The more important presence of women in IACCHOS is also visible in evaluation committees. We have shown that the situation to this regard strongly improved in IACCHOS coming from a proportion of 7% of women in 2009 among evaluators to 50% of women in 2014. This positive evolution in terms of gender balance does not took place in ELI where only one women was involved in evaluation committee in 2014.

In conclusion we can state that gender asymmetries in academic career are much smaller in IACCHOS than in ELI, for all indicators mobilised here.

2.3. Family/work balance

The UCLouvain evidently respects legislations in the matter of family and work/live balance policies (which are regularly transformed and are very complex). It has also taken some own initiatives. However, there is not yet an official and integrated work/life balance Policy, which makes its identification difficult. Based upon some interviews, observations and an analysis of internal Policy and practice, as well as consultation of a « gender » report, we have identified five fields of action:

- The autonomy at work and spatial-temporal flexibility;

- The health and psychosocial supports (related to the medicine of work);

- The support to the career of the researchers (for example, complementary financial aids for postdoctoral scholarships taking into account the composition of the family of the applicant) ;

- The measures for children of personnel (for example, day care places in a crèche);

- The leaves and work interruptions.

This section is focused on the take up of family related leaves. In line with the legal dispositions of civil law (researchers employed in work contracts and administrative personnel – not the academic personnel), the employees of UCL benefit of a series of leaves or interruptions of the career, which are relative to the private and family circumstances: maternity leave, paternity leave, parental leave, prophylactic leave, time-credit etc. The academic personnel on the other hand, has a specific status and we cannot measure the use of leaves at the present time. The academic personnel, due to its particular status, maintain a right to their salary in the case of absence for health or family reasons. Furthermore, they can negotiate with the authorities to find temporary arrangements.

Despite this statutory difference, UCL has participated in meetings of the « Committee of women and sciences », which is raising the question of « family leaves » and of trying to increase the possibilities that are being offered to the academic and scientific personnel in the different institutions in the French-speaking Belgian community. UCL recognizes the following access to leaves of its scientific/academic personnel:

Maternity leave: The maternity leave (15 weeks for a non-multiple pregnancy) contains an obligatory part. The women within the academic corps have the possibility of being dispenses of their classes during the academic year following a birth and can be replaced by APH (Academics paid per hour). However, this replacement has to be negotiated case by case in a context where resources are rare and which do not cover the totality of tasks and functions, which are assumed by the lecturers.

Paternity leave: it is 10 days for the researchers (legislation) and 4 days for academics (internal Policy).

Prophylactic leave for pregnancy or for breast-feeding due to the danger of the work place (laboratories, centers), with an agreement by the medicine of doctor.

Paid parental leave (women and men): 4 months - but with a substantial loss of income, with certain restrictions for certain researchers, in relation to their status and type of contract.

Paid adoption leave (men and women).

The **time credit scheme**, in other words the possibility to reduce temporarily the working time, is accessible to the non-tenured researchers and the administrative and technical personnel (under contract of employment). It does not concern the academic staff. The UCL administration distinguishes two types of time credit: time credit for personnel under 50 years old (often taken for family reasons by mothers), and for personnel having more than 50 years old (often taken by men for preparing the retirement).

The identification of users of work interruptions or leaves was not easy. The following data are very approximative. There are calculated on three years, from September 2013 to August 2016, for the two departments studied by GARCIA research team: Earth and Life Institute (ELI: STEM department); and Institute for the Analysis of Change in Historical and Contemporary Societies (IACCHOS: SSH department). Three types of parental related leaves have been identified: maternity leave, parental leave and paternity leave; and three other types of leave: Time-credit for employees under 50 years old, Time-credit for employees being 50 years old or more; prophylactic leave. The tables concern only non-tenured researchers. We do not have the number of days, but only the take up of leave. The results should be interpreted with caution first, because it is not sure that the administrative system produces an exact picture of the use of different leaves; second, because from our interviews we know that some mothers on maternity leave continue to work on their research project and some fathers do not use the paternity leave but care during this period of birth time.

STEM Department: ELI

Table 12. Take up of parental related leaves between 1/9/2013 - 31/8/2016

ELI	14	F	Maternity Leave
ELI	3	F	Parental Leave
ELI	1	M	Parental Leave
ELI	10	M	Paternity Leave

Table 13. Take up of other types of leave between 1/9/2013 - 31/8/2016

ELI	3	F	Time-Credit Scheme
ELI	1	M	Time-Credit Scheme
ELI	2	M	Time-Credit >=50 ans
ELI	7 (6 dif.)	F	Prophylactic leave

SSH Department: IACCHOS

Table 14. Take up of parental related leaves between 1/9/2013 - 31/8/2016

IACCHOS	18	F	Maternity Leave
IACCHOS	7	F	Parental Leave
IACCHOS	1	M	Parental Leave
IACCHOS	3	M	Paternity Leave

Table 15. Take up of other types of leave between 1/9/2013 - 31/8/2016

None

Comments

If we observe figures of maternity and paternity leaves IACCHOS/ELI, it is noteworthy that not many paternity leaves were taken during 2013-2016: only 3 paternity leaves taken for IACCHOS, and 10 for ELI. About maternity leave, 18 women in IACCHOS and 14 in ELI gave birth (and took a maternity leave). The use of parental leave is well present for female researchers in IACCHOS (n=7), but less in ELI (n=3), and only two male researchers (1 in IACCHOS and 1 in ELI) used parental leave. Prophylactic leave is a female concern, working in laboratories with dangerous manipulations for health in the STEM sector. Use of the time-credit scheme is rather anecdotal, and concentrated in ELI.

Maybe in ELI, since the research process and environment, it is more difficult for researchers to have a kind of "clandestine care" around the birth time, so new fathers use paternity leave; while in IACCHOS new fathers use their autonomy at work for caring without have the need to use the paternity leave.

Certainly, leave policies could be a help for parents, but they do not however manage to do away with the work/family contradiction in academia.

3. STATISTICAL GENDER EQUALITY INDICATORS

A first indicator of interest could be the Women Proportion Indicator. It could be calculated in this manner: X – 50% where X is the proportion of women in a career stage. For example, the proportion of women among teaching assistant (TA) in IACCHOS is 63%. The gender balance indicator of IACCHOS is 63%-50% = +13%. Comparatively, the gender balance indicator for women among the whole UCLouvain is: 48%-50% = -2%. With this indicator, we can see that odds that a TA is a woman in IACCHOS are 15% higher than for the whole UCLouvain. The women balance indicator for TA in ELI would be: 35%-50% = -15%. The odds that a TA is a woman in ELI are thus 28% higher in IACCHOS that in ELI. This indicator is useful to gain a first insight of gender balance in a research institution and compare it with other institution.

A second set of indicators should concentrate on the population of PhD student. Several studies have shown that the evaporation of women in academia begin at the level of the PhD, and especially at the transition between PhD and postdoc. We have shown that this is the case for UCLouvain as a whole, but not in the particular case of IACCHOS (where the evaporation of women occurs at the level of tenured professor) nor in the

case of ELI where female assistant professors are more numerous that female PhD students in proportion.

To understand possible gender bias in graduate studied, different indicators could be mobilised. A first indicator could assess the distribution of women across different categories of PhD students. In this study, in the case of UCLouvain, we distinguished three categories of PhD students that benefit for different working conditions. Unpaid students have the less comfortable working conditions, students that benefit for a four years grant have good conditions and salaries, but do not have all the advantages granted with the administrative status of employee in Belgium (some does not have retirement package, or does not have home-work travel expenses covert). The last status, teaching assistant, is the more comfortable, with home-work travel expenses covert, good salaries, retirement package, holiday allowance, 6 years duration employment contracts (that can be expended to 7 or 8 in case of maternity leave(s)), but these student have to devote 50% of their time to teaching. Comparing the proportion of women across these different status gives a good indication about gender inequality at the level a PhD.

To this regard, we have seen that the pattern is much more favourable to women in the social and political sciences that in the bioengineering and natural science doctoral programs. It is especially the comparison of proportion of women in doctoral programs according to the status that inform us. We have seen for example that in social and political science, 53,8% of funded student are women, this proportion falls to 47,4% for unpaid students. This situation is thus favourable for women who are more often funded that men. In natural science, the patter follows an opposite direction. Only 28,7% of paid student are women, against 37,3% that are unpaid.

It is worth noting that this proportion could also be assessed in reference to the global proportion of UCLouvain to see how one sector perform in the broader context of the university.

In the same line of questioning, an alternative indicator that we use is the proportion of women that have completed a PhD while still being funded. If we compare this proportion to the general proportion of women among students who graduated, and to the proportion of male that graduated while being still funded (table 7 for IACCHOS), we have a measurement of the difficulties encountered by women when pursuing a PhD.

If we now take the difference between TA and students with a grant among PHD students (table 3), we can see the same story, women are more often TA than students with a grant in IACCHOS and in ELI, women are more often students with a grant than TA.

A last indicator we used in this study is related to the assessment of women's' participation in decisional or evaluative organs or committees. The table 9 and 10 show interesting data in this perspective.

4. REPORT ON QUALITATIVE DATA

4.1 Individual trajectory

4.1.1. Summary for STEM

Postdocs STEM

For interviewees who are postdocs in the Earth Life Institute (STEM), two aspects stand out in terms of career paths and trajectories: the overall precariousness and uncertainty about obtaining a permanent position for a long period of time after the PhD, and the need to be mobile as a requirement of the career path. The uncertainty and precariousness are "taken into their stride" and "lived as normal" by both sexes, however women have more apprehension about what this could potentially mean for their family building (having children, settling down). Both women and men speak about how their career paths are often following the patterns of expectations that they see as being required in their career paths and institution; a necessity to have had a postdoctoral period or doctoral period abroad in another, often prestigious, university or research institution. In most cases, this mobility however is experienced as something valuable, even as a life experience to be undertaken with the respective partner. However, in the experience of mobility there are some differences as to the facility to undertake research stays abroad: in most men's cases, their partners are flexible enough to allow this mobility as a couple. However, in this group, both women and men are still childless, also permitting more flexibility.

Entering and continuing the scientific/academic career

Male interviewees often also spoke about how they preferred taking the research path in their respective STEM fields (for example in the case of Benoit) rather than entering industry or the private sector, which was about producing logicals or about specific "products" and the market, which they felt was not their nature of work. Although while doing initial engineering degrees, they would not have thought about a career in research, having Masters supervisors proposing them to pursue a PhD in a specific field or topic, which made them enter this and develop a taste, if not a passion for research and the specific topics. In fact, both male and female postdocs spoke about how research was not a career choice from the beginning of their studies in their respective fields; it was something that they happened upon through their connections with supervisors and potential promotors, who sought them out. It is something that we could call a "scouting" process, of professors or supervisors, who "scout" for potential PhD candidates, and meeting with what they believe is a suitable person then guide them into a research path. We can therefore highlight the importance of connections and gatekeepers for entering research careers and more specific fields.

Professional precariousness and Mobility

The most significant stance of most ELI interviewees, both male and female is that although job insecurity, precariousness or uncertainty is frequently spoken about and mentioned, it is *not questioned*; for example, Emma feels that this is "normal for a career in research/academia", both of which do not seem very different to her. Eloise, however, who is single and childless, speaks about uncertainty in terms of personal life

and compatibility with career choices that would in her view reflect a need to be mobile (as jobs in Belgian universities are slim to none). Feeling that she would need to go abroad for a stable position due to her international network and previous research stays; she is more ambivalent, not wanting to leave her family and country. In contrast, male interviewees often expressed an openness to long or prolonged research stays abroad, with their respective partners, with the idea of experiencing another cultural surrounding for a while, having the professional experience in another research context, meeting new people and living elsewhere. However, it must be said that their respective life partners seemed to have made this possible for them, either because they are themselves in unstable professional periods, or else sacrificing their professional careers. But male interviewees voiced the long term project of returning to their home country, Belgium, and settling here, buying a house, having children etc. Thus, males are more open to mobility than females and express less constraints for future life (both professional and private), despite their current short term postdoctoral situations. However, this is made easier for them through the given support by partner, being yet childless, and extended family, and the support of colleagues.

Newly Tenured STEM

Entering and continuing in the scientific/academic career

Entering and remaining (getting a permanent or tenured position) for newly tenured academics in ELI is something that does not show a soley linear career path; some newly tenured academics, one female and one male, both had completed their Bachelors and Masters studies in the Garcia institution UCL, and then had been "scouted" out by their respective supervisors in order to do a doctorate. They explain that they would not have particularly thought about the university as a career place, but rather slipped into it quite unintentionally, due to supervisors' advice and motivations. Their linearity of their career path seemed to them quite unexceptional, however they express that they were "lucky" in many ways, to get the permanent positions that were opening at some point. Although, entering the career did not seem to have any particular gender dynamics in terms of newly tenured interviewees, however, the experience after tenureship is strikingly different. Women newly tenured academics speak about how they have to struggle by themselves in order to bid for research funding, in order to manage their research and teaching, and often they speak about power struggles with male colleagues, hierarchically equal or lower. Their professional relationships are more positive with their own research teams, with postdocs and docs employed on their own research projects. However, these are hard to come by, and they often speak about overt competition with other colleagues about research grants on similar topics. Male newly tenured do not complain about this competition, and seem to have an easier time in their research centres, however not also speaking about a collaboration culture with their peers, rather with postdocs and docs. There are however, more mentors and cooperation for male newly tenured, whilst female interviewees spoke about having more former mentors from research stays in other institutions abroad, or their original institutions when they came from abroad in the first place, entering UCL only for the tenureship position.

Professional Precariousness and Mobility

ELI newly tenured males have all done at least one postdoc abroad, seeing it as an important experience in their career paths. They speak about *the strategic value of this mobility*: the prestige of the host institutions abroad and the networks you can build to publish and collaborate points to an important career step in order to obtain, in particular an FNRS permanent mandate. Some mentors have also been found abroad rather than at home, making you more eligible for publishing, research development, and relationships during further career and guidance. There is therefore *a clear added advantage of mobility*. For example, Thomas speaks about how "In fact, my academic career would not have gone all the way or would not have been possible without having done a postdoc abroad ". During this research stay abroad, moreover, Thomas was single, which according to him helped him to advance in an "efficient" manner in his scientific activities without feeling any pressure of any kind.

The mobility is not always lived as something easy, in terms of expectations and stress in intense research and academic environments abroad, such as in the States, where there is a lot of pressure to participate and to "perform". However, all interviewees agreed that these stays are an enriching and stimulating experience all the same. Sometimes, both husband and wife or partners have a research profession: mobility during postdoc is expressed as a challenge to the couple life, and is considered impossible once having kids; trying to settle and get permanent positions together is difficult. The impression of this particular male interviewee is that his wife had to sacrifice her disciplinary direction for family purposes and also professional purposes, so he could advance in the same discipline: taking herself out of the competition of some sorts.

A significant result that we found is that FNRS researchers, both male and female, seem to have more chances, or at least feel that this made a difference in their applications for permanent research positions, when they have done postdoctoral research stays abroad; have published in internationally renowned English-speaking journals. We could be looking at the higher significance of competition-based criteria of excellence (Dubois-Shaik, Fusulier, 2015) in FNRS permanent recruitment versus more nomination-based criteria for academic recruitment (see D 7.2).

4.1.2. Summary for SSH

Postdocs SSH

Entering and continuing a scientific/academic career

Even more than ELI postdocs, male and in some cases females had been rooted at UCL since their studies and continued in the same research centres and former Masters supervisors as postdoctoral promotors. Again the "scouting" process appears at play for the entering of research as a career, although an academic career seemed more likely envisaged at an earlier stage than for ELI postdocs, and other career options seem less visible. There is a lot of engagement in teaching, which however is not experienced as a preferred career option to research. We can make a note here that generally, we can observe a de-valuing of teaching vis-à-vis research, even in early career researchers (they remain true to their name), although teaching is one pillar of academia, without which it would crumble.

Professional precariousness and Mobility

In terms of mobility, unlike their peers in ELI, IACCHOS researchers are less mobile, both male and female, with children, whereby males try still to visit conferences and do field work abroad in average two to three times a year. Female postdoc interviewees are less close to the work place and in some cases even shuttle from other neighbouring countries for some days of the week. Constantine, who is originally from a close country to Belgium, and whose partner lives in her home country, speaks about how the frequent travels back and forth are tiring, also in order to be with her children, who are still in toddler and even new born ages. Helena, who had done two postdocs abroad in two different countries along with her children and husband, speaks about how it is not easy to go abroad with small children; who were born abroad. Arranging hospital services during birth and maternity; of arranging child care later. She also had a seriously sick child just after birth, and this was a struggle during one of the postdocs abroad. She speaks about how mobility period was hard and intense but also worthwhile in terms of forging important relationships, one female mentor, who helps a lot in developing career and research. However, settling is not easy with having to go abroad in order to build career and for research purposes. Financially, depending upon the postdoctoral grant, and depending upon the host country, it was easier or less easy to live on, especially if you have a family who accompanies you, or if you are going to give birth abroad and need medical care and assistance. The Marie Curie grant is considered quite generous and good in terms of being able to live comfortably, even as a family, whereas other grants, such as FNRS were not deemed sufficient to cover all or additional upcoming expenses.

Professional precariousness is experienced similarly to male ELI peers, for male IACCHOS postdocs, such as for Martin: Precariousness and uncertainty is not experienced as menacing; often males speak about taking one stage and step at a time, not feeling the infringement upon family life, although with an awareness that the partner or wife is sacrificing more in her career due to arrival of children. Male IACCHOS postdocs are optimistic about future positions and possibilities, while being aware of the scarcity of academic openings and of the competition in terms of short term and long term contracts. Women are more ambivalent in the sense of their professional future; even in Helena's case, where nomination may be imminent, a lot of caution is exercised and professed. Women live their uncertainty with more worry about the future, about family building and family maintenance, especially in cases where the partner or spouse does not have a stable position either. The uncertainty in Constantine's case is also about the location of her current job context and her family situation, being far away and her husband's profession that is more stable and located in her home country. She feels more cautious about a future in this institution and feels that it is likely she will leave and look for more stable positions, or even a professional conversion or change of sector, in order to better adapt to her life situation

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Newly Tenured SSH

Professional precariousness, entering and continuing the scientific/academic career, transitions and mobility

As with most of ELI newly tenured, the social capital of familiarity with the world of university and also a rooted career in the same institution, along with trips abroad during the postdoc is a recurring constellation in terms of "winning type" career paths, especially for male newly tenured, and also female in most cases. There were some exceptions in which interviewees deviated from their social capital from home; but interestingly this is more present in non-stable postdocs, especially in females, and one male, whereby often the family does not understand the engagement in a profession that seems so fraught with uncertainty and instability.

As with ELI interviewees, IACCHOS newly tenured FNRS speak about how important it was to do postdocs abroad in prestigious universities, also having worked with affiliation to a prestigious French research centre, where for example Jean still teaches. According to him, this affiliation works as much in favour of CV building as well as "belonging" to a famous scientific school. However, mobility is not really lived positively by all newly tenured; there are tensions about travelling with family and also attaining the true value of mobility in terms of research development.

Mentors abroad are important for female newly tenured; mobility therefore during thesis or postdoc is important for accessing more possibilities of meeting with "true" mentors, something they found to be more lacking at UCL; intellectual mentors, or those contributing to a development of research. Also some strategic mentors other than UCL were named, for example external mentors in clinics or research centres, such as in Chloé's case.

The postdoctoral period is lived with a lot of uncertainty at UCL by female IACCHOS newly tenured, with prolonged postdoc short-term contracts, without any perspective of prolonging or permanent positions. Maternity occurring during this time makes things harder, and some part-time work is also envisaged, and in some cases more than one maternity sometimes occurs during this period. And finally, at the end of what is seen as a weary road, then obtaining a FNRS permanent position (see Chloé), with a lot of struggle, or a permanent academic position (see Helena) after at least 8 years of postdoc.

In terms of mobility, female newly tenured speak about how they would like *to go abroad more often*, as their research stays, even if short *had been important in terms of research exchange, collaboration* etc. but family duties and presence does not allow this or makes it difficult. This remains an aspect with regret, also voiced by some of their male peers. The arrival of children is experienced as slowing down mobility considerably for both sexes, especially in IACCHOS interviewees. Thus the clandestine carer struggles to keep up with yet another advantageous rule of the game.

4.1.3. Comparative conclusion

On the whole, when comparing the two groups SSH and STEM, we can see that postdocs and academics in ELI (STEM) have had a lesser linear career path in terms of the

rootedness in the Garcia institution, whereas more IACCHOS researchers and academics have already done their previous studies there and been "scouted out" by local supervisors, taking them on as PhDs. However, another aspect of linearity in ELI appears, as postdocs in ELI are more prone to take into stride a longer period of professional uncertainty, and the acceptance of a longer period of postdoc (up to 10 years). Both women and men postdocs are moreover childless, whereas in IACCHOS we find already quite a few parents amongst the interviewees, whereby women are more ambiguous in living their motherhood and work balance. Moreover, in ELI women interviewees who are postdocs speak quite frankly about how not being stable in their jobs stops them from building a family, and stalling motherhood to the time when they can obtain a permanent position. We can draw from this that in ELI the career path is precarious in multiple ways that also affects personal life to a high degree, whereas in IACCHOS women and men are not ready to sacrifice their family life due to the job uncertainty. Mobility is an aspect that appears in both SSH and STEM groups as a factor that is crucial for your career, obtaining a permanent position, and also gaining an important international network. For women this becomes important as they have lesser support and collaboration with local supervisors and local male colleagues. However, IACCHOS postdocs and newly tenured academics are less mobile than STEM peers, perhaps due to an increased parenthood, and more local rootedness, networks and mentors, especially in the case of IACCHOS males.

4.2 Organisational culture and everyday working life

4.2.1. Summary for STEM

Postdocs STEM

Work Conditions, workload, tasks, time

Work conditions in STEM are often lived as "part of the parcel", as laboratory toxicology for example (using toxic products for treating plants or other organic material) and noise of laboratory machines are things you can "get used to" after a while. Interestingly, we came across more female ELI interviewees working in laboratory than males. Emma also speaks about lots of engagement in laboratory culture work, which has its own rhythms that you need to follow. However, many female researchers, when asked about the nature of work, preferred laboratory work to writing for example, and felt ready to be engaged at that level, even if this meant being obliged to conduct experiments throughout the day or evenings. The nature of STEM work was something that females spoke differently and more often about in terms of differences between preferring laboratory and fieldwork, rather than writing, publication and literature work.

An interesting point is that amongst the ELI postdocs, male interviewees did not assume any teaching tasks during their postdoc period, and focussed upon research and CV building, whereas a majority of females did some teaching and Masters and PhD supervisions, which was sometimes "free" and voluntary, and which they seemed to like, even if this took up a lot of their time and engagement, and took time away from publications for example. In fact, relationships with junior doctoral colleagues were remarked as being valuable and often the only real interactions, rather than with promotors or other senior colleagues. This continues to be the case for newly tenured

females in STEM, as we will see later. Male postdocs had more interactions with postdoc promotors, whom they sometimes referred to as "boss" or colleagues, rather than supervisors, mentors or promotors.

Not many ELI postdocs spoke about overwork, but Eloise expressed her concern about overwork that should not infringe upon her need to want to build a family, meet someone and have children, which is not yet the case. She worries about whether this type of career and overwork could restrict her personal development. But given a choice, she would want to pursue a research or academic career and especially continue working on plants/flowers, which is a subject she loves. Moreover, Eloise was an exceptional case of also having some teaching and supervision responsibilities, which she loved doing, but which were not easy to reconcile with developing research and building a CV with publications. Clarice was in an exceptional work situation of being involved in a centre within UCL, which deals with vulgarisation of research in society and teaching: Clarice is hyper-engaged in her different work spaces, vulgarisation of Science (creating exhibitions, workshops for teachers and prospective teachers and students) and also her teaching and current research project that she is working on; she is juggling constantly with the load of the different tasks, and does not feel like this is a burden, except in terms of the constant influx of never-ending emails. Moreover, she has trouble switching off and speaks about constant overwork in the different spaces of work (vulgarisation, teaching, research project), which could result potentially in a burnout; she speaks about herself as a "borderline burnout". Incidentally (or not), these two female interviewees were both childless (still) and showed a more engaged rapport to research. In parenthesis, we could refer here to the point made by Fusulier and Del Rio Carral (2012), Barbier and Fusulier (2015), in their qualitative research with FNRS researchers that parenthood, if lived with sufficient support, can assist in curbing the tendency to overwork and to overinvest in work, because children simply require a lot of time and can put work in second place in a person's priorities.

In contrast, male interviewees speak about being quite independent in their own work, such as Benoit (living and doing a joint postdoc in another European country) with a need to stop working evenings and weekends, taking also time during stay abroad to have a "personal experience" of the environment, other than work; social life, which is slow, as still new. On the whole, female interviewees feel more fragile about overwork and juggling different kinds of tasks, and its infringement upon personal life. In fact, they describe more multiple and varied tasks than their male peers, who have multiplicity rather within the research activity (seminars, conferences, publication collaborations, dissemination events). This is an interesting point, as arguably female researchers are being active in "academically" orientated tasks, such as teaching, and male researchers are investing in research-based development, networking and publication: potentially, this could also contribute to a more focussed CV-body-building by male researchers during the postdoctoral period, with more publications and international connections to show for in what can be an initial highly competition-based selection round in research and academic recruitment for permanent posts (see Dubois-Shaik, Fusulier, 2015). Female researchers, who could be building valuable skills and competences for academic work by assuming the less valued teaching tasks, could therefore be losing out on chances of selection by not "boosting" their CVs with quantifiable competition-based

criteria, although they paradoxically could be suited for the multiple-task and –pillar based academic mandates.

Female postdocs also tend to have less social or other leisure activities than their male counterparts.

Interactions, Relationships and Mentors

On the whole, female postdocs in ELI speak a lot about former and current promotors as supervisors, even during the postdoctoral period. In one case, Clarice, speaks about how she has had many mentors, also her current promotor, and has had a very positive experience in terms of interactions and guidance on multiple personal and professional levels. She is also the only interviewee who has multiple workspaces and responsibilities, such as the centre for vulgarisation before having entered research and PhD pathway. In contrast, the other female interviewees speak about how they had had supervisors who are supportive, such as in Emma's case; her PhD female supervisor was a mentor-figure, pushing her to try for the Marie Curie grant, which she obtained. Her current male promotor is for her a supervisor-type, and she feels that the postdoc is an extension of the PhD, both in terms of her needs of guidance, and the kind of work relationship she has with her promotor. Eloise has had very good supervisor and colleagues, but less in terms of internal strategic networks, as rather good working groups in her laboratory. However, none of the postdoc interviewees from ELI felt that there were significant differences or disadvantages of having female or male supervisors or promotors, but rather that different types of persons can have a stronger or weaker relationship, which can impact upon developing collaboration or not.

And as previously mentioned, female interviewees also speak about being engaged teachers, in terms of supervision of junior researchers and master students, who are principal interactors in their work environment, more than supervisors or promotors or senior colleagues. Male ELI postdocs tend to be lonelier in their research work at UCL, rather having more interactive collaborations with colleagues in centres abroad. This ties in with the point made previously that females tend to be more invested in local academic tasks with less "sales" value, whereas males have less local institutional links, rather more abroad and therefore are lonelier institutionally as a consequence. However, some female interviewees also spoke about having a very lively and active and continued interaction in terms of collaboration with international colleagues rather than UCL colleagues, relationships forged during their research stays abroad.

Many female interviewees speak about how their internal network is composed of their lab colleagues, who also have become friends of sorts. Clarice is ambivalent in terms of her emotional proximity to the vulgarisation centre colleagues, which is like a "second family", which is too close for comfort, as she tends to take things to heart. In contrast, male postdocs in ELI speak about good relationships with former supervisors and current promotors, but speak about these relationships more in terms of professional relationship such as colleagues, rather than guidance, friends or mentors, and sometimes use the term "boss". However, few speak about strategic guidance for career purposes, and more in terms of research collaboration.

In both female and male interviewees' cases, family and friends external to university are supportive, although some "know that research is not going to be about making a

direct and visible service to society", or family does not understand why they engage so much in a profession that is so less stable and so uncertain.

Newly tenured STEM

Work Conditions, workload, tasks, time,

The importance of having the multiple pillars of academia/research is important for newly tenured males, as it offers a balance between research, teaching and collaboration. Most newly tenured males work more than 8 hours a day, often also evenings and sometimes also weekends, but they don't feel that this infringes upon their family life. They feel that it is a flexible job that allows for work/family balance, such as is expressed by Jean, who believes that "teaching and university are compatible with children and that it is possible to make a balance between the two".

However, in contradiction to this need expressed of multiple and varied tasks, one major topic that emerged not only for male, but also female newly tenured in ELI is the frustration of "omnipresence" in multiple tasks, which does not leave sufficient time for research development or for publication, which is necessary for career advancement and the demands of the institution: being newly tenured means dedicating yourself to multiplies tasks, although FNRS positions still do not imply as much investment for example in teaching or institutional tasks. However, in practice, even FNRS newly tenured researchers are engaged on a high level in institutional service and in some cases also in teaching and supervision; in a way, FNRS permanent researchers have to meet with double demands: first from the FNRS commissions for advancement of their research careers, but also secondly to engage institutionally in the institution they are based in, in order to justify of some sorts their FNRS appointment and institutional (UCL) affiliation.

The different pillars of academic/research newly tenured position are not easy to build up and to maintain (see Omnipresence): For example, Elise speaks about how "once you are nominated, the nature of work changes drastically. Creating a research project requires from the beginning to build a research team, construct the project, responding to calls, getting and organising the finances. All these competences, for which she does not feel formed during her PhD, she needs to learn by doing. Today, she estimates that the administrative procedures represent 60% of her work, which she sincerely regrets. She has a nostalgia of the time when research was her primary and simple concern."

As for the male newly tenured, the female interviewees also regret having to spend a lot of time to bid for funding, which are rarely granted (by FNRS). Monica regrets the time she spends in creating research projects, which rarely get funded. There is often a "financial frustration" voiced by both male and female newly tenured of having to get research project financing, which otherwise is not foreseen in FNRS or on university level sufficiently: collaboration seems very important, also in terms of sharing funds within research centres and distributing them according to needs. This "fits" with the professional bureaucratic model proposed for UCL in D 5.2: there is a lot of freedom in terms of units and governance, but also less funding and more need to "fend for yourself, or fend for themselves within the centre": hence centres and individual researchers and academics also a need to show that you merit or can bid, whereby criteria of "excellence" in terms of publications come into play. We can ask ourselves if

the frustration expressed by newly tenured researchers/academics about lack of time for publication also perhaps partly due to this pressure to "show excellence".

4.2.2. Summary for SSH

Postdocs SSH

Work Conditions, workload, tasks, time, and Relationships

Collaborations are lived as positive, if not exuberant by both female and male postdocs at IACCHOS; they both express equally positive collaborations with colleagues and current promotors, but without speaking about mentors. In fact, in the female interviewees' case, mentors at UCL were even deemed absent in terms of strategic career advice. Helena speaks about having had a female mentor abroad, who had been vital for her personal research or intellectual development. But strategic advice in careers is rare if not found, and often females were speaking about how they had to *"battle alone"* and how they "built their own careers and connections on their own". There is the sentiment of having struggled and fought alone and being independent in her endeavours and strategies towards building her career. Once again, as with the ELI postdocs, intellectual mentors were found abroad, and in none of the cases in IACCHOS were mentors to be found on the level of the centre, former or current supervisors/promotors, or colleagues. However, the ambiance of the centres was described as positive, easy to converse and collaborate with. There is more frustration expressed in both male and female postdocs about the processes of publication; although publication, both single and multiple author was possible – in Helena's case, she was approached often for publications during conferences for special issues and did not in her own view ever publish of her own initiative – the process itself was seen as long and weary, which was not advantageous for CV building or for your own research dissemination.

Unlike ELI males, IACCHOS males also assume teaching responsibilities in most cases, and most females, except Constantine have teaching responsibilities, both lectures/seminars and supervision of Master students. We can drop already a hint here that there is a significant difference between SSH and STEM males in their institutional rootedness in terms of career building; ELI males seem to have a more internationally based network and collaboration during their postdocs, consequently being lonelier upon their return to UCL, whereas IACCHOS males are more comfortable if not ecstatic about their local research centre.

In terms of female interviewees, in Helena's case, there was a high level of institutional engagement, as she was co-director of a research centre, despite her unstable and non-permanent research contract; she invested in this task to a very high degree, and felt that she worked a lot during the last two years in the different tasks. She also had a burn-out of sorts with serious health issues. As co-director, she also supervised informally many young researchers, PhDs, without being formally involved in their theses. Other female Postdocs speak about how boundaries of research and teaching work are sometimes hard to set and how this can spill over into other life spaces and times; working during long travelling hours, working evenings and some weekends to meet with deadlines.

Newly tenured SSH

Work Conditions, workload, tasks, time, and relationships

For IACCHOS newly tenured males, the advice given to young researchers is to be "entirely invested" in work, without being encumbered by family and other obligations. However, this is considered the "cynical" advice, as opposed to a real advice of reconciling. For example, Jean suggests that "for having an ideal career in the scientific world, researchers should not have families nor emotional relationships, which will put a constraint upon mobility and working hours. Also the need of learning how to publishing in English speaking journals. This is the "cynical" advice. But the "sincere" advice he gives is that young researchers try to come sufficiently close to the given standards, in order to not diminish their chances and at the same time not renounce having a family and relations outside of work. "

As with ELI FNRS newly tenured, IACCHOS newly tenured FNRS and academically tenured complain about the lack of finances for research purposes and the constant bid for projects that do not always work out; sometimes interviewees auto-finance their research by working elsewhere in other universities or teaching.

IACCHOS newly tenured males are ambiguous about work conditions, somewhat less speaking about collaboration and work culture/ambiance, and coming more across as solo-players, with international collaboration rather than internal. This is similar for ELI male interviewees. A theory yet to be confirmed is that FNRS (National Fund for Scientific Research) newly tenured[7] are more isolated and solo-players (especially in SSH) rather than ordinary newly tenured IACCHOS academics, as in the latter's case nomination-based criteria and institutional rootedness play a key part for nomination in any case, so those interviewees tend to already have a solid internal network: whereas FNRS researchers with permanent status would have had to play to international standards and competition-based criteria more or on an equal level during the career progression and recruitment: which also means less of a previous institutional rootedness and less interaction.

Similarly to their ELI peers, IACCHOS newly tenured speak about the importance of having alternative passions, and work possibilities, such as teaching is an important prerequisite for remaining optimistic.

Like their male peers, female IACCHOS newly tenured speak about some frustration about their publications, which they think are too few and not enough time available to develop this. Also they spent a lot of time building their CV until it was "good enough" to be considered for permanent positions.

Female newly tenured IACCHOS don't have it easy to build their own research teams; due to lack of funds and lack of Human Resources (Administrative and Technical support), they don't really have the possibility to engage doctoral fellows, who would be important collaborators: so they hope to have this only in later years after their

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[7] In Belgian Universities, there are two tenure-track career paths possible, one that is research-orientated, funded through the National Fund for Scientific Research, and one academic, through nomination at the given University. However, even you obtain a FNRS career path, you have to be affiliated in a given unviersity, and can also parallely be nominated as an academic.

appointment. Chloé speaks about how "there is a tension in the lack of personnel and financial resources, which make building my own research teams difficult. She regrets – in the absence of these resources – the lack of doctoral students at her side, whereas her research presupposes that she has a research team to work with. In this respect, she hopes to have the power in some years to build an own research team." Another case is Lola: "In her future career, she hopes being able to build her own research team. She hopes that this can develop her own research and stabilize the nature of her research, which she has altered after her thesis, wanting to expand into other domains – and of collaborating more, because currently she is working in an "isolated manner". This is quite significant in terms of findings for IACCHOS newly tenured females as opposed to ELI females, who have sufficient funds to appoint doctoral researchers in their own teams, and moreover express their main collaborators to be their own researchers, which the IACCHOS females don't have, therefore having even less of collaboration in terms of research development and advancement.

An important result gleaned from virtually all interviews is that "relationships determine the job or the profession" (Chloé), both male and female newly tenured and postdoc, it becomes clear that relationships forged or not forged before, during and after PhD, as well as during Postdoctoral periods, determine to a large extent the possibilities of collaborating, of gaining access to short-term contracts, to international collaboration and publication, and to important mentors, who can help in developing research, but also opening doors to future collaborations (in terms of publications, project funding, intellectual development, strategic advancement and team building, membership through knowing and working with gatekeepers). As with countless other male and female interviewees, often female IACCHOS newly tenured have entered into the research profession simply what they call "chance" of having a Masters promotor who "scouts" them out and proposes doing a PhD on a specific topic that they would not normally have thought of, but which they quickly develop a passion for and for research. Often these initial supervisors turn into PhD supervisors and/or postdoctoral promotors, who can play a key role in advancing and guiding their supervisee. This could also prove the point that *networks and gatekeeping* (Brink, Benschop, 2014) is a very important, if not elementary aspect in the research and academic social field: gatekeepers guard the entrance, uphold the keeping, guide the pursuing and define the membership. So these are persons who may or may not recommend you, advance you or promote you, may or may not guide you, may or may not include you and collaborate with you.

This can create disadvantages and advantages depending upon whether or not you are able to create a network, both internal and external. However, for competition-based criteria building (see Dubois-Shaik, Fusulier, 2015), such as quantifiable CV building, international networks seem more important, and for guidance external mentors are significant. In terms of the conditions for developing local rootedness, interviewees speak less about mentors at UCL. And if so, not necessarily always in the person of former supervisors or current promotors (with some exceptions), but rather about hierarchically other relationships "lower" in the ladder, often peers. However, for attaining permanent positions and furthering the career, contacts and mentors (and in some cases also the support from family) are essential, such as for Caroline: "One could say that I have always been supported in my career success by a strong encouragement from my professional peers and family. " Dominique considers her success in obtaining a

permanent nomination as a "victory of all the team", as the fruit of an important contribution of work of all the members of her centre in which she works. Although there is a large element of chance as well, I have also worked a lot to achieve this."

Moreover, relationships and support during years of uncertainty are deemed vital to "survive" during this period and not to get demoralized. *Also* the family is important during this time, as it shifts the importance level of a hazardous career and also "allows" time to look after children.

As their male peers, female interviewees considered research and academic work as quite flexible in terms of times and allowing to work from home; but this flexibility is double edged as it is also considered "elastic", which means you work from home, but you are always working in some sense, and "have the impression of never stopping" (Lola). The working hours are estimated at 45h despite a contract of 38h; but not considered as negative, but "part of the type of profession of research", for which a passion exists with the major part of the interviewees. Caroline mentions that she does not have leisure outside of work, but she considers work to be leisure." As for Dominique, "she has some sports activities and reading, but a major part of her time is spent working, even weekends, which means that the lines between work and leisure are blurry." Valentine (with no children or partner): ".It is not so much difficult to reconcile the two as it is to separate them. The boundary between the two is nebulous and this leads to situations where professional and private life interfere." This kind of sense that researchers make of their spatio-temporal work interference can be a proof of an illusio (Bourdieu, 1987) that adheres to constant and totally committed engagement, but also a feature of intellectual or brain work that is "hard to switch off", especially while related to non-immediate and non-tangible objectives in sight.

In terms of other task and multiple tasks, teaching is something many newly tenured FNRS for example also do, and some also teach abroad in other institutions (Lola). But although this adds to the workload, it is considered a healthy balance in some cases, of being able to interact in what often is a lonely work of research. Other newly tenured speak about how ensuring the 3 pillars (teaching, research, service to institution) is not easy to achieve in the beginning and how often research as practiced during the postdoctoral period is not possible anymore.

The hyper-productivity and current criteria and demands of the profession is something repeatedly regretted by all interviewees, especially females in terms of maternity periods; the fear of not being able to meet with the demands, and the regret of not having met with demands during previous maternity leaves and periods. The difficulty of CV "body-building" and producing research publications and output is considered difficult to meet in terms of maternity; and felt not taken into consideration.

The tenureship or permanent position make it easier to actually get on with work rather than CV building or accountability of your work in some interviewees point of view, as is the case for Valentine: "Gaining access to the position of permanent researchers permits me to really take time to work, without the need of being constantly accountable, which was the case during the postdoctoral period. However, despite these difficulties, there is a sense of pride in having achieved tenureship and a comfort about the future, such as in Valentine's case.

4.2.3. Comparative conclusion

While comparing ELI and IACCHOS interviewees, we can observe that ELI females assume more varied tasks, including teaching, which gives them a lot of satisfaction, but not a lot of institutional recognition. Paradoxically, IACCHOS males do assume teaching too, which is considered as a healthy balance to other tasks. However, IACCHOS female postdocs and ELI male postdocs due not assume many teaching tasks, and the research and publications for career purposes takes up a lot of their work load and investment. On the whole, we can see that a bid for funding is a major issue for female interviewees, especially in IACCHOS (SSH); women newly tenured spend a lot of time bidding for research grants and they have a harder time obtaining them, and a harder time building research teams. This is the case for IACCHOS men too, however they have more of collaboration within their research centres and local networks. ELI males (STEM) tend to be more solitary in their work, also open tenureship, and they have more international collaboration rather than local. On the whole, local collaboration fares poorly at UCL; both male and female interviewees speak about a competition over collaboration culture, which makes research work harder, as it requires a constant bid for funding, and the bid for research teams.

In terms of managing work time and flexibility, the double edgedness of flexibility is something that many STEM and SSH interviewees, both women and men struggle with. However, this has a clear gendered difference, as women have more trouble switching off than men. For women, the boundary between the two spaces is nebulous and this leads to situations where professional and private life interfere.

Moreover, women assume more institutional engagement than men in IACCHOS, they feel like they have to be involved more than 100% in multiple pillars of academic work in order to survive and to be part of the institution. Men feel less pressure to do so, while however assuming also teaching responsibilities for example in IACCHOS. Women speak more often about health issues and burn-outs, in both IACCHOS and STEM. On the whole, female interviewees feel more fragile about overwork and juggling different kinds of tasks, and its infringement upon personal life. In fact, they describe more multiple and varied tasks than their male peers, who have multiplicity rather within the research activity (seminars, conferences, publication collaborations, dissemination events).

In both SSH and STEM, we can observe that women have a harder time gaining access to mentors; their PhD and postdoctoral supervisors are less supportive. This is especially the case for IACCHOS females, where the feeling of being lonely and isolated are more pronounced, and of struggling alone. STEM females also speak about "making it on their own", especially in the newly tenured group. STEM female postdocs have more mentors abroad and in other institutions other than UCL. An important result gleaned from virtually all interviews is that "relationships determine the job or the profession", both male and female newly tenured and postdoc in both institutes SSH and STEM, it becomes clear that relationships forged or not forged before, during and after PhD, as well as during postdoctoral periods, determine to a large extent the possibilities of collaborating, of gaining access to short-term contracts, to international collaboration and publication, and to important mentors, who can help in developing research, but also opening doors to future collaborations (in terms of publications, project funding,

intellectual development, strategic advancement and team building, membership through knowing and working with gatekeepers).

4.3 Well-being and work-life balance

4.3.1. Summary for STEM

Postdocs STEM

The first visible result for postdocs in ELI (STEM) is that they are rather more optimistic and engaged than newly tenured researchers or academics in terms of work, interactions at work, and conditions of work and work/life balance. This is the case for both *female as well as male interviewees*, who are more optimistic rather than engaged. The significant characteristic is however that all postdoc interviewees for ELI, both male and female, were all childless (still) and in stable couples, except for one case of a single female, in which more ambivalence is given for personal life and the need expressed of not wanting to sacrifice private life (meeting someone and founding a family) for the sake of a career, and a professional reconversion is not excluded. *Females have more ambivalence* in the question about *compatibility of children with career* and also about *health reasons, overwork* and *infringement upon or sacrifice of family*, mobility and *leaving the country due to career choices*. Like the females, the males believe that their professional activity is limited by a family life, because this would decrease the professional engagement needed to advance the career. But unlike the female researchers, men do not feel a professional constraint on family building. In this manner, the work/family interference impacts upon time but does not result in questioning the academic career in itself.

Most postdoc females have (male and female) partners with high intensity or profile professions and jobs, which meant dual careers and dual planning within the couple. In some cases, this meant relatively less time spent together in evenings or weekends. For example, Emma does not feel that they are sacrificing anything as a couple due to intense dual careers in terms of time and spatial engagement. In her case, she feels that this can only be the case as long as they don't have children; children are therefore an element that would change this feeling. Also some female interviewees are far from their extended families (parents) and need to travel quite often in order to see them. In the case of Clarice, on the couple basis she feels like they are sufficiently stable and both loving their work, and having home-based "projects", but not children. She does not seem to feel any sacrifice in terms of her family life, despite the high level of professional engagements.

Most male interviewees have partners with unstable professional stage or contracts (PhD stage), which however does not diminish their optimism about their future as a family, or for family building purposes. In some cases, for male interviewees doing postdocs abroad, they lived initially apart from their partners. These life partners would follow them eventually to their postdoctoral host country, this being possible due to their own uncertain job situations. For example, Benoit is optimistic in terms of wanting to build a family (he is in a stable couple but without children) and saying that *work should be accommodated* to make this possible. On the whole, male interviewees speak about how the precariousness and insecurity in the scientific career is lived as a "*normal*

and predictable" part of the career path, about how short term projects are not seen as menacing, rather an advantage if you want to travel and have the experience of living abroad for a couple of years, albeit as a couple.

Newly Tenured STEM

One significant difference with postdoc males is the tipping of the scale of male newly tenured in ELI towards a *frustration of not being sufficiently present for family and for work, thus being somewhat ambivalent*. This especially comes into play when both life partners are in research or high profile jobs; the male newly tenured from ELI speak about how it is not easy to balance work/family life. And also female spouses ending up "sacrificing" her career or at least the discipline in one particular case where both partners had same discipline and career paths, then but the need arising for one to accommodate, whereby the female partner made the change. This results in the female life partner being the primary carer in the family. Moreover, an important difference is that male newly tenured who are optimistic or engaged have partners who don't work or work part time and are available for kids. It is moreover observable that most newly tenured males have children and a family, whereby postdoc males did not. There are also some few engaged profiles (entirely invested in work), however without family or couple life, as in case of Manuel, who regrets not having taken enough time off work to construct a family life, but feeling that the time alone was necessary to build his career.

Female newly tenured academics tend to avoid speaking about their family life to colleagues, keeping silent about work/life interference. Even in some cases, such as Anna's, this leads to her not asking for parental leave because implicit/explicit comments are made or even mentioned by male colleagues or superiors as barriers to promotion. These same female interviewees spoke about how having children during doctoral or postdoctoral phase elicited different reactions from colleagues and supervisors: In the case of Cassandra, "while one of her promotors expressed joy at her news of pregnancy, the other never spoke to her again". Being in family situations is not always easy to declare or speak about with colleagues, especially to male supervisors/promoters.

Women newly tenured in ELI are ambivalent about how their academic or research careers infringe upon family life and the plans to build family and being otherwise engaged outside of work; but as with the postdocs this is seen as being "normal" for this type of career or work, thus "taken into stride". Having children is considered difficult and problematic during doctoral periods and postdocs especially; CV building and being totally invested seems not compatible with family building according to newly tenured females in ELI. Also in terms of working efficiently and being able to build the career whilst having maternity leaves, making delays or actual interruptions in publications and research work, as in the example of Manon. She knows that maternity leaves are taken into consideration for FNRS doctoral applicants, but she has the impression that the interruption in the research career and work will have important consequences for publications and can represent a slowing down of the career advancement. However, she also speaks about how she worked even during maternity leaves, whereby "this is not a work in which you feel that you stop after the end of the day. One never really stops. There is not really a clear limit between work at work and work at home".

Also, having children and doing a research careers, means making certain sacrifices because of the high investment of time and mobility, also needing looking after of your children by child care services: Manon speaks about how "the research demands, the high investment in time is not always compatible with the life of a mother." For example during her research stay in a prestigious university, her husband and first child had to move abroad (her husband worked from this place) and that they had to often apply to child care services. Elise expresses how "work/family balance is not always easy and her work requires a total involvement."

Moreover, in some cases, such as for Monica, her husband and herself had waited with having a child until after she had her permanent position as a FNRS researcher, because she felt more free to think about a child. She says "*it's not so much about reconciling work and family life, but rather constructing both at the same time*."

From all these points gleaned from both male and female interviewees, we can see a significant tipping of the rapport to work toward *ambivalence* and arguably heighten precariousness within the career once interviewees enter parenthood.

4.3.2. Summary for SSH

Postdocs SSH

A significant difference between interviewees from IACCHOS and ELI is that there were more interviewees that were parents in IACCHOS. Moreover, within the IACCHOS group, the male interviewees express less feelings of regret than females of being taken up by parenthood and not being able to carry out their professional project or enjoy their leisure time. As with ELI females, IACCHOS females speak less about leisure, and when they do, it is about how leisure has become more difficult or impossible due to the arrival of children.

In a similar way to the optimism professed in ELI male postdocs, the IACCHOS male postdoc felt that even with the arrival of children in their family lives, their professional projects were not menaced as such, although the level of engagement in work may diminish in some respect, in research publication for instance. For example, in Martin's case, who has a partner who is a researcher as well, and who has three children, he speaks positively about the possibility of work/life balance with research careers. But he expresses tiredness after his babies' births and subsequent sleepless nights and having to "function normally" the next day. But the feeling was voiced by mainly optimistic male interviewees that research/academia is compatible with family life, picking children from school and crèche, being there if need be if they are sick. This flexibility was also expressed by some female postdocs with children, although with the added angle of feeling guilty of not being there "enough" for the kids. Thus a significant difference can be found in the interference between work and family between men and women for both ELI and IACCHOS. Moreover, in postdoc females from IACCHOS, even the most optimistic women voiced feelings of guilt, and speak about how the arrival of children transform profoundly their relationship to work. Moreover, we can observe that having an optimistic stance (leading to the same level of investment in work and family) presupposes specific material conditions of existence: parent female researchers in fact present professional and family configurations providing favourable supports: the

possibility of shared responsibility for the children between the female researcher, their partners and the family entourage; the use of collective services, a home near the work place, etc. This configuration allows them to ensure an extended presence at the work place, such as evenings, but also to cope with long absences for scientific stays abroad, such as in Mathilde's case.

Moreover, as will be also the case explained for newly tenured females, beyond the respective life partner's availability, it's his understanding that favours optimism: he can liberate the female researcher by understanding the kind of constraints the female researcher is caught up in. Therefore, the attitude and behaviour of the partner is an important factor in daily life in satisfying the requirements of the scientific environment. Optimistic female researchers in IACCHOS present a strong homogamy (sometimes endogamy). If the partner shares a professional activity based on similar operating rules, the female researcher can work evenings or weekends, at the same time as her partner, because he understands that this is necessary.

We can observe that there are more ambivalent females in IACCHOS, especially those with children. Simultaneously, the material living conditions mentioned above are lacking among the ambivalent female postdocs. This career relationship, which is only observed among the parents, is in fact based on the absence of an essential resource, even if, in theory, compensated for by the presence of other organisational resources: living far from the work place and caring for children, the partner's professional activity is not very compatible with the researcher's, the children's fragile health may require a prolonged presence at home, which is for example, Blandine's case. It may also result from isolation with respect to the family entourage. Consequently, family life weighs down on the practise of work: days are shortened and the interviewee cannot resume work at the end-of-day because the partner does not work evenings (or not at home), or because domestic chores are too weighty, etc. Those difficulties nourish a frustration, which does not directly touch the pleasure taken in doing their work, which remains powerful, but rather the sense they attribute to their engagement. Whereas that sense may be solid and structuring, the arrival of a child in a context of not sufficient resources increases the cost of access to a scientific career (cost in energy, frustration and guilt feelings at having to ask so much of one's entourage and of not measuring up to the demands of one's milieu). Activities that were not perceived as efforts before come to be seen as "sacrifices".

Newly tenured SSH

Male newly tenured in IACCHOS - such as In the case of Jean, newly tenured, whose wife is also in high profile job - find work/family conciliation difficult, fraught with tensions, as they are not capable of involving themselves as much in family chores, and also feel restricted in terms of mobility. In the example of Jean, during the postdoctoral level, he is not able to travel with the family to a prestigious European university town, as father of his wife was ill. Also he cannot do research stays beyond 10 days, which seems for him a strategic problem in his career. Paradoxically, however, he does state that work/life is compatible. There is also for IACCHOS interviewees a major difference between male and female, in that high career and work engagement is taken in "stride" and not "complained about" as a true hindrance to working in this profession or career. This points to the difficulty of addressing the hidden carer aspect in researchers' lives; it

is difficult for both male and female researchers/academics to reconcile academic work and family, however, it the carer role is often considered "regrettable" or "to be excused" in the name of the scientific/academic career in narratives, especially in male narratives. This points to the significance and existence of the illusion (Bourdieu, 1987) of the perfectly committed researcher/academic, unhampered by care or other considerations, which makes any existing care events and activities "chores" or "tensions" or "restrictions"; a kind of guilt in the fact of renouncing career or work activities.

However, contrary to ELI newly tenured, perhaps also related to professional profile of spouse or partner and children also present simultaneously, IACCHOS newly tenured males tend to be more ambivalent about work/life interference and balance.

For newly tenured females, the work/family balance is considered possible, *but difficult to achieve*, with a personal need of setting limits upon oneself, not working evenings and weekends; often this is considered more difficult during the postdoctoral period, and easier after nomination, as you are more independent and less pressurized to "produce" and "'prove yourself" (see Helene and Chloé). Marine: "Despite the will to separate professional and private sphere, I often feel pulled apart by the two, which makes me feel guilty. I want to spend time with my children, but I also feel guilty when I am not working, so....it's always difficult to find a balance. "Other examples, such as Lola consider work/life balance to be possible, but admit having waited to have children in order to attain stability, as in Lola's case, because "she wanted to construct a family once she had a certain stability and a "greater freedom" during her career. Today, her work demands are met thanks to the presence of family support and the atypical working hours of her companion." Thus, even in this case, having a partner, whose job or profession is "lighter" or more flexible helps in managing or obtaining a stable position and of assuring care within the family. Moreover, having support from other family is also needed. This ties in with the material and human resource conditions met with, such as with optimistic ELI females, which can make a balance possible. Thus female newly tenured in IACCHOS are in some cases optimistic, with a balancing act that can easily tip the scale towards precariousness, and in some cases quite ambivalent.

In some cases, as for Caroline, having children made work/life balance easier, as it helped to ease the rapport to the career, of having a certain distance in terms of uncertainty; "She feels that the arrival of a child was more "sane" for her, because after the birth, Caroline could differentiate work and family time in a better way. She felt more efficient, more productive and more organised in her work, which made "office hours" possible. And spending time with her family made her make a clearer "cut" with her work and of reconnecting to things that were more essential to her life, in order to work better later. "We are looking at what Del Rio Carral and Fusulier (2013) identified as a spatio-temporal logic of conciliation in work/family interference; the capacity to organize yourself better with work due to family considerations and schedules.

The precariousness of postdoctoral periods in terms of work/life balance

The period of postdoc was fraught with ambivalence for many now newly tenured females; the uncertainty of what will come, the necessity to engage in many small contracts, often changing the institution, whether abroad or at home within Belgian institutions; not knowing whether to go ahead with building a family, buying a house or

stabilizing/settling. The period of postdoc is considered precarious on many levels with many sacrifices made in order to continue in this career path. Caroline; "The period of postdoc was that professional period in her life, during which she had to make the most sacrifices in terms of her personal life. She felt like she had a lot of difficulties to enter into the scientific career and for remaining, with all the short-term contracts, which made life projects such as houses to pay off and keeping children difficult." Valentine speaks about how "she encountered difficulties during her second postdoctoral year, until which she had not felt any major obstacles. However, in this second year, she was struck with a doubt whether this career was really possible for her and whether she would ever find a permanent position. Especially, seeing her contemporaries in her immediate work environment and the difficulties they lived, she felt herself going down the same road." Marine, who is a mum speaks about how "she was always enthusiastic about research, but that during her postdoctoral period and the uncertainty that it brought, she felt like there was a stopper to her other life projects. She sometimes hesitated and thought about professional reconversion, which also meant reducing her full-time work. The position of permanent researcher is a real relief, although this does not rhyme with a reduction of stress linked to work:" It can be observed that on the whole male as well as female newly tenured in IACCHOS speak more ambiguously or with more ambivalence about their life situations during the postdoctoral period, and sometimes even extending the feeling of precarity or uncertainty beyond nomination.

For engaged profile types in males, this involves part-time work or non-high intensity or profile work of wives/partners, and if yes then without children, unless there is strong family support if children are there, for instance grand parents. Other optimal configurations for engaged newly tenured males are good international networks, available mentors, available internal or interuniversity networks; and good publications on "original" topics, as is the case for Henrys and Gerard. This is very similar to the case of engaged newly tenured male in ELI.

4.3.3. Comparative conclusion

The striking comparative results is that in ELI (STEM) postdocs, both male and female are rather more optimistic and engaged than newly tenured researchers or academics in terms of work, interactions at work, conditions of work and work/life balance. This is the case for both female as well as male interviewees, who are more optimistic rather than engaged. The significant characteristic is however that all postdoc interviewees for ELI, both male and female, were all childless (still) and in stable couples (with one exception). Female postdocs in STEM have more ambivalence in the question about compatibility of children with career and also about health reasons, overwork and infringement upon or sacrifice of family, mobility and leaving the country due to career choices. Like the females, the males believe that their professional activity is limited by a family life, because this would decrease the professional engagement needed to advance the career. But unlike the female researchers, men do not feel a professional constraint on family building. In this manner, the work/family interference impacts upon time but does not result in questioning the academic career in itself. In IACCHOS on the other hand, parenthood appears earlier on, already during postdoctoral period, and the ambivalance about work and family reconciliation is already present during this period, whereas for ELI postdocs, this was not yet the case. However, ELI postdoc women voiced

concern about what the arrival of children would mean for the career, and vice versa. IACCHOS male newly tenured express how work family interfere and how the presence of children makes them less productive, and less mobile. IACCHOS women voice more guilt when it comes to work and family; they feel at tug of war with both spaces. One can observe that a precarious balance can be achieved in IACCHOS, if the right family and support configurations are available; a flexible partner who works part-time or does not work, family support in terms of caring for children, a supportive research centre and mentors, colleagues. This configuration is more present for men than for females, and for females it is harder to maintain on the long run for both SSH and STEM.

4.4 Career development

4.4.1. Summary for STEM

Newly tenured STEM

Connections and support in Career Progression

What can be observed for both male and female interviewees is that support from former PhD supervisors and postdoc promotors is primordial for gaining access to opportunities for applying and constructing a FNRS proposal, whereby male interviewees often had more access to this support than females. Lots of colleagues and current work relationships for newly tenured males are forged during doctorate, or even Master level with professors, who propose to them to do PhDs, or with other postdocs or docs during doc/postdoc. The international collaboration is forged during postdocs abroad, so adds to external networks that are useful for publishing and doing joint research projects. In conjunction to this, the advice to researchers by male newly tenured for a successful career is about being strategic and alert, taking chances and knocking on all doors, establishing collaborations and connections that will help you to progress, publishing in English. This is more the case for permanently appointed FNRS researchers rather than for academic nominees; in the latter's' case, local networks and associations are more weighty than international networks, although, at a slightly later stage, for project and fund bidding, and research development, international networks become important for academic nominees too.

Generally, the gist from all interviews so far, postdoc as well as newly tenured in STEM is that there is not much supportive culture at UCL/ELI, and that often true mentors were found abroad, where competition did not reign, and where they were enriched rather than threatened by (mostly senior) peers, which could sometimes be the case at UCL; especially in the case of female newly tenured academics/researchers, especially before nomination during the postdoctoral phase.

Some female newly tenured speak about how the during the doctoral and postdoctoral phase they felt still "young" to be having a permanent position or of being in a professional situation, lacking maturity of "full" researchers or academics; this ties in with current female postdocs in ELI speaking about being in a prolonged doctorate still, with the same hierarchical relationship with promotors and the need of guidance, speaking of promotors more in terms of supervision rather than colleagues. This differs substantially from male newly tenured, who speak decidedly about colleagues, even

during their previous postdoctoral phases with promotors. This points to the important aspect of guided confidence-building during doctoral and postdoctoral phase, the lack which of can lead to "shaky" feelings of self-doubt even after nomination for female researchers/academics.

Female newly tenured academics/researchers also tend to speak differently about mentors, although mentors, more roles of PhD supervisors in guidance on research itself, and less strategic support. Emeline for example speaks about two mentors, but not entirely in the same way as masculine interviewees; her PhD supervisor, who was supportive, but who had not been her first choice as supervisor, as the other one was too overloaded to take her on as PhD; then the postdoc mentor abroad, who helped her advance in her research development, but not necessarily strategically for her career". However, in some cases, there were important mentors abroad, who were strategically supportive for networking as well as research-wise (see gatekeepers in WP7).

Cassandra: "Abroad, I had a very good mentor, who could guide me in terms of research when I needed it. He also presented me to several brilliant scientists with whom I still have contact. And apart from academic and networking help, he gave me confidence in my capacities as a researcher. "

For female interviewees, the same things count strategically as for their male peers, especially with FNRS: international mobility and contacts, with an added angle of confidence-building that was either absent or given abroad in some rare cases, such as for Cassandra.

In terms of nomination/selection of newly tenured in ELI, one interviewee, Manuel speaks about the informal ways of proceeding and criteria of selection: "Because "co-optation" can play out in the nomination by a scientific committee, the rector has introduced another filter through the central administration, which means that the filter is much thicker; the administration tends to select by adhering to criteria of scientific excellence, and then having gone through this filter, another second selection is made by the academic council; this is the way the FNRS mandates are selected and nominated, which was the case for me for the FNRS and for the position of first assistant (permanent research position)." Filters and states in the selection processes for academic nomination is experienced as being complex, multiple-level, which also requires meeting the demands of both competition- and as well as nomination-based criteria (see Dubois-Shaik, Fusulier, 2015). Arguably, strategic career advice, collaboration, research development and guidance are quintessential for crossing these multiple "filters" or selection steps.

Newly tenured STEM

Vocation/passion, lonely heroine and sticky floors

Most if not all male newly tenured speak about how research work is a passion: however, many have a dual career in university and affiliated with industry or private sector, and often in the beginning having thought about going into private sector before doing a postdoc. However, after postdoc the desire to stay in university is higher and more pronounced. One could say that doing a *postdoc is* already an important

professional step or transition into the research profession for males whereas the doctorate remains still open to changes and is more ambiguous.

As for men, women also speak about research as a passion, vocation even and of being inclined towards this at a very early stage. Also women speak about the importance of doing docs and postdocs abroad, and of being at the right place at the right moment and depending on who you know is important for getting a permanent nomination: for FNRS as well as for academic nomination.

Getting stuck in administrative and non-gratifying tasks is something that female newly tenured complain about, which can confirm the presence of the *sticky floor phenomenon* (Booth, Francesconi, Frank, 2003) (there are also postdocs female who complain about this). Alicia speaks about how she regrets that an important part of her time is dedicated to secondary and assistance type tasks, she even refers to herself a kind of "luxury secretary". This is something considered getting in the way of her actual work and institutional affiliation/loyalty/membership (Dubois-Shaik, 2014). Not being entirely taken for full.

Lots of newly tenured women interviewees (ELI and IACCHOS) speak about themselves as being their own "boss", or "left to their own devices": there is much less narrative about collaboration than with male interviewees; there is more hierarchically lower interaction, such as with their Masters' students, doctoral researchers, or postdocs employed in their projects. This ties in with the system of increased auto-regulation we address in D 5.2 (see working paper N°8). Not enough peer support or collaboration as for males. However, women newly tenured speak about good PhD support, but not spoken about in terms of mentors.

There is also with newly tenured female academics a pronounced narrative about harassment due to being a woman: by senior colleagues who are experienced as being jealous of their younger female peers, who don't propose joint publications, who bid for similar projects without proposing collaboration. Women speak about a competition-based culture experienced by them. There is also conflictual relationships with other staff members, such as laboratory technicians, who are male and older, not liking to be "told" by younger female academics. Newly tenured female academics also speak about how in some cases, being mothers would expose them to haven been "taken advantage of" by supervisors, who would systematically put their names on papers they wrote by themselves and of FNRS criteria for recruitment not being in par with their real lived situation, such as is the case for Cassandra: "The contrast with where she did her postdoc abroad was very great upon returning to UCL; the precariousness was lived in a more pronounced way, as the support from her former promotors had deteriorated, especially after announcing her pregnancy. In fact, one promotor took advantage of her publications and co-signed systematically without actually working on the papers, whereas she believes that publishing alone is important for her career and for gaining access to permanent positions." There are therefore visible signs of *old boys's clubs* (Case, Richley, 2012) or *male bastions*, with a *joint effect of Matilda/Matthew* (Rossiter, 1995; Merton, 1968).

The insecurity of short contracts during a long period of time was a source of stress for many female newly tenured during their early career stage before nomination, without any guaranty that this would work out. Also the thought of professional reconversion

seemed more difficult for female interviewees, whereas male interviewees seemed more ready to change without feeling regrets or doubts. Manon: "This job insecurity (She had several short term contracts of 5 month to a year duration) was a great source of stress for me. It was impossible for me to think of a professional reorientation towards the private sector." However, she still started to "job hunt" in case her application for permanent researcher would not work out.

In Monica's case "she speaks about how the periods of applying for permanent positions as being the most stressful, because she would question herself fundamentally and wonder whether she wouldn't try other career paths, she had applied for the second time and did not know if she would end up applying a third time." The postdoctoral period seems to be have been harder for female interviewees from ELI; struggling to do publications and meeting with CV bodybuilding (Fusulier, Del Rio Carral, 2012) necessities. Also work/life balance is a challenge, whereby precariousness persists although females are newly tenured, by always having to maintain a borderline balance, like a kind of trapeze act, with danger on each side of not being able to reconcile. This balance is possible but with the support of partners who are not in high profile jobs themselves if children are around, or else childless with high profile partners' job.

For male newly tenured in ELI, the fact of having a stable/permanent position has done much in terms of diminishing stress and uncertainty.

4.4.2. Summary for SSH

Newly tenured SSH

Professional precariousness, career paths, transitions

As with most of ELI newly tenured, the social capital of familiarity with the world of university and also a rooted career in the same institution, along with trips abroad during the postdoc is a recurring constellation in terms of "winning type" career paths, especially for male newly tenured, and also female in most cases. There were some exceptions in which interviewees deviated from their social capital from home; but interestingly this is more present in non-stable postdocs, especially in females, and one male, whereby often the family does not understand the engagement in a profession that seems so fraught with uncertainty and instability.

As with ELI interviewees, IACCHOS newly tenured FNRS speak about how important it was to do postdocs abroad in prestigious universities, also having worked with affiliation to a prestigious French research centre, where for example "Jean" still teaches. According to him, this affiliation works as much in favour of CV building as well as "belonging" to a famous scientific school. However, mobility is not really lived positively by all newly tenured; there are tensions about travelling with family and also attaining the true value of mobility in terms of research development.

Mentors abroad are important for female newly tenured; mobility therefore during thesis or postdoc is important for accessing more possibilities of meeting with "true" mentors, something they found to be more lacking at UCL; intellectual mentors, or those contributing to a development of research. Also some strategic mentors other than UCL

were named, for example external mentors in clinics or research centres, such as in Chloé's case.

The postdoctoral period is lived with a lot of uncertainty at UCL by female IACCHOS newly tenured, with prolonged postdoc short-term contracts, without any perspective of prolonging or permanent positions. Maternity occurring during this time makes things harder, and some part-time work is also envisaged, and in some cases more than one maternity sometimes occurs during this period. And finally, at the end of what is seen as a weary road, then obtaining a FNRS permanent position (see Chloé), with a lot of struggle, or a permanent academic position (see Helena) after at least 8 years of postdoc.

In terms of mobility, female newly tenured speak about how they would like to go abroad more often, as their research stays, even if short had been important in terms of research exchange, collaboration etc. but family duties and presence does not allow this or makes it difficult. This remains an aspect with regret, also voiced by some of their male peers. The arrival of children is experienced as slowing down mobility considerably for both sexes, especially in IACCHOS interviewees. Thus the clandestine carer struggles to keep up with yet another advantageous rule of the game.

4.4.3. Comparative conclusion

Former PhD supervisors and postdoc promotors are important gatekeepers for gaining access to opportunities for applying and constructing funding proposals, whereby male interviewees often had more access to this support than females, in both SSH and STEM. Lots of colleagues and current work relationships for newly tenured males are forged during doctorate, or even Master level with professors, who propose to them to do PhDs, or with other postdocs or docs during doc/postdoc. Women have lesser access to these kinds of relationships, and interestingly these contacts and mentors are more often found abroad rather than in the Garcia institution; on the whole there is a rather negative light upon collaboration at UCL, especially for women in both institutes ELI and IACCHOS, and for postdoc ELI males. However, finding mentors abroad presupposes international mobility. The international collaboration is forged during postdocs abroad, so adds to external networks that are useful for publishing and doing joint research projects. However, this mobility, as we saw in the earlier sections is paired with the possibility of right configurations given to be able to go abroad. For ELI females, both postdocs and newly tenured, this is the case usually because they stall motherhood. For IACCHOs females, and also in some cases males, both postdocs and newly tenured, mobility is more difficult due to parenthood.

However, in conjunction to this, the advice to researchers by male newly tenured for a successful career is about being strategic and alert, taking chances and knocking on all doors, establishing collaborations and connections that will help you to progress, publishing in English. But this is found to be more difficult to access for women, especially in SSH, IACCHOS.

The precariousness and job insecurity and repeated short term contracts are found to be wearisome, especially by women, especially due to maternity; the need to be hyper-productive during this period. The need to be mobile, the need to forge important

relationships with gatekeepers. Parallel to this is a need to settle down, to build a family, to develop research and teaching that is undervalued.

There is a more pronounced apparition of Matilda effects, of sexism, and of sticky floor in ELI (STEM) for women, even more than for SSH. Especially, we can see that there is a cumulative effect of all these aspects that makes the career path especially arduous for women in STEM, at great personal and professional costs (see also report D 6.3, Dubois-Shaik & Fusulier). These costs are lesser for male postdocs and especially newly tenured, in both institutes. However, ELI males tend to be more isolated on the local institutional level than IACCHOS males, and are more dependent upon international collaborations forged during research stays abroad.

4.5 Perspectives on the future

4.5.1. Summary for STEM

Postdocs ELI

For women who are postdocs in ELI, speak about the importance of supportive supervisors and mentors, however who maintain an even balance between advising to go in for a PhD in good measure and then supporting further ahead. Moreover, the pathway seems to be traced out by supervisors but also by yourself by the particular stance you have. For example, Emma feels that doing a thesis is hard, and that support during that time is really important and that she did have this in her former PhD supervisor, who was a definite mentor, also on a personal level (she attended her wedding too, so this extended to a personal level). She feels that there are too types of supervisions; one that is over-protective and does not teach how to do your own research, write, manage etc. and that this is very important in order to learn. A thesis for Emma is about learning.

Eloise's advice to young researchers would be to really want to do research and love their field, but not having the illusions about the job situation and the continuity in this work environment. Of being clear about this from the beginning, and not continuing with a post-doc unless you were aware of this and could live with the uncertainty, and then choosing a topic one loved, having a good supervisor and ensuring good relationships with colleagues.

Clarice would say that often she feels that many people go in for a doctoral thesis without much reflection: she in her own experience was not ready at masters level to go in for a thesis, and now with more maturity she feels like she is able to enjoy her research, and able to "auto-manage" her own work and development. Doing research with less maturity could also mean being exploited in ones' work in the research environment. She feels like being part of a supportive team is very important aside the research work, and that without this one would risk feeling quite isolated and devoid of meaning. So having maturity at the time of starting a thesis is an important point for her. Having a range of mature mentors is also something she would really stress, as in her own experience, she felt fortunate in her mentors, who were of a wide variety and qualities, especially the person in former masters supervisor, Science Infuse colleague

and current PhD supervisor supporting her. This is in her opinion a very enrichening experience and aged persons can provide invaluable guidance.

For male postdocs, as for example Benoit, there is much more emphasis on self-management, on your own ability to promote yourself and to be persistent. Unlike their female peers, male postdocs speak much more about independence, rather than the need for guidance and supervision. For example Benoit speaks about how it is important to make your work known to others, in international conferences, with colleagues and in journals, as often research is a very solitary work. To build your confidence and your CV you need to make yourself known, and to aim always higher than you think possible, because even if you "fall flat" you would have emerged learning something important. He always try hyper-ambitious projects, so even if they don't work out, he would have drawn some important lessons from this. To travel a lot, and to visit other research centres in order to know how other people work and other types of work and research modes and environments. For supervisors, he would advise mostly to be available and to be able to take sufficient time for the supervisee, as this he feels is the principle flaw in today's university contexts and at UCL, the availability of professors for their doctoral researchers due to all the other commitments they have. This ties in with other narratives with postdocs and also the movers/leavers interviewee groups undertaken for WP6, the lack of availability of professors to do a steady supervision, despite their "scouting" of doctoral researchers.

Newly tenured ELI

For male newly tenured, there are some examples of persons who insist that "holding it out" and keep going is an important stance to adopt if you want to make it in this sector, such as in Alain's case. He speaks about how more and more there permanent positions are becoming rare, despite brilliant CVs and motivation; the young researcher has objectively little chances of becoming a permanent member. The alternative is seen to be able to move everywhere in Europe in order to obtain this kind of position. However, male newly tenured speak a lot about having "tried their luck" and having achieved despite the narrowness of offers, and the question being one of "good fortune" or "getting lucky".

In terms of institutional and professional engagement, Nicholas explains that his employers expect that he does the best he can. And he explains how the slogan at university is often "be excellent". However, he finds that there is a great ambiguity in this terminology of excellence, because you don't know what it means. Many publications, many conferences? For him, he does not have the feeling that he is publishing in order to fill a certain quota; he hopes and does not have the impression that this is required. He believes this could become problematic also for permanent researches. And he asks himself what are the criteria upon which this is based, and that the acceleration of production can also mean a reduction of quality, therefore being counter-productive. However, despite this he believes that publications and conferences make sense for reasons of dissemination and of adopting a certain rigour at work, and of structuring your work. This autonomy can therefore enable him to organise his time and also give the priority to his son for example.

For Thomas the relationship with other colleagues and a good atmosphere at work, which is not based on competitivity, is essential for a good work environment. He feels

very free in the management and orientation of his research projects, which for him is primordial. This enables once again also to make time for family, which is a priority. And he emphasizes that the relationships forged with colleagues are essential to achieve this balance.

Jean gives advice to young researchers to focus on the unavoidable elements, such as publications, in English and international collaborations. He also suggests going towards a university where few persons are working from the beginning, as to be first alone, and saying this, he believes it is still a kind of "lottery" about being there at the right moment. Gilles in his turn speaks about grasping the opportunities as they come along. It is for him a strategic question, which can be used to your advantage; you need to talk to people, to make yourself known and show interest in others' work and your own.

Other male newly tenured in ELI highlight the importance of having worked abroad, which can play to your favour. Having written many articles with persons during these stays, and having done postdocs abroad. For example, Mathieu believes that having gone abroad is really essential for obtaining a permanent post, even if you are good at what you do otherwise. He thinks this is really unfair as not everybody has the opportunity, especially if you have a family.

Others, such as Pierre speak about developing an intuition about what to do next and how to improve your CV, and not feeling that something was done for nothing. Everything had some benefit. Sometimes, he thinks that even supervisors can try to push you in one direction, and if you follow your own instinct about something it can have positive effects, even if you had the feeling of ending up against a wall. He speaks about how sometimes this was not well received by supervisors, who would then not give him good recommendation letters. However, he feels that this is still beneficial at the end. Continuing in the career means not only boosting your CV, but also being passionate about your work and continuing despite other advice.

Another advice given by Pierre, was that you need to warranty of having good "basic" research results, which is even a necessity. If you spend time on too many details that can work against your favour, especially as a postdoctoral project is not very long. This changes once you obtain a permanent position, then you can afford to dwell on things, rather than going fast about producing basic tangible results. Also having coordinated and supervised in his turn several persons is valuable for him, for an academic CV, and of creating international relations and of collaborating with researchers everywhere in the world.

In terms of institutional policy and conditions, for example Manuel thinks that the university does not finance technical equipment sufficiently which is needed for research. This adds to the weight of the job, if you do not have sufficient funds, and if old material is constantly falling apart or defective.

They also speak about the quantity of publications that they feel are necessary for obtaining a mandate of "chercheur qualifié" (senior research fellow) in the FNRS research career pathway; having an impact factor. Three publications per year seems a good rhythm. And also having originality in your research, international mobility, which allows you to start over in a new environment and of discovering other modes of life etc.

For women newly tenured, the narratives about future perspectives are quite different. For example Florence speaks about masculinity and feminity in research, and about how different kind of gendered methods can make a difference in the orientation that a particular research can take, and can limit research in multiple ways. Quite a few female newly tenured in ELI (STEM) also speak about sexist attitudes of male, especially older colleagues, either hierarchically lower (for example lab technicians) and hierarchically on same level. There have been some narratives about overt or more subtle forms of moral harassment, with remarks about clothing, remarks about presence at work. Also one female interviewee spoke about how she was denied a parental leave, because her male boss told her quite explicitly that if she decided to take parental leave, she would forego promotion. Florence moreover speaks about how male colleagues have tried to undermine her research funding by applying for the same funding with a very similar project proposal, without including or discussing with her. There is an overt competition culture and attitude reigning.

Alica on the other hand criticizes the university of letting the individual researchers/academics very much on their own, without bothering how they can get their work done. Although science is a passion for her, she thinks that the discourse about this is ambiguous. She also regrets having to spend a lot of her time on auxiliary tasks, which sum up to being a kind of "luxury secretary". She has nostalgia for time spent abroad where she could do actual research. For her, the material conditions as well as the requirements does not serve the profession well, in fact devalue it.

Emmeline and also other female interviewees explain how the system favours international trajectories and that this is very difficult for persons to achieve, especially if you have a partner, and if you want to settle down, which usually occurs at the ages of 30 - 35 years for women, during or after your PhD. She did not have children during this period as it seemed impossible to achieve and of staying at a top level at the same time. She also believes that the difference of reasoning for science between the two sexes is valuable for science. She remains however quite pessimistic about the equality between women and men in the future, as the permanent positions are getting fewer, the postdoctoral periods are getting longer, 10 years after your thesis, and this inhibits women from having children.

Cassandra speaks about how showing that you are capable of publishing is essential for obtaining a permanent FNRS post; the criteria of the FNRS do not seem adequate to her. Elise on the other hand speaks about how being constantly motivated in your work is a must, and that your can have good relations and contacts with colleagues abroad, in order to progress in your knowledge and the discovery in your research. A good researcher according to Cassandra is someone who is passionate, curious and courageous in the sense of being able to do a large quantity of work.

Some female newly tenured also speak about how it is very important to sometimes switch off from work now and again; but that this kind of work does not permit this easily, because 4 weeks are the maximum period of leaves that are authorised by the university. However, research work is not a routine work, and sometimes you have more or less productive periods, and this makes taking leaves quite difficult to organise effectively.

4.5.2. Summary for SSH

Postdocs IACCHOS

Female postdocs at IACCHOS (SSH) speak about how publications are really crucial if you want to be considered for permanent positions and for funding. However, the support for this is not given easily, especially at the Garcia institution, and found more often abroad. However, this can be a source of constant stress and anxiety, because you battle alone, and don't have much collaboration from supervisors or colleagues in the same institute or field. Female postdocs complain about a severe competition and non-supportive culture.

Male postdocs are somewhat more optimistic about their futures, and speak more about having a local network and support. However, the chances of gaining permanent positions are considered quite slim, and they feel that an addition of short-term contracts is becoming normal for a longer period of time. They do not however speak as promptly about needing to leave academia and research as their female peers.

Newly Tenured IACCHOS

For male newly tenured, such as Jean, there are several criteria today that need to be rethought, such as international mobility. Although this is seen as something that is necessary nowadays for career progression, this does not necessarily mean improving your research. On the other hand, the funding system is criticized, as there is a severe lack of funding for research, and for example the FNRS researchers have to find various strategies to fund themselves. Sometimes, male newly tenured speak about having another income elsewhere to compensate their lack of funding for research at the Garcia institution. There is also a critique about the constant comparison with the anglo-saxon world, whilst the criteria do not have to be the same in the two very different contexts, especially in terms of administrative support and financial means. He feels that there is a constant bid for funding that is a waste of precious time otherwise spent on research.

There is also a critique that the university system is a meritocratic system, which makes interviewees such as Pierre question why there are so many doctorates being dealt out and promoted. Also the criteria used for recruitment and promotion, are considered constricting for the creativity and liberty needed to be scientific. The rhythm of publications is considered very difficult, as criteria to be able to continue a career as a permanent FNRS researcher.

However, some male interviewees such as Alexandre speak about the value as such of the PhD, not only in terms of a acquiring a position in academia. The competition become more and more stringent and requires many sacrifices to be able to work in academia, the advice would be to look elsewhere too, and that the PhD can have a great value otherwise too.

Henrys in his turn speaks about the freedom that being a researcher brings; you are free to do the kind of research you want, to participate in conferences, to do research stays abroad. "This freedom is magnificent." What is more harrowing is the problem of switching off and that work follows you even in the holidays. He never in fact takes any holiday, but takes part in conferences abroad and takes some time for visiting the place

also. For scientific policy he thinks that things are quite alright the way they are, and that on the salary level too they are quite well paid.

According to Gérard, the conditions at UCL are impeccable considering the fact that it is a huge university, and that it does give its workers enough means. However, the FNRS is more problematic, as the researchers do not have much funding for research beyond their salaries and need to compensate this with other self-organized funds. He thinks that his work context is quite free, however he works even weekends and 50h à week, as there is never a legally considered work time. However, he thinks that if you want to aim for a permanent post or of progression you need to be doubly motivated and very involved. He worked literally quite on his own for the most of his research projects, and the only thing that bothers him is the stress of not knowing what will happen after the postdoctoral periods.

Newly tenured women speak similarly as the ELI female postdocs, like Helena, who speaks about how it is not easy to go abroad with small children, who were born abroad. Arranging hospital career during birth and maternity; of arranging child care later. She also had a seriously sick child just after birth, and this was a struggle during one of the postdocs abroad. Also settling is not easy with having to go abroad in order to build career and for research purposes.

In the example of Chloe, she believes that you need to be passionate about your work and that relationships are the gateways to the development of your scientific knowledge. As for Lola, she believes that the values that had been instilled in her during her postdoc really work, such as rigour and scientific excellence. However, she criticizes the requirement of productivity, which seems for her easier to manage when you don't have any family constraints. She feels that the academic world puts pressure upon women in twofold ways: by discriminating women at the "heart of maternity", where these latter can no longer ensure the high level of work required. And on the other hand, she feels that the status of FNRS permanent researcher is even more productivity-orientated than academic posts, who have teaching responsibilities. She feels that research needs time to be of high quality. However, she also says that motherhood allows her to see things in a more relative way and in a different ladder of priorities. In some cases, motherhood is not favourably viewed by colleagues and sometimes can seem as an obstacle to the career by your own self, such as in Camille's case. Also, female colleagues are sometimes not easy to work with, can be more discriminating and badmouthing, and rivalizing.

Female interviewees, such as Caroline, also speak about how your private and professional environment matter a lot in terms of professional success; if you are supported by each. But they also underline the fact that they can put some distance to not succeeding in the career if they have a full family life, and if the partner is professionally stable. This support is also important to gain a good flavour and a liking for the profession. Such as for Valentine who has had strong family support, and support from her colleagues, by whom she feels considered as an equal, without any rivalry or hierarchical rapports.

For Dominique, exceptionally, her professional success has been a success lead by the whole research team. She has been strongly supported, and this she believes is essential in having a fruitful career and meaningful work. However, she also adds that working

very hard to get there was necessary on an individual level. All women, even successful in their tenured positions, explain how their career path has been arduous and not easy to achieve, as much on the professional level as on the personal level.

According to Marine, the scientific policy could envisage facilitating work and private life balance by creating more part-time positions. And she thinks it could be interesting to stop considering only numbers of publications, but to be interested more globally about the researchers' activities.

4.5.3. Comparative conclusion

There is on the whole a major difference between the way males speak about future perspectives and advice to young researchers and female interviewees in both SSH and STEM. Male researchers/academics speak about boosting your CV, about being strategic, taking opportunities as they arise, about knocking on doors, about making use of your relationships, about going abroad as much as possible, about being passionate about your work, making your work and yourself known, being persistent and not giving up. However, a majority of male interviewees, in both institutes, are critical about criteria of "excellence" in academic/scientific world, especially the FNRS; they are not sure that criteria as they stand today are conducive to creating good research and to real quality. There are however also many young postdoc researchers who believe the system to be sufficiently good, to have a good salary and good general working conditions for developing research and a good professional sense.

Funding remains however for both sexes a major issue to be dealt with, especially FNRS funding for research purposes that are deemed insufficient and having to be compensated by second jobs and other sources of income. Men speak about this more, and seem to assume this second income, either because they are ready to pay the price, which means less time spent with family, or because their family configurations allow this.

As opposed to this, women interviewees are much more critical about the criteria of scientific work. They speak also more about stress, anxiety due to precariousness and due to personal sacrifices. They are however, not altogether critical about the institution, as much as also being self-critical: the flexibility of scientific work itself presents a constraint in terms of being able to switch off. This is also voiced by some males. In general, ELI women are slightly less critical while in the postdoctoral group; they recommend having good collaborations and relationships, of taking opportunities and of being passionate about your work. There is however a recommendation towards supervisors of being careful when engaging doctoral researchers and doing this responsibility. There is also the idea of having a certain maturity when undertaking a PhD, and not taking this too lightly, in terms of professional self and opportunities. The ELI newly tenured females are much more critical towards the institution and the field; harassment issues are broached, and a tough time establishing themselves in a masculine dominated field and institute.

Maternity remains in this analysis too, a major issue broached by women in both institutes and in all groups (postdoc and newly tenured); the criteria of recruitment and progression not being in favour for mothers, such as mobility and productivity. The precariousness and job uncertainty contributing to stalling building a family and settling

down. The rhythm of scientific work and career difficult to reconcile. The need of the right support configurations, both on the level of the partner, with a stable career in case a permanent position has not been gained, or where there is, a support from the family and from the professional environment.

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NETHERLANDS

Laura Berger

1. Introduction

The main aim of this report is to portray the gender (in)equality in academia with a particular focus on the early stages of academic and scientific careers. This will be done by discussing statistical data and materials collected through qualitative interviews, conducted within the GARCIA institutes at the Radboud University.

1.1 University and selected SSH and STEM department

Radboud University is a broad, internationally oriented university that aspires to be one of the best in Europe. It works closely together with the academic hospital RadboudUmc. The university contains seven faculties: Philosophy, Theology & Religious Studies; Law; Arts; Medical Sciences; Science; Social Sciences; and the Nijmegen School of Management. In 2014 there were 19.685 students and about 5000 staff members. We focus on early career scholars from two particular institutes within the Radboud University: the Institute for Mathematics, Astrophysics, and Particle Physics (IMAPP) and the Institute for Management Research (IMR).

The STEM department IMAPP is one of the six research institutes at the Science faculty and is divided into four departments: Mathematics, Astrophysics, Theoretical High Energy Physics, and Experimental High Energy Physics.

The SSH department IMR is the research institute of the Nijmegen School of Management and conducts research on the governance of complex societal systems. The IMR is divided into five departments: Business Administration, Economics and Business Economics, Political Science, Public Administration, and Geography, Planning and Environment. Each department is divided into different sub-departments.

For a correct understanding of the report: The various academic positions in the Netherlands are full professor, associate professor, assistant professor, other academic staff (teachers and researchers, among which postdoctoral researchers), and PhD candidates (De Goede, Belder, & De Jonge, 2013).

1.2 Data collection process reflection and data

The report consists of a quantitative and a qualitative part.

Quantitative data

We took the data for the quantitative part of this report from data gathered for tasks 4.1.1, 6.1.2, and 6.1.3. These data were assembled by the HR and finances departments of the SSH and the STEM departments. We have noted it in the findings if data were not available. To give an overview, the following information was not accessible/available:
- Sex composition of staff with permanent or temporary position in relation to their vertical promotion (STEM and SSH)
- Number of postdoc applicants and number of evaluators (STEM)
- Number of applicants associate and full professors (STEM)
- Number of exits associate and full professors (SSH)
- Newly entering postdocs and 2011-2012 no data on number of postdocs and number of evaluators (SSH)
- Number of newly entering assistant professors (SSH)
- Number of applicants, newly entering and evaluators of associate and full professors(SSH)

Qualitative data

The part on qualitative data is based on interviews done with 19 postdocs and assistant professors of the STEM and SSH department. The interviews were conducted from January to April 2015. We acquired a list from the HR departments with persons who were working at the institutes at the moment of interviewing. We approached the potential interviewees by email to ask for their participation. In the invitation e-mail, we mentioned the goal of the interview; how much time it would take (around 90 minutes); that they could choose the location; and that their answers would be treated anonymously and confidentially. The interviews were recorded and then transcribed verbally for one part by the interviewers and for another part by an external transcription service. No difficulties were encountered when contacting interviewees nor during the data collection. See table 1 for an overview of the interviewees. Table 2 shows a list with more details of the interviewees regarding sex and type of contract.

Regarding the postdocs, three were interviewed within the IMR, of whom two women and one men, and six within IMAPP, of whom four women and two men. We interviewed ten assistant professors in total, of whom three within IMAPP and seven within IMR. Within IMR, four were men and three were women. Within IMAPP, two were men and one was a woman. The employees, postdocs and assistant professors, were between 29 and 40 years old. The majority was in a relationship: of the women, all had a partner; of the men, five were single, the rest had a partner. Eight of the current employees had at least one child: three in IMAPP, five in IMR; four men and four women.

The interview guide contained questions on six dimensions: Socio-demographics, e.g. age, current position, home situation and marital status; Individual trajectory, e.g. salient moments of work story from the end of your PhD until now; Organisational

culture and everyday working life, e.g. description of the climate within the department; Well-being and work-life balance, e.g. appropriately balanced work spare time; Career development, e.g. support from current workplace to pursue professional ambitions; and Perspectives on the future, e.g. how do you imagine your professional and personal future?

Table 1: Overview interviewees

		Men	Women	Total
SSH	Postdocs	1	2	3
	Assistant professors	4	3	7
	Subtotal	5	5	8
STEM	Postdocs	2	4	6
	Assistant professors	2	1	3
	Subtotal	4	5	9
	Total	9	10	19

Table 2 Overview of interviewees with details

Institute	Sex	Interviewee's occupation Type of work	Part / Full time	Type of employment contract
STEM	M	assistant professor tenure track	full time	temporary
	F	postdoc	full time	temporary
	F	postdoc	full time	temporary
	F	assistant professor, tenured	part time	permanent
	M	postdoc	full time	temporary
	M	postdoc	full time	temporary
	M	assistant professor tenure track	full time	temporary
	F	postdoc	full time	temporary
	F	postdoc	part time	temporary
SSH	F	assistant professor tenure track	full time	temporary
	M	assistant professor	full time	temporary
	M	assistant professor	full time	temporary
	M	assistant professor	full time	permanent
	M	assistant professor	full time	temporary
	F	postdoc	part time	temporary
	F	assistant professor	part time	temporary
	F	postdoc	part time	temporary
	M	teacher/researcher	full time	permanent

2. REPORT ON QUANTITATIVE DATA

The quantitative part of the report is organized according to three thematic fields: gender equality in working condition; gender equality in career development; and work-family balance. We provide analyses from statistical data, stressing variations, differences and similarities by sex (m/f) and STEM/SSH department. For all three thematic fields we provide tables with the number/percentage of women and men, separately for STEM and SSH departments.

2.1 Gender equality in working condition

2.1.1   IMAPP

a)   What is the sex composition of the STEM department as regard to the presence/affiliation of the staff in selected university/research institution?

STEM (in FTE)*	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
N of full professors	10.58	1	9.67	.8	11.16	.51	13.33	1.1
N of associate professors	7	0	6.91	0	6.75	0	5.33	0
N of assistant professors	5.7	0	8.22	.58	12.05	1	12.97	1
Other Scientific Personnel**	7.52	1.15	8.19	1.68	9.64	1.01	17.82	4.05

STEM (in %)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
N of full professors	91.3	8.7	91.7	8.3	95.6	4.4	92.4	7.6
N of associate professors	100	0	100	0	100	0	100	0
N of assistant professors	100	0	93.4	6.6	92.3	7.7	92.8	7.2
Other Scientific Personnel	86.7	13.3	83	17	90.5	9.5	81.5	18.5

* Full Time Equivalent
** Postdocs and lecturers fall in this category

These tables show the predominance of men in the STEM department staff, and how little has changed over the years 2010-2013. Except for postdocs, all senior positions have over 90% men and less than 10% women. No women work at associate professor level, which is a potential pool for full professor positions. This means that the in-flow of women for the highest position through internal channels is minimal. The relatively highest number of women in the department are among the lowest post-PhD levels of Other Scientific Personnel (postdocs and lecturers).

b) What is the sex composition in the STEM department considering permanent/temporary position and grades of the staff?

STEM (in FTE)*	2010		2011		2012		2013	
	M	F	M	F		M	F	M
N of research staff with a permanent position:								
N of full professors	9.2	1	9.7	.8	11.2	.51	13.33	1.1
N of associate professors	7	0	6.91	0	6.75	0	5.33	0
N of assistant professors	5.7	0	5.47	0	8.63	.08	8.47	1
Other Scientific Personnel	0	0	0	0	.13	.33	2.14	1
N of research staff with a temporary position:								
N of full professors	1.3	0	0	0	0	0	0	0
N of associate professors	0	0	0	0	0	0	0	0
N of assistant professors	0	0	2.75	.58	3.42	.92	4.5	0
Other Scientific Personnel	7.52	1.15	8.19	1.68	9.51	1.68	15.68	3.05

* Full Time Equivalent
** Postdocs and lecturers fall in this category

As can be seen from this table, the largest groups of both temporary and permanent academics are in the upper en lowest categories: full professors and postdocs. Hence, the department has an hourglass figure. Again, we see how in all categories there are far less women than men. The number of women declines going up the ladder, in both the temporary and the permanent group. In 2012-2013 we see a sharp increase (doubling) of women in the postdoc and full professor levels, however, these had low numbers to start with. The large part of the postdocs/lecturer group is employed on a temporary basis.

These numbers split up in the four IMAPP departments show several interesting gender related issues. They show that there are no women in Experimental Higher Energy Physics nor in Mathematical Physics. In Applied Stochastic there was only a woman among the postdocs in 2010-2012. Some increases we noted:

- Increase of women postdocs/lecturers in Theoretical Higher Energy Physics, from 0 to 1 in 2012-2013. For men this went from .13 (2012) naar 2.14 (2013)
- Increase of women postdocs/lecturers in Astronomy, from 1 to 2.38; of women assistant professors from 0 to .33 (2013). This department grew between 2011 and 2013, but this was mostly due to more men coming in:
    o Astronomy: full professor men from 2.21 to 4
    o Astronomy: assistant professor, permanent, men from 1 naar 3
    o Astronomy: assistant professor, temporary, men from .33 to 1.75
    o Astronomy: postdocs/lecturers, temporary, men from 4.58 to 7.78; women from 1 to 2.38
- In Algebra & Topology a woman permanent full professor was employed, but the FTE went from 1.0 (2011) to 0.10 (2013). In the postdoc/lecturer group, men went from 1.34 to 5.9 in the years under study.

c)   What is the sex composition of PhD candidates?

STEM (in numbers)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
N of PhDs (ongoing)	17	4	24	7	26	8	34	9
N of newly entering PhDs	6	1	7	3	10	3	11	4
N of PhDs obtained	2	0	5	1	10	3	9	3

STEM (in %)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
N of PhDs (ongoing)	81	19	77.4	22.6	76.5	23.5	79	21
N of newly entering PhDs	85.7	14.3	70	30	76	23	73.3	26.7
N of PhDs obtained	100	0	85.3	16.7	76	23	75	25

Men are predominant among the PhD candidates, about 75-80% of the total number of PhD candidates. However, the numbers of newly entering women and graduating women have risen between 2010 (14.3%) and 2013 (26.7%) as have the number of ongoing women PhDs (19% to 21% between 2010 and 2013).

2.1.2 IMR

a) What is the sex composition of the SSH department as regard to the presence/affiliation of the staff in selected university/research institution?

SSH (in numbers)	2010		2011		2012		2013	
	F	M	F	M	F	M	F	M
N of full professors	9	31	8	31	9	35	10	32
N of associate professors	5	20	4	20	6	21	6	24
N of assistant professors	20	35	26	37	24	43	23	38
N of Researcher 4*	3	4	5	6	4	8	6	6
N of Researcher 3*	5	2	4	1	3	3	4	6

* Researcher 3 and 4 are both postdocs. However, 'postdoc' is not an official label.

SSH (in %)	2010		2011		2012		2013	
	F	M	F	M	F	M	F	M
N of full professors	22.5	77.5	20.5	79.5	20.5	79.5	23.8	76.2
N of associate professors	20	80	16.7	83.3	22.2	77.8	20	80
N of assistant professors	36.4	63.6	41.3	58.7	35.8	64.2	37.7	62.3
N of Researcher 4	42.9	57.1	45.5	54.5	33.3	66.7	50	50
N of Researcher 3	71.4	28.6	80	20	50	50	40	60

These numbers shos how on all levels except for researcher 3 (post-PhD) that more men than women are employed. The lowest numbers of women can be found among the associate and full professor ranks (in 2013: 20% and 23.8% respectively). The numbers do not show a significant sign of increase of number of women over the years 2010-2013 in any level.

b) What is the sex composition in the SSH department considering permanent/temporary position and grades of the staff?

SSH (in numbers)	2010		2011		2012		2013	
	F	M	F	M	F	M	F	M
N of research staff with a permanent position:								
N of full professors	8	22	7	23	8	27	9	24
N of associate professors	5	20	4	20	6	20	6	22
N of assistant professors	19	34	20	32	17	29	16	24
N of Researcher 4	0	2	0	2	0	2	0	2
N of research staff with a temporary position:								
N of full professors	1	9	1	8	1	8	1	8
N of associate professors	0	0	0	0	0	1	0	2
N of assistant professors	1	1	6	5	7	14	7	14
N of Researcher 3	5	2	4	1	3	3	4	6
N of Researcher 4	3	2	5	4	4	6	6	4

We see a bigger increase of men as temporarily employed assistant professors than women. Especially in 2012 and 2013 the number of men in this rank increased quite steeply in comparison to the number of women. Noticeable is also how in the rank of researcher 4, only 2 men and no women were given permanent contracts.

c) What is the sex composition of PhD candidates?

SSH	2010		2011		2012		2013	
	F	M	F	M	F	M	F	M
N of PhD students	18	27	37	33	43	54	61	66

The number of women PhD candidates has more than tripled in the period 2010-2013. The number of men PhD candidates has more than doubled in this same period. A large part of the growth in number of PhD candidates comes from growth in number of women candidates.

2.2 Gender equality in career development

2.2.1 IMAPP

a) What is the sex composition of the staff with the permanent position (Full professors, Associate professors,…) in the STEM department as regards to their vertical promotion?

These data do not exist.

b) What is the sex composition of the staff with the temporary position (Full professors, Associate professors,…) in the STEM department as regards to their vertical promotion?

These data do not exist.

c) How is the frequency of exits distributed among men and women in the STEM department?

N of exits:	2010		2011		2012		2013		Total
	M	F	M	F	M	F	M	F	
N of exits of Full professors	1	0	2	0	0	0	0	1	4
N of exits of Associate professors	0	0	1	0	1	0	0	0	2
N of exits of Assistant professors	0	0	0	0	1	0	0	0	1
N of exits of postdocs	3	1	2	1	5	2	5	1	20
Total number of leavers	4	1	5	1	7	2	5	2	27

The exiting staff is mainly men and postdocs: this makes sense as there are mostly men in the department and as postdocs make up the largest part of the (temporary) staff (after PhD candidates).

d) What is the sex composition of PhD candidates (ongoing, newly entering and obtained) in the STEM department?

STEM	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
N of PhDs (ongoing)	17	4	24	7	26	8	34	9
N of newly entering PhDs	6	1	7	3	10	3	11	4
N of PhDs obtained	2	0	5	1	10	3	9	3

The ratio of ongoing women in comparison to men is very askew; the same goes for the newly entering PhDs. This implies that the ratio will not improve in the short term. The fact that there are fewer women than men who obtained their PhD is a logical result of the lower number of women PhD candidates.

e) What is the sex composition of postdocs (applicants and newly entering) and the evaluators in the STEM department?

Postdoc	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
N of applicants	N.a.							
N of newly postdoc entering	5	1	3	1	7	3	15	2
N of the evaluators								
(members selection committee) N.a.								

These numbers show that relatively more men than women postdocs entered the STEM department between 2010 and 2013.

f) What is the sex composition of assistant Professors (applicants and newly entering) and the evaluators in the STEM department?

Assistant professor	2010 M	2010 F	2011 M	2011 F	2012 M	2012 F	2013 M	2013 F
N of applicants	n.a.	n.a.	5	1	3	2	6	2
N of newly entering	2	0	3	1	3	0	1	0
N of the evaluators (members of selection committee)	4	4	5	2	6	1	6	1

g) What is the sex composition of associate and full professors (applicants and newly entering) and the evaluators in the STEM department?

	2010 M	2010 F	2011 M	2011 F	2012 M	2012 F	2013 M	2013 F
Associate professors N of new entrances	0	0	0	0	0	0	0	0
Full professors N of new entrances	1	0	1	0	3	1	1	0

No information on applicants was available.

This table shows that of the new full professors, only one was a woman over the years 2010-2013. This is a sign of a glass ceiling. As one left the year after (see question c), the ratio of men/women full professors remained askew. No new associate professors were hired between 2010 and 2013.

h) What is the frequency of responsible rulers (heads, boards and committees) of research units/groups/centers) distributed between genders in the STEM department?

Heads of research units/groups/centers, boards and committees (on Dec 31, 2013)	Male	Female
Faculty board	3	1
IMAPP daily board	3	1
Heads of departments	7	0

This table shows that on 31 December 2013, at the highest level women were represented for 25%. The seven heads of department, however, are all men.

i) How is the amount of salaries distributed between genders in the STEM department?

	Salary scale	2010		2011		2012		2013	
		M	F	M	F	M	F	M	F
N of full professors	H2	8	1	7	1	9	1	10	1
	H1	2	0	2	0	3	1	3	1
N of associate professors	13	1	0	2	0	2	0	3	0
	14	6	0	5	0	4	0	4	0
N of assistant professors	11	1	0	3	0	1	0	2	0
	12	7	0	7	1	12	1	10	1
	13	0	0	0	0	0	0	1	0
N of postdocs	10	7	2	7	1	10	2	17	3
	11	2	1	3	1	2	1	4	1
	12	0	0	0	0	1	0	1	0

The few women postdocs that were at the STEM department, were in the lowest scale (similar to the majority of men postdocs). The few women assistant professors that were at the STEM department, were in the middle scale, similar to the majority of men assistant professors. The few women full professors in the department were not awarded differently than the men full professors (though this is based on a very low number of women).

2.2.2 IMR

a) What is the sex composition of the staff with the permanent position (Full professors, Associate professors,…) in the SSH department as regards to their vertical promotion ?

These data do not exist.

b) What is the sex composition of the staff with the temporary position (Full professors, Associate professors,…) in the SSH department as regards to their vertical promotion?

These data do not exist.

c.   How is the frequency of exits distributed among men and women in the SSH department?

	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
N of exits of assistant professors	0	1	0	0	2	2	2	0
N of exits of researchers with a PhD ("Researcher 3" and "Researcher 4")	2	0	0	0	1	1	0	1

Data for associate and full professors are non-accessible.

It is noticeable how as of 2012 more men assistant professors left the department. In general the number of early career researchers leaving the department started rising in 2012.

d) What is the sex composition of PhD candidates (ongoing, newly entering and obtained) in the SSH department?

SSH	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
N of PhDs (ongoing)	27	18	33	37	54	43	66	61
N of newly entering PhDs	5	6	4	10	7	6	4	9
N of PhDs obtained	2	4	7	7	4	1	6	3

This table shows that the ratio men-women PhD candidates got better because more women than men were hired to do their PhD over the years 2010-2013, and because in the last two years more men than women gained their PhD title and hence left the pool of PhDs.

e) What is the sex composition of postdocs (applicants and newly entering) and the evaluators in the SSH department?

	2010		2011		2012		2013	
Postdoc	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
N of applicants	1	4	no data	no data	no data	no data	2	2
N of newly postdoc entering								
N of the evaluators (members of selection committee)	2	2	no data	no data	no data	no data	3	1

Number of newly postdocs entering is not accessible.
In 2010 more women than men applied for a postdoc position, in 2013 there was a balance.

f) What is the sex composition of assistant professors (applicants and newly entering) and the evaluators in the SSH department?

	2010		2011		2012		2013	
Assistant professor	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
N of applicants	5	1	no data	no data	4	2	4	4
N of newly entering								
N of the evaluators (members of selection committee)	2	1	no data	no data	3	1	3	1

Number of newly entering assistant professors is not accessible.
More men than women applied for the position of assistant professor in 2010 and 2012; in 2013 a balance existed.

g) What is the sex composition of associate and full professors (applicants and newly entering) and the evaluators in the SSH department?

These data are non-accessible.

h) What is the frequency of responsible rulers (heads, boards and committees) of research units/groups/centers) distributed between genders in the SSH department?

Heads of research units/groups/centers, boards and committees (on Sept 2013)	Male	Female
Faculty board	3	1
Heads of support departments (e.g., faculty office, communication, IT, teaching centre)	4	0
Heads of four sections	4	0
Head of CICAM centre	0	1

We see here that in September 2013, at the highest level the department was represented by one woman (25%) and one of the research centres was headed by a woman. As for the rest, all sections and support departments were headed by men.

i)   How is the amount of salaries distributed between genders in the SSH department?

	Salary scale	2010		2011		2012		2013	
		F	M	F	M	F	M	F	M
N of full professors	15	2	4	1	3	1	3	1	2
	16	0	1	0	0	0	0	0	0
	18	0	1	0	1	0	1	0	1
	H1	1	5	1	7	1	7	1	5
	H2	5	11	5	12	6	16	7	17
N of assistant professors	10	1	1	3	1	3	6	2	5
	11	14	15	15	16	14	17	14	17
	12	5	18	8	18	7	17	7	14
	13	0	1	0	1	0	1	0	1
N of associate professors	13	2	5	1	5	4	7	4	10
	14	3	15	3	15	2	13	2	12

This table shows that in comparison, women *associate professors* were in lower salary scales than men. For instance, in 2012 66% of these women were in the lower scale 13, whereas in that same year 35% of the men associate professors were. The same goes for *assistant professors:* in general, relatively more men assistant professors than women assistant professors were in scale 12 as opposed to the lower scale 11. For instance, in 2012 58.3% of women assistant professors were in scale 11 and 29.1% in scale 12, whereas of the men assistant professors this was 41.5% in scale 11 and 41.5% in scale 12. With the *full professors*, the proportions of men and women in the salary scales grew more towards each other over time, where the women were relatively more often in the lower salary scale (H2) than men full professors. In 2010 relatively fewer men (50%) than women full professors (62.5%) were in the lowest scale, and in 2013 these percentages were for men 68% and for women 77.8%.

2.3 Family/work balance
2.3.1   IMAPP

a) How is the frequency of days for maternity/paternity/parental leave distributed between genders in the STEM department?

2013	Male	Female
Maternity leave - N days (mean)		
Assistant professors		120
Assistants / "Lecturer"		
PhD student		
Parental leave - N days (mean)		
Full professors		
Associate professors		
Assistant professors	365*	92
Postdoc	121	

*This reflects the period over which the leave was taken (so 365 days does not mean the person was out of work all year)

By law women are entitled to 16 weeks of maternity leave. Nationally, fathers have recently gone from two to five paid paternity leave days.

This table shows that it was only early career researchers who took up maternal and parental leave: assistant professors and postdocs. The fact that men took up more leave than women may be due to the fact that there are more men than women in the department.

b) How is the frequency of days for other types of leaves due to family care distributed between genders in the STEM department?

These data are non-existent.

2.3.2 IMR

a) How is the frequency of days for maternity/paternity/parental leave distributed between genders in SSH department?

2013		
*Maternity leave - N days (mean)**	Male	Female
Assistant professors		116
Assistants / "Lecturer"		119
Postdoc		112
PhD student		117
*Parental leave - N days***		
Full professors		
Associate professors		
Assistant professors		
Postdoc		

* Calculated fulltime leave, despite part time contracts

** The data received is not convertible to days

This table shows only women of the IMR who took up leave.

b) How is the frequency of days for other types of leaves due to family care distributed between genders in SSH department?

These data are non-existent.

3   STATISTICAL GERNDER EQUALITY INDICATORS

Gender-sensitive indicators are useful tools for measuring different matrices of implementing gender equality principles in scientific research organisations. On the basis of analysed statistics presented in the previous section, in this part of the report key indicators of gender (in)equality shall be highlighted and their relevance assessed for exploring the similarities/differences in (dis)advantages in women's scientific careers in the STEM/SSH departments. We provide a list of indicators from each section (working condition; gender equality in career development; and family/work balance) and explain what position/process/change pertaining to women/men in scientific careers they measure.

List of identified gender inequality indicators per section:

Working condition

- Ratio women versus men in the different ranks. We found an askew gender composition of the workforce with characteristics of the leaky pipeline; in STEM more than in SSH. This is field specific (in mathematics more than in astronomy, for instance).

Gender equality in career development

- Ratio ongoing men/women in a certain position vs. number of newly entering. We see in the SSH for instance that at the PhD level a balance emerged after more women than men were hired in proportion to numbers of ongoing men/women PhD candidates. In STEM, the ratio ongoing men/women in PhD position – number of newly entering PhDs remained askew, so no balance can/could be reached.
- Male Management: the ones in power positions with decision making authority are mostly men, in both STEM and SSH departments.
- Percentage of women versus men positioned in the highest versus lowest salary scales. We noted a difference in how men and women were awarded in the levels from assistant to full professors.

Family/work balance

- Ratio number of women vs. men taking maternity/parental leave. Especially in SSH, where only women and no men took maternity/parental leave in 2013. In IMAPP a different picture exists: men also took parental leave. Parental/maternity leave was mostly taken by assistant professors.

4   REPORT ON QUALTATIVE DATA

The analysis below is based on the interviews with current postdocs and assistant professors. These results are partly taken from deliverable 6.2 on the Leaky Pipeline and deliverable 4.2.2 on Work-Life Balance, and partly based on new analyses. Due to privacy reasons and the issue of anonymity, we cannot go into much detail concerning certain people/groups.

4.1 Individual trajectory

In this section we discuss the trajectory of the postdocs and assistant professors, whether they were smooth or interrupted, and how the interviewees gained access to the IMR or IMAPP. We first discuss the analysis per institute, and then take the postdocs and assistant professors together to draw conclusions on their trajectories.

4.1.1 IMR

The trajectories of the IMR postdocs are characterized by being on projects through grants – either personal or from a professor, short term contracts, grant writing, networking (with either other academics or with practice) and juggling with work-life balance.

Two women had started their careers outside of academia. Whereas the career of the first was characterised by applying to existing projects and several contract extensions due to private reasons, the career of the second woman was characterised by writing and being granted her own research, international mobility and an illness. The man went straight from his master's degree in the Netherlands into an academic career. After having done his PhD, he was informally recruited for a postdoc at the IMR. After his contract ended he got another temporary contract, with a small contractual interruption in between. One of the women postdocs came into the IMR through applying for an existing postdoc, already knowing the related researchers. The other woman postdoc entered the institute through a grant, being hosted by one of the IMR professors.

From the trajectories we characterize the IMR assistant professors as for the large part 'flowing' academics, as they went into their current positions relatively smoothly. Two assistant professors had started their career outside academia. The trajectories of the IMR assistant professors are characterised by relatively swiftly sliding into their current position. Most either came from abroad (N = 3) or had experience abroad. Two women and one man got the position immediately after their PhD, or even when they had yet not finished their PhD project. Others had done a postdoc or small research projects in between before they arrived at the IMR, but never more than one postdoc. Doing a postdoc and going abroad thus were not strict requirements at the IMR to become assistant professor.

Except for two foreign men, all IMR assistant professors had gotten into the institute and their position as assistant professor via their network. Whether via former colleagues, or directly via one of the sub-department chairs, these interviewees had the advantage of access to the institute via contacts.

One man said to not have taken the job at IMR if it had not been a tenure track with the prospect of a permanent contract. Another man had been disappointed after starting working at the IMR: other than promised beforehand, there was little money for conference visits, for experiments, and he got more teaching hours in the first year than he expected.

4.1.2. IMAPP

The trajectories of most of the IMAPP postdocs are characterized by mobility, and as for the IMR postdocs, by short term contracts, grant writing, networking, and juggling with family-work balance.

From the interviews with the IMAPP postdocs it becomes clear that doing (multiple) postdocs is seen as very much part of a 'regular' route for academics in STEM. This is illustrated by one woman indicating her current postdoc position as "according to schedule". All assistant professors interviewed of IMAPP had done a minimum of one postdoc as well.

Five of six postdocs in the IMAPP sample were foreign and three of them started their academic careers outside of the Netherlands. All IMAPP postdocs had started working in academia directly after their studies. Three of the postdocs (two women and a men) came to the IMAPP after having won a (Dutch) grant. The others were appointed on projects.

Two women came to IMAPP for reasons related to their home situation. One made an open application as she already knew people in the IMAPP. Another had come to the Netherlands after periods of unemployment and unfulfilling research appointments.

Based on ambitions, self-confidence displayed and previous trajectory, we identify three postdocs as flowing. They had been able so far to gain grants and do research they had wanted, felt for the large part optimistic about their prospects, and wanted to pursue an academic career. We identify the other three IMAPP postdocs as doubting, either because there was no real ambition to build an academic career or because they had met with and also perceived obstacles in their academic careers.

The trajectories of the IMAPP assistant professors are characterized by more time between PhD and the assistant professor position than in the IMR. The three interviewees had all done at least one postdoc, and they had all gone abroad to do so. They did not get their job in the IMAPP directly via their network but through applying for positions.

The assistant professors applied for and received different grants. One of the men said he had always been working on different projects, often "Bread and Butter" projects as he called them, i.e. smaller grants.

One man just received a positive evaluation in his tenure-track, however he had to fulfil one additional criterion. This shows how demands on early career scholars are increasing over time. Though they encountered some obstacles, these assistant professors are still 'flowing' as they are either tenured or they have a good chance to become so in the near future.

4.1.3. Comparative conclusion: postdocs and assistant professors

Within the IMR, two postdocs had been sponsored by senior academics to come to the IMR and do research there. One had also been stimulated and encouraged by former supervisors to enter and stay in academia. Within the IMAPP, postdocs were quite aware of the relevance of networking and people were strategic in building networks to help their career. What also seemed important there were reference letters when applying for jobs, as these were mentioned by several IMAPP postdocs in contrast to postdocs from the IMR. One woman professor was mentioned by multiple interviewees as being supportive towards their access to the institute and getting chances within the faculty.

From the trajectories as presented by the assistant professors, it seems that networks and being sponsored was more important for the IMR assistant professors to gain their current positions than for the three from the IMAPP. Within the IMR, interviewees had not done extensive job search: often they transitioned quite smoothly and it was usually through a network that they heard of positions and came in contact with the institute. Almost all IMR interviewees had come into their current position through network connections, whereas in IMAPP two of the three interviewees had gotten access to the institute through applying for a job and grant. It seems that the latter were judged more on their previous accomplishments, which they had built for a big part in between their PhD and current position as postdocs and lecturers, whereas the IMR interviewees overall had had less in-between experience and hence had built less accomplishments to be judged on. This is possibly also one of the reasons why the IMAPP interviewees were talking more concretely of going to associate professor level and getting tenure than the IMR interviewees, who were less far in their careers.

4.2 Organizational culture and everyday working life

In this section we discuss how the current postdocs and assistant professors perceived the organizational culture of the two institutes. What role did personal relations play, were professional self-fulfilment and career development hindered or supported, and how did they experience the internal organizational hierarchy?

4.2.1. IMR

From the interviews we learn that the organizational culture of the IMR is characterized by collegiality, openness, and helpfulness, individuality and individual responsibility to get help or support.

From the interviews we got the picture that the IMR early career scholars perceived most pressure as coming from the bigger academic system. If one wants to succeed in science, one will need to publish many and preferably high-end articles. A new publication system was introduced at the time of the interviews in the IMR, which some interviewees still needed to grasp fully.

A few interviewees indicated that they felt the culture at the IMR was individualistic. This space provided room for the interviewees to arrange their own working week and planning. Others did experience isolation. One of the (woman) postdocs talked of

researchers being a "small island". New employees needed to figure things out by themselves, which cost time and energy.

Interpersonal relations seemed mostly formed around teaching duties, not research – even though the faculty was trying to build more of a research community. Relations were also built though formal meetings, which were mostly section meetings, and were often focused on education, and less on research and the sharing of knowledge. Especially postdocs did not seem to see the use of these meetings.

Most of the interviewees indicated to work, besides standard office hours, at irregular hours at home, in the evenings or weekends. Moreover, especially the assistant professors put emphasis on their teaching tasks; the actual ratio education – research was different than the formal 60-40. This was especially so when they first started, as they needed to learn the ropes and their way through the faculty. Research fell behind because of this teaching time pressure. One assistant professor (woman) who had issues with her teaching load said, "You don't want to nag too much. You're in a temporary contract after all." This shows the politics and pressure put on early academics, which they need to adhere to as they are in a precarious position. Some were able to build in teaching and research blocks throughout the year, which gave them space to do research and write research grant proposals.

Achievements and birthdays were celebrated, though this differed per section. One section had arranged monetary support through small grants for conducting field work. Interviewees of that section were very positive about this development, which helped them to gather data and build networks.

Professional self-fulfilment and career development were mostly seen as an individual matter. Though the university offered courses and support, few interviewees seemed to actually actively make use of them. Something taking up much time and hindering, mentioned by several interviewees, was the procedure to gain the necessary education qualifications needed to get promoted or tenure.

The postdocs and assistant professors did not speak explicitly about how the internal organizational hierarchy hindered or supported them. Indirectly hierarchy did matter. Their access to the institute had often gone through professors in the institute, their evaluations were done by senior colleagues and supervisors, and the arrangements of educational tasks and potential promotions were decided upon by seniors. Some had experienced isolation (partly) due to the absence of their direct supervisor.

4.2.2. IMAPP

From the interviews we learn that the organizational culture of the IMAPP is characterized by openness and a flat organizational structure. Informal relationships existed between students, early career researchers, and senior staff. In some groups daily lunch was taken between students and professors and all ranks in between. Successes were sometimes celebrated. A summer barbecue was held yearly on the roof of the office building.

In the IMAPP, like in the IMR, postdocs and assistant professors mostly saw their career development as an individual accomplishment, though supported by senior staff. They

did not participate much in university courses, but said to go to colleagues and senior staff to ask for advice in case they needed such. More than in the IMR, social relations were based on research, which makes sense as IMAPP has more of a research history and more postdocs employed. Research is more embedded in the culture of the institute.

Postdocs, especially the ones on personal grants or fellowships, had the freedom to do their own research. Freedom came along with the acquisition of personal grants. On the one hand, the relative freedom in the institute enabled researchers to plan their own working week. One the other hand, the pressure of criteria to be accomplished pushed people to work more hours than formally indicated:

"There certainly is something wrong with the pressure people put on themselves. And a sort of unspoken "you have to work hard". Nobody looks weird at you when you say all you did was work. Then it's like: Everybody does that *"...everybody has the feeling that this is the only way to survive."* (IMAPP, man)

Here we see the picture of a culture that stimulates people to work very hard but that also individualizes this hard work: "pressure people put on themselves". The implicit ("unspoken") norm of hard work and the fact that working many hours was taken for granted, according to this interviewee, indicate the normalized way of doing. As many saw their academic career as part of a 'hobby', this was legitimized. You do not only have to work hard, you also want to because you like doing science so much.

Internal hierarchy was mostly implicitly discussed by interviewees. As for the IMR, hierarchy was important as their access to the institute had often gone through staff/professors in the institute, their evaluations were done by senior colleagues and supervisors, and the arrangements of educational tasks and potential promotions were decided upon by seniors.

4.2.3. Additional remarks

What is remarkable is that some postdocs mentioned not to want to invest too much in their present institute as they would leave after a while, but focus on their own publications and grants. This is directly impacted by the academic norm of mobility and short term contracts. The other side of that coin is that several postdocs mentioned feeling isolated. Possibly, the lack of experience with postdocs within IMR limited the available (formal or informal) supporting infrastructure for postdocs. This could make postdocs in the IMR even more responsible for their own well-being than within IMAPP, where postdocs are well embedded in academic careers and benefit from a social and supportive infrastructure.

Additionally, the fact that many colleagues did not live in Nijmegen influenced the work environment: it was mentioned by interviewees from both IMAPP and IMR that it was sometimes quiet at the offices. This means that part – perhaps even a large part - of the work people do was not visible for colleagues.

4.3 Well-being and work-life balance

This section revolves around how the current postdocs and assistant professors dealt with their work-life balance: what university arrangements did they use, and how did their family and organizational micro-politics impact their balance? We start with a general discussion, to build an overarching picture of the WLB at the university, and then go into the specific institutes.

4.3.1. General

From the interviews the general sense appeared that combining children or a social life and an academic career provides challenges and is difficult (most interviewees) if not impossible (a few interviewees). Interviewees said that their job is about how they perform, their output, not how they get there. They perceive no direct control from supervisors, bosses or colleagues over their working hours. In that sense most interviewees stated they perceived to have freedom and autonomy in how, when and where to do their job.

People with children did perceive and build in more restrictions on working outside of 'standard' working hours than interviewees without a family. One IMAPP interviewee (f), for instance, used her flexibility and part-time work to work around her husband's non-academic long job hours. An IMR interviewee (m) put it in the following way:

> "I think [early career researchers in this field] have a hard choice to make. If they want to have a position in academia, if they want to stay, they will risk that their private life is ruined." (IMR, man)

From the interviews it appeared that people had little knowledge of the facilities for work-life support available at the university, nor did they use them much. Mostly, work/life was organized individually, without the university involved, but with the partner and, if available, other non-work related people. Three things were mentioned by interviewees by which the university helped or could potentially help: 1) flexible working culture; 2) child care nurseries; 3) parental leave.

Regarding the first, it was mentioned by several interviewees who were parents that the flexibility provided by the academic culture helped to make work/life arrangements. Being able to arrange their own working hours, they could schedule when to work from home and provide care to their children and when to go to university. Informal care giving for parents or others were not mentioned by any of the interviewees, except by one interviewee who worried about this for the future.

Second, several parents mentioned child care nursery as a potential supporting facility. Child care was for the large part arranged by the parents themselves: agreements with the partner regarding working days and times, a 4+4 arrangement (both partners work 4 days and stay at home one day), babysitters, grandparents (mostly grandmothers), day care nursery at the place of residence. Several parent-interviewees preferred a day care at the place of residence over a day care at the university (in the case that they did not live in Nijmegen), so as not to have to take the children all the way to Nijmegen.

The third facility mentioned was parental leave. There were a few interviewees (m) who made use of it; one of the parents did not. Paternity leave is set at five days by law in the

Netherlands, which was seen by several interviewees as very few. One IMAPP interviewee (m) believed it was harder for men than for women to get parental leave approved. Multiple women interviewees mentioned being compensated by money or time for research regarding maternity leave as an important issue, for instance for grant proposal evaluations.

In addition to these three facilities, several foreign scholars mentioned how they had no or hardly a support system in the Netherlands as they had no family or friends nearby, so they were dependent on their partner and the arrangements they made with each other.

4.3.2. IMR

Concerning private life, all three IMR *postdocs* had a partner. One woman and man also had children. Both women worked part-time at the moment of the interview. The man was planning to take up parental leave for his child, and felt that it was common for men to do so within the institute.

Most assistant professors had a non-academic partner or were single. One woman had a partner who also worked in science. The woman spoke for some length about the two body problem, the difficulties of finding a job at the same institute. One of the men stated about combining a partner with a career in science:

> *"you have to accept that if you want a job, you cannot live together with your partner".*
> *(IMR, assistant professor, man)*

The man points to a common practice among the assistant professors, which was juggling between work and private life. One woman had a partner who did not have much flexibility in his job, as he had to be present in his office unlike her. She would work part-time when they would get children. The other three IMR assistant professors all had children. The two men with children had a partner working part-time - "how very cliché", one of them noted. The majority lived outside of Nijmegen, and thus had to travel, and worked one or two days at home, whenever possible. One of the assistant professors mentioned how research evaluations are not adapted for women with new-borns. Except parental leave, no real issues with this were mentioned by or about men.

4.3.3. IMAPP

All women interviewees in IMAPP had a partner, of which some were academic and others non-academic. Most of them lived with their partner. One of these women had children with her partner. Two men in the sample were single. One woman with children spoke of academic research as "something that we do with passion" which requires making sacrifices, but preferably not concerning her family. She saw parenting and an academic career as "both fulltime jobs in fact".

Several women mentioned the 'two body problem' (i.e. dual career issue) in relation to private life and academia. The first had an (academic) partner in another country. She distinguished between two types of academics: the ones who choose for a fixed location and compromise their research, or the ones doing the research they want and compromising family and private life. She considered herself as belonging to the latter

group and noted how having a family would complicate her life as an academic and with her partner. Another woman, also with an academic partner, said:

"it can be a serious drawback for starting a family. But I love my work and he also loves his work. So there are some kind of compromises. It is not a pleasant thing". (IMAPP, postdoc, woman)

In the sample of postdocs we see various responses ranging from talking about a chance to do research but being not really ambitious to talking about making personal sacrifices for their passion for science. These sacrifices go from health (multiple illnesses reported) to relationships, to building a family. We noted especially in the IMAPP that flexibility was key in the group of postdocs. Flexibility in terms of moving abroad, but also in terms of combining a career with other responsibilities. The majority of postdocs had a partner, and different arrangements were made regarding living together or apart and moving abroad together (or not). The two body problem with regard to academic partners was mentioned by several women postdocs from the IMAPP. Postdocs were seen as part of the standard route of an academic career. (This was not the case within IMR, where postdocs were going directly to an assistant professorship after the PhD was not seen as uncommon.)

Two of the IMAPP assistant professors had multiple children and were married; one was single. One of them said about work-life balance at the moment:

"on the one hand it's easy in academia to have a child, I think, because a lot is flexible. On the other hand it's not easy at all, because you are expected to make long hours, long weeks". (IMAPP, assistant professor, woman)

Freedom in academia seems paradoxical: academia provides space to arrange one's own career in combination with private life, whereas at the same time to succeed in academia it is needed ("expected") that academics work very hard and many hours. Work-life balance arrangements impact one's future chances. For instance, a man with children said not to take his parental leave because of his tenure track position:

"I have one of those tenure track contracts, so you think: okay, first I'll try to comply with all demands, before you start talking about parental leave. So I haven't looked into that". (IMAPP, man)

His quote implies women getting children while in tenure track will encounter difficulties to try and meet all demands for tenure positions. As a man, he has the choice to leave work for a while after the birth of his child, or not; a women expecting a baby cannot. This quote also points to how early career scholars are more focused on the short than the long term: the pressure of things needing to be arranged now or in the near future require a shorter term vision on their career. He also noted how getting permission for parental leave would be harder for men than for women:

"[as a man] you always need more reason [to take parental leave] – as a woman you have the reason that everybody's seen it, you are getting a baby. As man it's just, you just go back to work and then you have a baby and you give treats to everyone and we continue." (IMAPP, assistant professor, man)

Within the IMAPP and STEM in general, going abroad was perceived as an important criterion for an academic career. An IMAPP interviewee (f) stated that going abroad would be harder if she had children:

"If I had a family this could have been problematic. But as long as I don't have children, I just enjoy to go to conferences, to meet new people. To hear new ideas and discover new places and new cultures. And so, I think, I feel privileged from this point of view." (IMAPP, postdoc, woman)

Indeed, having children affected the trips abroad. Another interviewee from IMAPP said:

"Now I travel terribly little of course. During my postdoc projects I went away for a week every month, but now…that doesn't work anymore. So if there is something stopping me from travelling, it's my family and nothing inside [the institute]." (IMAPP, assistant professor, woman)

This quote illustrates the individual approach of interviewees regarding their arrangement of work and private life. Work-life balance was presented by interviewees as something personal and individual, mostly provided room by the academic system of independence and autonomy and less by micro-politics of the institutes themselves. Wider norms for academic careers were guiding in how men and women looked at their work-life balance. For women, having children affected their working times and arrangements more than for men (all women with children worked part-time).

4.4 Career development

In this section we discuss how the institutes impact the career development of the postdocs and assistant professors through the division of tasks, internal relationships, and promotion criteria.

4.4.1. IMR

Education was a central element in the career development of the assistant professors within IMR. Not only lecturing but also setting up and coordinating courses was part of their education load. Getting their University Teaching Qualification was an aim of several, with the goal to get tenure or promotion. This procedure took up relatively much time, to the frustration of several interviewees. Except one, nobody got compensation for the time spent on this procedure. Social relations were built around education mostly, e.g. through meetings that more often than not centred around educational affairs. For the few postdocs present in the IMR that we spoke to, this led to relative isolation.

For the postdocs, little support came from the institute, except for their direct supervisors. Their goals were to conduct research, publish articles and acquire grants. One of them mentioned that as she had no valuable networks to draw from, she would have to become successful in her academic career through the winning of (prestigious) grants. They acknowledged the importance of teaching experience for a further academic career, but one was not interested in teaching or an academic career per se, and the other had a 100% research task and was still recovering from a disease at the time of the interview.

For the assistant professors, criteria to get tenure were "ambiguous" and "vague". Publications, good teaching evaluations, University Teaching Qualifications, and gaining funding were criteria recurrently mentioned by interviewees as most important criteria. Teaching evaluations were criticized by multiple interviewees: they argued how these evaluations do not revolve around the quality of teaching but around student perceptions of teachers; these evaluations are too much emphasized. Additionally, management or administrative tasks are mostly seen as needed to get ahead towards either tenure or an associate professor position. Finally, grant proposal writing was an important theme concerning future plans, as the interviewees knew that in order to be able to do research besides their teaching tasks they would have to bring in their own research money. The start of their career was seen as an important phase that would influence their chances for the rest of their career:

> *"especially in the beginning of your career it's important that you can propel yourself forward [knallen], can show who you are...And when you then have a nice publication, you go and build from that so to say, because based on that you can work together with people who suddenly find you interesting for what you have accomplished" (IMR, assistant professor, man)*

Several interviewees indicated that they would have liked to see more sharing of knowledge and progress regarding research within the faculty through meetings or seminars. A few suggested a mentoring program or structural coaching. Others mentioned more (small) budgets for early career scholars in the IMR to travel abroad for short periods, such as conferences of collecting data in fieldwork. One interviewee wanted a longer paternal leave for men around the birth of their children.

4.4.2. IMAPP

Within IMAPP there seemed to be a clear agreement that academic careers cannot be built within one institution, or even one country. Going abroad was an almost taken-for-granted aspect of a successful career in STEM sciences. Some interviewees came from abroad, whereas several Dutch interviewees had experience abroad. Diversity of employers and countries for the sake of building networks and of gaining new perspectives and learning of other ways of doing were important elements here.

Other criteria often mentioned were publications (though more emphasized by the postdocs than the more senior assistant professors) and acquiring research money through grants. The postdocs were mostly focused on doing the research they wanted to get ahead, knowing that publications are key to being accepted for tenure-track jobs. The assistant professors were more focused on acquiring grants to further develop their research lines and research groups.

Education was approached by most postdocs in the interviews as something 'on the side'. More than most postdocs, the assistant professors saw education as much more important for their advancement. One of the assistant professors met all criteria to become associate professor, yet the only thing standing between this interviewee and promotion was getting a Advanced University Teaching Qualification, required for an associate professorship.

Committee work was also more important for assistant professors than for postdocs. Some postdocs saw 'organizational citizenship' simply as sometimes attending faculty meetings, a few had a history of active participation in committees.

Another aspect important for career development regularly mentioned had to do with personal relationships and networking. Most interviewees were aware of the importance of visibility and knowing people in their field for their potential advancement in science:

"being very good in your field does not guarantee that you're gonna get a permanent position at the end...you just have to be exactly the right person at the right time in the right place...". (IMAPP, postdoc, woman)

One woman stated how image and publications were the two important aspects of acquiring grants and building an academic career:

"no one really um records like what, since I don't have fixed some kind of obligations, no one really records what I'm doing in any time. The only thing that matters is how much l publish and how much of image I'm creating" (IMAPP, postdoc, woman)

This quote shows how postdocs have the space and freedom to do either their own or a project's research, while this at the same time lacks social support or control – the annual evaluation of publications aside. From the large part of the IMAPP interviews, the image arises of postdocs as academic entrepreneurs, who need an institute to be appointed to and a network to draw resources and positions from. Several postdocs mentioned one particular woman professor who sponsored them to gain access to the institute.

4.5 Perspectives on the future

This section discusses the interviewees' perspectives on their future, and looks at how organizational and national measures impact their professional and private life. It turned out that academic culture and structure also played a role in their future plans. Working on grant writing, education certificates, gaining tenure, publishing more articles, and so on were all informed not only by institutional demands but also (or perhaps even for the largest part) by the wider academic norms for building an academic career. Austerity measures and the growing emphasis on the value of science for society were national developments discussed by current postdocs and assistant professors as impacting their own careers, but mostly indirectly, e.g. when they mentioned the growing competition for grants and the growing body of PhDs in relation to the stable or even decreasing number of tenure positions.

4.5.1 IMR

The three interviewed postdocs at IMR had three different career strategies. One interviewee considered to leave academia, the second wanted to stay in and the third was keeping all options open. At the time of the interview the first woman was considering to leave academia, partly because of her interest in practical value, but also because she missed the 'human' side of work, i.e. more constructive interactions and shorter term thinking. She was thinking about working in a research institute where she should would feel more at ease, not a 'tough commercial' company, but a "small club

with attention for each other". She stated about science: "it's after all a certain culture, that fits some and not others". She saw herself as one of the latter category.

The second woman was applying for grants. She wanted to stay in academia. She said she did not have the academic network to get a position, so she would have to take the route of acquiring grants and as such increase her chances for being promoted to an assistant professorship.

For the man, though his aim was to stay in science, he also kept "his options open" for a career outside academia. The insecurity of science was not something that bothered him, as his partner had a permanent contract. Going out of academia was also not motivated by the relatively low salary, as he felt the freedom provided by academia compensates for that. He said not to be "so super-ambitious" that he would work nights and weekends.

All IMR assistant professors wanted to stay in academia and several wanted to stay and grow within the IMR. For most of them this intention was implicit, as they had as future goals becoming associate professor, getting tenure or getting on a higher salary scale. Only one man said to keep the option open to change his career to outside academia.

Interviewees were ambitious because they wanted to be "marketable" (man) and to have a good CV for future possibilities and positions. They looked beyond the institute when it comes to plans for publishing, because a few interviewees saw the institute as not being very ambitious. IMR was not seen by some as a particularly demanding institute, but interviewees put pressure on themselves to be able to succeed outside the IMR. They needed publications to be able to either get promotion or a better position in a different institute. One woman was explicit in wanting to become associate professor.

One woman said she was "continually looking forward" with respect to her career. For instance, she planned to finish writing a book, although in the IMR this is not greatly rewarded with points. It would be important should she want to continue her career in for instance the US. Here institutional arrangements were thus ignored for the sake of her own future. Another woman said that staying in academia would mean she would have to "juggle a lot of things at the same time" and that this is a hard thing to do.

Interestingly, one man said not to go and work fewer hours being a father, because teaching would not decrease but as a consequence time for research would. This shows how people with children could be disadvantaged as their research time is diminished when having children. Here an institutional measure thus put pressure on choices made by early career academics. One woman said she and her partner would not buy a house or get children, as that would mean they would have to start living together and that would prove difficult due to the two body problem.

Only one IMR man expressed doubts about working in academia. He had experienced multiple episodes of near burnout and was critical of the high work pressure in relation to the relatively low salary.

One IMR assistant professor (f) was happy that her husband had a permanent contract, as they had a mortgage on their house. She stated that mortgages are still geared towards having a permanent position, and it is difficult to get one having fixed term

contracts like in academia. Here a national measure (or rather: banking measure) clearly impacts the chances for academics in building a private life.

4.5.2 IMAPP

Within the IMAPP, applying for grants was one of the most relevant future activities, seen by the postdocs and assistant professors as central to their careers. Moreover, the postdocs' plans were to apply for (tenure track or junior faculty) positions. One postdoc had concrete plans to go abroad to a foreign institute. Another postdoc was considering applying for permanent positions in the same country as where her partner was living or for more grants. To do so, she was now working on making the best of her current grant and appointment. A man postdoc talked about academic careers being increasingly influenced by politics and nepotism. Much depends on one's research topic and how it aligns with people or groups hiring new staff. Here we see that informal institutional processes can impact the working experience of early career academics.

Besides these ambitious plans, some showed doubts about pursuing an academic career. One man did not want an academic career as the required mobility put him off, as well as the stress throughout his PhD and the pressure he felt within the academic system. One of the flowing woman postdocs said she would try to be successful in academia, but if she failed there would be enough other options. Another woman was quite pessimistic about getting a next job. Yet another woman was going to try to stay in academia for the next years by applying for grants. Interestingly, she noted how the intersection of two of her identities gave her an extra disadvantage in academia:

> "I have a double handicap. I mean, I'm a woman and I'm also foreigner. So you know, I'm a minority and then another minority" (IMAPP, postdoc, woman)

Though she said in IMAPP not to feel disrespected for being a woman, she had experienced and heard of others' experiences of difficulties in academia due to being a woman and/or foreigner. She had herself experienced moments of exclusion earlier in her career and talked of the competitive world and politics in academia.

All IMAPP assistant professors wanted to stay in academia. One man was considering becoming a full professor in the future, though in his eyes this would not be possible if he stayed at IMAPP, as internal candidates would not be promoted to full professor positions, he claimed. So here, institutional arrangements impacted the course of his career. Moreover, being a professor was not something he aspired right now, as he noted that they have little time for research and have to engage in many managerial tasks. He did not know if he was going to stay in Nijmegen or even the Netherlands.

Two of the assistant professors mentioned the ambition to further climb the academic steps. One man said if he would not, or if he was not given promotion, he would leave and go to another institute, perhaps even abroad. He did not see himself in higher management, but possibly as full professor. Interestingly, although the woman was one of the most 'promising' interviewees, she described herself as being not so ambitious, and being lucky. This runs counter to her accomplishments so far and to her ambitions. She displayed the implicit norm that one can only grow to top positions when working more than full-time, the heroic picture of the academic. She kept applying for grants to be able to further build a research line and group.

Multiple interviewees were in doubt about whether to start a family and when, where to live with their partner (and family), or whether to buy a house.

"I am happy to delay my starting of a family until I have more security." (IMAPP, postdoc, woman)

The insecure character of academic careers influenced the future plans of interviewees. Institutes are not able to give many candidates a permanent contract and hence security, which impacts the early career researchers in their choices for their career and private life.

4.5.3 Concluding remark

We noticed how early career researchers are affected by pressures on different levels: institutional demands (number of required publications, getting an education certificate, working on their societal value), national measures (mostly indirectly through austerity measures and increasing insecurity, leading to higher competition in grants, more difficulties in getting a permanent job), and most of all, the demands of the academic system to be successful. The academic culture is guiding in that it shapes (and is shaped by) national measures, the dynamics of which impact institutional measures. Within this arena of multiple demands, early career researchers manoeuvre to be able to stay in academia and some decide to leave.

ICELAND

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1. INTRODUCTION

1.1. The University of Iceland

The University of Iceland is a public research university situated in Reykjavik. The university is the oldest and by far the largest institution of higher education. During the first year of practice of the University of Iceland, 45 students were registered, thereof 1 woman. In 2013 the student body was approximately 14.000 with 34% men and 66% women. In 1926 the first woman defended her doctoral thesis. In 2013 52 students graduated with a PhD, thereof 25 women.

In the 1990s a structural change took place reflecting the political emphasis of the era. Decentralization was increased and new procedures implemented in order to increase the institutions responsibility for their own affairs. In 2005 the first woman was elected rector of the University of Iceland, Dr. Kristín Ingólfsdóttir. She is the first and only woman to serve as rector at the university.

The University is divided into five schools: School of Education, School of Humanities, School of Engineering and Natural Sciences, School of Social Sciences and School of Health Sciences. For our specific purposes we rely on data collected from the School of Engineering and Natural Sciences (STEM) and the School of Social Sciences (SSH).

The School of Engineering and Natural Sciences is made up of six different faculties, namely the faculties of civil engineering, earth sciences, electrical and computer engineering, industrial eng., mechanical eng. and computer science, life & environmental sciences and the physical sciences. In February 2015, 2.632 students were registered at the school, hereof 56% men and 44% women spread across the different departments. The School of Social Sciences is also made up of 6 faculties: Business Administration, Economics, Law, Political Science, Social & Human Sciences and Social Work. In February 2015, 4.307 students were registered at the school, hereof 34% men and 66% women.

1.2. Specificities of obtaining quantitative data

Organizational data was obtained through the University of Iceland website as well as through individuals and departments at the university with more privileged access to data. These were the Division of Human Resources, Division of Science and Innovation, and the Student Registration Office. Significant amounts of quantitative data were unavailable. Data on the number of exists from the University do not exist and the number of promotions is so small that it does not yield any statistical significance whatsoever. The same can be said for the numbers on postdoc positions, which is a very

new phenomenon at UI. No data exists on the parental/maternity/paternity leave of employees. Moreover, a change in the recruitment system in 2010 meant that assistant professor became what we define as a non-permanent position. In effect, assistant professors hired before this time might be in a permanent position today. This means that we cannot distinguish between staff with a permanent and a non-permanent position. Regardless of whether a person obtains an assistant, associate or full professor position, one only becomes a permanent employee after 5 years in employment and only if one has worked up the necessary amount of points during this time frame.

1.3. Specificities of obtaining qualitative data

Participants were all academics at the early stages of their career. These participants were found via a search on the University of Iceland website, using search terms pertaining to their career stage (postdoc and assistant professor) and school (School of Social Sciences or School of Engineering and Natural Sciences).

Email invitations were sent to potential participants and interviews were conducted with those who agreed to participate. Since the University of Iceland does not keep records of employee exits, former academic employees were found via word of mouth. They received the same email as the first group of participants. Semi-structured interviews based on a structured interview guide were carried out with all participants.

Of the **20** current academic employees, **11** were from the School of Social Sciences (**8** women, **3** men) and **9** were from the School of Engineering and Natural Sciences (**5** women, **4** men). Of these, **4** were post-docs, **15** were assistant professors and **1**, who was mistakenly listed as assistant professor on the UI website, had recently turned associate professor. However, since this did not become evident until the day of the interview and since we thought that this might provide us with valuable insight into a participant's first experience with academic promotion, we decided to still include it in our data set.

2. REPORT ON QUANTITATIVE DATA

In this section the quantitative data is organized into two thematic fields (seen as no quantitative data exists to describe family/work balance), each presenting the available statistics from STEM and SSH respectively, ending each section with a comparative conclusion.

2.1. Gender Equality in Working Condition

2.1.1. STEM

As becomes evident when examining the sex composition of our STEM department (Table 1), there are two main variations in the presence and ranking of academic staff in the years 2010-2013. Whereas the gender (im)balance among assistant professors seems to be operating steadily around the 60/40 mark across the time span, 2012 stands out as a year with uncommonly few women in STEM assistant professor positions. The opposite might be said for the associate professor position, which undergoes a significant change towards more gender balance over the time period.

However, the more significant statistic is that of the professor level. At any one time, the full professor title makes up the majority of positions in STEM. Moreover, and more importantly, men consistently dominate the full professor position throughout the time period. There are hardly any adjunct positions filled in the STEM department.

Men are also in the majority in STEM PhD programmes. Consider the following figure:

Table 1 Sex composition in STEM department

	2010		2011		2012		2013	
	Men	Women	Men	Women	Men	Women	Men	Women
N.								
Professors	66	8	63	8	61	10	61	10
Associate professors	23	9	18	8	17	11	15	11
Assistant professors	7	5	8	5	6	2	5	5
Adjuncts	0	0	0	0	2	0	1	0
Total	*96*	*22*	*89*	*21*	*86*	*23*	*82*	*26*
%								
Professors	89%	11%	89%	11%	86%	14%	86%	14%
Associate professors	72%	28%	69%	31%	61%	39%	58%	42%
Assistant professors	58%	42%	62%	38%	75%	25%	50%	50%
Adjuncts	/	/	/	/	100%	0%	100%	0%
Total	*81%*	*19%*	*81%*	*19%*	*79%*	*21%*	*76%*	*24%*

Figure 1. Number of PhD candidates (newly entered, ongoing and obtained PhD) by Sex, Organizational Level (STEM).
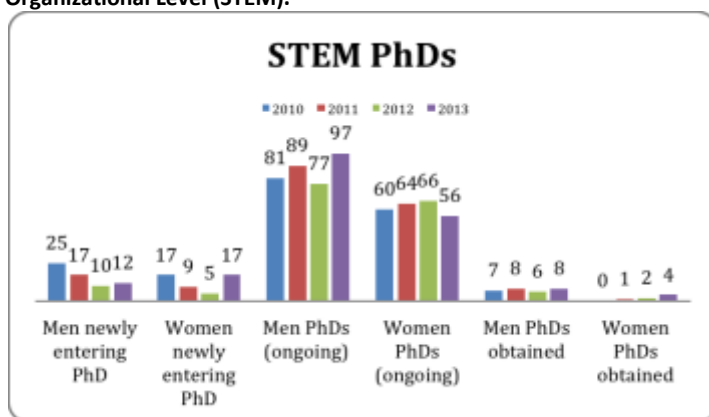
In STEM (figure 1), more men are currently working on their PhDs while the number of women PhD candidates remains low in comparison. It is positive to observe, however, that women make up **59%** of newly entering PhDs in 2013. This, however, does not necessarily signal a future change in gender distribution in STEM, as women tend to

disappear from STEM the closer academics get to the top of the career ladder (see D6.1 and D6.2).

Table 2. Sex composition of PhDs in STEM department

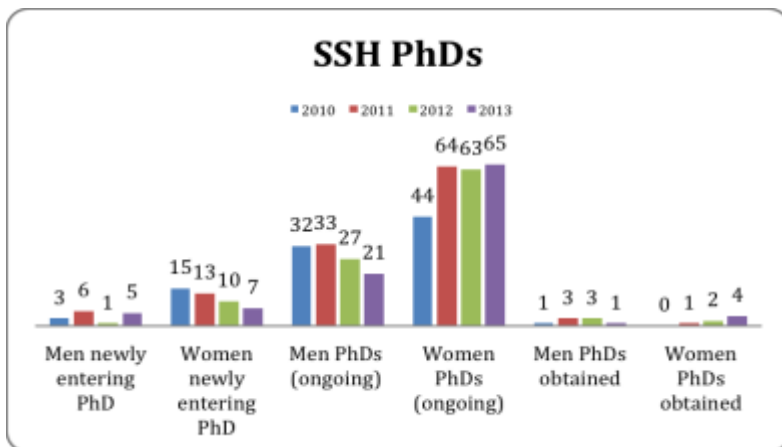|	2010		2011		2012		2013	
	Men	Women	Men	Women	Men	Women	Men	Women
N of newly entering Phds	25	17	17	9	10	5	12	17
N of PhDs, ongoing	81	60	89	64	77	66	97	56
N of PhDs obtained	14	7	15	8	8	6	11	8

2.1.2. SSH

Statistics from SSH differs from that of STEM at different levels. Consider firstly the sex composition in SSH departments:

Table 3. Sex composition in SSH department

	2010		2011		2012		2013	
	Men	Women	Men	Women	Men	Women	Men	Women
N.								
Professors	25	15	24	16	25	17	26	18
Associate prof.	14	9	17	9	16	11	17	11
Assistant prof.	19	12	17	13	18	13	18	16
Adjuncts	6	9	9	10	7	9	9	11
Total	*64*	*45*	*67*	*48*	*66*	*50*	*70*	*56*
%								
Professors	63%	38%	60%	40%	60%	40%	59%	41%
Associate prof.	61%	39%	65%	35%	59%	41%	61%	39%
Assistant prof.	61%	39%	57%	43%	58%	42%	53%	47%
Adjuncts	40%	60%	47%	53%	44%	56%	45%	55%
Total	*59%*	*41%*	*58%*	*42%*	*57%*	*43%*	*56%*	*44%*

As evident from Table 2, men are in the majority in every academic position above the adjunct level. It is interesting to observe, however, that percentage-wise the obvious gender imbalance seems to keep steady right under or above the 'accepted' 60/40 mark. This, however, is not the case at the PhD level. Consider the following figures:

Figure 2.Number of PhD candidates (newly entered, on-going and obtained PhD) by Sex, Organizational Level (SSH)

Table 4. Sex composition of PhDs in SSH department

	2010		2011		2012		2013	
	Men	Women	Men	Women	Men	Women	Men	Women
N of Phds, ongoing	28	58	24	61	x	x	24	51
N of newly entering Phds	3	15	6	13	1	10	5	7
N of PhDs obtained	1	0	3	1	3	2	1	4

If we track the number of female PhD students in SSH from 2010 to 2013 (figures 2 and 3), it is obvious that women have increasingly been choosing the PhD option. At the same time fewer and fewer men have been doing the same, even though, when it comes to newly entering PhDs, things are lightening up towards 2013, when the number of newly entering PhDs was **42%** men and **58%** women. At the same time, however, this seems to be because fewer and fewer women are choosing the PhD option, not because more men opt for a PhD in SSH.

2.1.3. Comparative conclusion

When comparing STEM to SSH, it becomes obvious that more people occupy higher positions in STEM than they do in SSH and that the higher the academic position, the more likely it is that a man is occupying it. Across this time period, women made up an average of **40%** of full professors and **38%** of associate professors in SSH. In STEM it was only **13%** of full professors and **35%** of associate professors on average. Moreover, STEM has comparatively few people in adjunct and assistant professor positions compared to SSH. This might have to do with the fact that it is easier to gain promotion in the STEM department due to indirect factors such as for example higher funding (See D4.1.2).

However, it may also in large part be due to the fact that STEM researchers simply have more time on their hands due to, among other things, fewer teaching responsibilities. On average, STEM has a much higher teacher-to-student ratio than SSH. In the time period from 2010-2013, STEM fields had an average of **111** available staff compared to **117** in STEM. Even though STEM has a slightly higher number of teachers, this number pales into insignificance if we consider the volume of the student body in SSH compared to that of STEM, as we pointed out earlier. If we take the numbers from the University of Iceland alone, there were on average **2203** students in STEM fields each year between 2010 and 2013. For SSH fields this number was **4717**. This means that the student-to-teacher ratio in STEM at UI is around **1:20**, and a whopping **1:40** in SSH fields.

Moreover, whereas the total number of students is much higher in SSH than in STEM, and is comprised of more women than men, the opposite applies to the PhD level. The PhD students in STEM are much more numerous than in SSH, or 153 against 86 in 2013, and comprised of more men than women. As pointed out above, the majority of the large externally funded research projects are STEM related which reveals the gendered dimensions in this.

2.2. Gender Equality in Career Development

From May 2010 to April 2014, **55** Assistant Professor positions were advertised at the University of Iceland within the School of Social Sciences (SHH, 28 positions) and the School of Engineering and Natural Sciences (STEM, 27 positions). All positions were advertised as tenure-track positions with initial appointments of five years with the possibility for renewal as per Icelandic Law and Rules for the University of Iceland No. 569/2009. Because nothing else is stated in the advertisements, we assume that the full-time equivalent (FTE) of all advertised positions is 1.00.

For selection processes for candidates at the University of Iceland, applications go through two different selection committees; the evaluation committee and the selection committee. The evaluation committee consists of three members: A chairman, a 2nd permanent representative and a department representative. The job of the evaluation committee is simply to make sure that all applicants fulfill minimum requirements in accordance with university rules and the position advertisement. The selection committee consists of five members: A chairman, a permanent representative, the 1st expert, the 2nd expert and rector's representative. The job of the selection committee is to appoint the final candidate.

In the following we analyze the numbers from the STEM and SSH department simultaneously.

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Table 5. Sex composition and nationality of STEM Assistant professor applicants and committee members, 2010-2014

Variable	Number	
	Men	Women
Total number of applicants	287	42
Icelandic applicants	20	15
Extranational applicants	247	27
Evaluation Committee Members	52	26
Selection Committee Members	81	45
Number of people hired	19	8
Icelandic people hired	16	6
Extranational people hired	3	2

Table 6. Sex composition and nationality of SSH Assistant professor applicants and committee members, 2010-2014

Variable	Number	
	Men	Women
Total number of applicants	58	38
Icelandic applicants	49	35
Extranational applicants	9	3
Evaluation Committee Members	39	33
Selection Committee Members	91	49
Number of people hired	14	9
Icelandic people hired	14	9
Extranational people hired	0	0

If we consider the sex composition of applicants in STEM (Table 5), it is clear that male STEM researchers make up the vast majority of applicants. However, the majority of these (**86%**) are extra-national applicants. If we compare the number of Icelandic and extranational STEM applicants with number of those who were hired, it is clear that there is a discrepancy. Of the **274** extranationals who applied, only **5** were hired. Oppositely, out **35** Icelandic applicants, **22** were hired. This mirrors our qualitative interviews in which participants would regularly point out that Icelandic-speaking researchers are often favored over foreign ones. It is, however, not possible to say which extranational applicants even lived up to minimum requirements for hiring.

If we eliminate the extranational variable and turn to the gendered nature of the numbers on Icelandic applicants and hired researchers, one of the first things that stand out is the ratio of Icelandic men being hired for STEM positions. Of the **20** Icelandic men who applied, **19** were hired. Statistically this means that if you are an Icelandic male STEM academic, you are almost secured a position in academia, should you want one. Oppositely, only **6** out of **15** Icelandic women were hired for an assistant professor position in STEM. Put differently, in the years from 2010 to 2014, the chances for a STEM

researcher to secure a position in academia was **95%** for men and **40%** for women. In SSH these numbers were respectively **29%** for men and **26%** for women.

3. STATISTICAL GENDER EQUALITY INDICATORS

1. **More people occupy the highest academic positions in STEM than they do in SSH.**

Table 7. Average number of full professors and associate professors, 2010-2014

	STEM	SSH
Full professors	71	41
Associate professors	28	26

2. **The higher the academic position, the more likely it is that a man is occupying said position, regardless of whether this is in STEM or in SSH.**

Table 8. Average sex composition of full professors and associate professors, 2010-2014

	Men	Women
STEM full professors	62	9
STEM associate professors	18	9
SSH full professors	25	16
SSH associate professors	16	10

3. **The teacher/student ration is twice as high in SSH (1:40) as it is in STEM (1:20).**

4. *Irrespective of academic field, men are more likely to secure themselves an academic career than are women, though men in STEM fields have a clear advantage over all other groups.*

Table 7. Average hiring percentage of Icelandic applicants by gender and field, 2010-2014

	Man	Woman
STEM	95%	40%
SSH	29%	26%

4. REPORT ON QUALITATIVE DATA

4.1. Individual Trajectory [STEM and SSH]

When looking at the respective trajectories of our participants and attempting to distinguish a pattern among them, one eventually comes to the conclusion that they all have vastly different trajectories that do not appear to have a specific feature (e.g. gender, field of study, etc.) in common. Practically, this means that there were no visible differences between SSH and STEM. We therefore analyse interviews from both STEM and SSH participants together in the following.

Two participants had graduated with their PhD in a field different from the one they had been hired into. Three did not even have a PhD, but had been hired by their departments because their field of study was so new when they were hired that no Icelanders had a PhD in those particular fields or simply because they had enough publications. One had a decade long professional background in the private sector. Half were foreign researchers, others had studied abroad while still others were home grown University of Iceland researchers. Two had done a series of postdocs before becoming assistant professors.

When grasping the current situation of the sample, there are some points of similarity. Five participants had a very similar life situation: Living in Reykjavík with their partners and children while struggling to keep up with workloads and teaching responsibilities at the university. One was a single parent, one was childless and lived with her partner and one was both single and childless. Regardless of family situation, however, all participants from this sample lived in close proximity to the university.

Taken together one might argue that this particular group has a very diverse trajectory experience. But as with our postdocs however, some trajectories were marked by a sense of participants "winning" the race to their tenure track job because they already knew someone at the university with whom they had a good relationship. As such, Ásgeir explains why he believes he was eventually hired:

> *I am guessing that my supervisor for my PhD studies here probably was on my side in the whole process, even though I guess he did not "officially". But there's also a good reason for that, I mean, it's not only because we are friends or something like that, I mean, we work in the same field and he believes the field will be strengthened if I come in because we have worked together before with success, so — it's not only because of some personal reasons — but it will play a role always, it's difficult to distance yourself from that.*

Even though Ásgeir insists that he did not get the job because he and his former supervisor are friends, he also admits that one cannot distance oneself from the personal relationships one might have inside the academy.

Knútur is another example of someone who did not land his job through the official channels. Having finished his PhD, he was doing occasional teaching at the University of Iceland when a department leader from a different field saw one of his lectures and subsequently offered him a job. Fatíma had occupied an adjunct position before she became an assistant professor, and as such she also had contacts within the department

when she applied for her tenure track job. This was also true for other participants. Finally, one participant, Atli, explained how his trajectory, in this way, was marked by a clear sense of academic "inbreeding"; that he simply fitted well into the research group. As he said, he was a "good strategic choice."

However, it is also important to point out that many participants did not have prior strong ties to the University of Iceland before getting their tenure track position. As such it does not appear as if there is a very specific "winning" trajectory that helps this group obtain their first tenure track position. However, even though there does not appear to be a specific winning trajectory, there are strong indicators in the interview categories that would suggest that candidates for tenure track positions have some attributes in common that give them distinct advantages regardless of their educational or career trajectories.

Firstly, accepting the tremendous work effort and the long-hours in academia seems to be a winning attitude. Knútur, a newly hired foreign researcher, explained how he comes from a working class family with a strong work ethic. By his own account he does not know how to work any differently than putting in all his best effort at all times. He even works through his lunch break:

I do sort of eat my lunch at my computer and I work -- so when people are like 'you wanna have lunch?' [and I say no], they know I'm not being antisocial, it's just — during the semester it's just 24/7.

Knútur has a family and his work ethic often gets in the way of his familial responsibilities. As he says, "I do make time for my kids and stuff like that, but I do have no choice but to work in the evenings." For participants with younger children, keeping up with the academic workload was a challenge. It was less so for those with older children and the participants with no children seemed to be the one's who got on easiest with academic life. For one childless assistant professor, Adda, academic life was enough of a breeze that she even found space to criticize those who did not put in the effort to achieve good results in both research and teaching (i.e. often parents):

I know there are people who prefer to do research and they don't take the teaching part seriously and they don't make good classes, but I try to make good classes, because that is the way I can attract students —- to do work with me — and they can actually do part of the work I'm supposed to do [giggles]."

In the context of living the academic life, this is a clear example that having no children is both an advantage and a privilege. Moreover, Adda seems to have "mastered" or "played" the system. By paying attention to teaching she is able to attract students, and if she attracts students she can informally employ them to work for her, thus lessening her own academic workload.

A pattern among newly hired assistant professors seemed to be a desire and a willingness to live up to high demands for performativity, regardless of whether it interfered with their work/life balance. As Geiri put it, "as a new academic … you have to prove that you're worth something"; an attitude that for him ultimately resulted in spending a lot of time each month away from his family. Participants Dóra and Elísa both reported occasionally feeling that they did not belong in the university; that they suffered from the "imposter syndrome", resulting in them trying even harder to live up

the expectations set by the academic environment. This beginners' willingness, so to speak, to put in the work required was expressed by Fatíma as such:

> There's that feeling that when you're new … you want to try everything, so when people say 'Fatíma, do you wanna do this?', you go 'Yeah, yeah yeah!' like a puppy. And there's still … that little ego that goes 'I am so grateful they chose me', you know. So I'm all excited and I end up over working myself.

Having a lot of publications under one's belt was also an attribute of many of our newly hired participants. Some were very adamant about enumerating their most prestigious publications, underlining that their ability to publish in ISI journals is what had secured them the job. For example, as Bergþóra says: "I have been very successful [and] this has opened the eyes of others and this is helping me now … I have published 5 ISI papers … Those are the best journals." As such, the much criticized point evaluation system at the University of Iceland (e.g. D5.2, p. 132-144) here becomes a subject of praise because it is what ultimately has secured Bergþóra her current position. Throughout our interview she appeared to be in a constant state of competition with herself and her colleagues, making sure to enumerate the papers she had published and in which prestigious journals. Rather than being critical towards the point incentive system as many of our interviewees were, Bergþóra seemed to accept this system as an unquestionable condition of being an academic. Her spirit of competition was further highlighted when she spoke about the publication process and said that "if you are publishing with other people, they might be very demanding about what order the authors are on the paper, and even though you might have contributed most ... so sometimes you just have to stand your ground."

Oppositely, some of our movers/leavers were very critical towards the point evaluation system, indicating perhaps that people who just made assistant professor are more likely to be thankful rather than critical of the system into which they have just been accepted.

Finally, some participants also mentioned nationality as a distinct advantage to obtaining a tenure track position. As such, Atli mentioned that part of the reason why he got the job was because "They needed someone to teach the big courses in Icelandic" and Ásgeir concurs when saying:

> The one thing that probably works for me is that I am an Icelander … Even though, sort of, the policy is to advertise internationally and so on; if they get a good candidate who is also Icelandic, then that works as an advantage.

Fatíma, who is not a native Icelander, also experienced that not being able to speak Icelandic could be a hindrance in the form of student prejudice:

> I've had a couple of issues with students that I was surprised about — ehm — when they were frustrated about something, instead of coming directly to me they [the students] sort of attacked my Icelandic [in class] which I thought was very odd.

Taken together, trajectory experiences among newly hired assistant professors vary greatly and there does not appear to be a specific winning trajectory. However, when examining our interview categories it becomes clear that newly hired assistant professors tend to not only accept the high workloads in academia, but tended to accept conditions in general that our movers/leavers tended to more critical of. There are also

indications that prior connections to the university as well as being a native Icelander might work somewhat to one's advantage.

4.1.1. Comparative conclusion

As mentioned in the introduction to this section, there were no visible differences between STEM and SSH in the way participants spoke about their individual trajectory.

4.2. Organizational Culture and Everyday Working Life

Because the culture of an organization is a very broad topic with room for endless nuances, we are here going to focus on some of the categories that emerged at the most importunate during the interview process, and those which are not touched upon in the other sections of this report.

4.2.1. STEM

When asked direct questions about the working culture at their respective departments, nearly all STEM participants initially reported very positive experiences. Initial outbursts containing superlatives like "great", "awesome" and "lovely" were common. Often times, however, there was a sense of participants measuring their current situation up against a troubled past. Like one male assistant professor put it, "Things are very good *now.*" Or as one female assistant professor said: "I think it's nice. I like it. Yes. I've experienced worse." In this sense, praise of their department and colleagues was often done with reference to a time when things had not been nice.

A common complaint, however, was the lack of communication between researchers. As one woman said: "I guess scientifically, there could be more understanding between the scientific fields." In this way research participants would describe an otherwise positive relationship with their colleagues, except when it came to doing research, which was very hard to do together because "everyone are just sort of doing their thing" as one male researcher put it. Another female associate professor concurs and says: "the research we do [does not have] very much in common, so we can't talk together about research, so that might — that could be seen as a problem."

If we consider this organizational culture in the light of recent debates on the neoliberal university, these participants' habit of not working together might mirror a new working culture in which securing academic capital for yourself means that you have to guard your research and data so that others will not "profit" off of your work. One former male assistant professor even cited the fact that "there wasn't enough [research] interaction" between colleagues as a reason for eventually quitting his job. This sentiment of each researcher metaphorically functioning as her or his own little individual business was perhaps most clearly expressed by one male assistant professor: "Most people are sort of working on individual projects, so it's like 'every man for himself' in a way. There is some interconnectivity between one-man projects, but not a whole lot I guess."

This kind of lack of interconnectivity between researchers was also expressed as a kind of lack of transparency. One female postdoc expresses her frustration of beginning to work in her department:

At one time I felt like I was running into a wall because it's very opaque who have done what and what has been published when it comes to [my field], so if you're working with something and don't really know --- it just functions on a person-to-person basis here.

Instead of being able to freely access articles and publications, information on what has already been researched goes through individuals, and as such one's success as an academic (i.e. one's ability to publish) is to some extent influenced by one's personal relationship with colleagues. Perhaps partly as a result of this lack of transparency, some of our participants did not seem very passionate about their research. One male assistant professor expressed this in very uncertain terms when he said:

It gets to be a routine, you just work within this academic system of producing knowledge and writing papers and applying for grants and so on and so forth. I wouldn't say there's nothing else behind it, but of course people probably wouldn't be in a research environment if they weren't curious. But if you'd ask if people here have a calling to make the world a better place — not in the every day routine.

It is interesting to listen to this participant and witness him realize that perhaps a lot of the research that takes place in academia (and perhaps especially in STEM where the disconnect between laboratory experiments and the social world might be bigger) have lost touch with its original sense of purpose. For him science becomes about securing funding, publishing, get promoted, etc.

Another category that emerged in relation to organizational culture was sexism. Interestingly, this was less pronounced in the STEM interviews than in the SSH interviews (which we will get to). One female lecturer in STEM provides an example of how women have a more difficult time breaching the initial chasm between teacher and student: "You have to prove yourself to the students, you — and this is true for everybody and every woman knows this. If you're a woman you get criticism."

This kind of experience might be more closely linked to the history of sexism in STEM fields in general. A male assistant professor provides an example: "There was a guy here … who probably did not believe that women could do mathematics so well, because he gave different problem sets for men and women [laughs]. He retired 10 years ago." While it is also worth noting that 10 years is not that long ago, what's more important here is the fact that this researcher, along with others, sometimes referred to an archaic past while explaining the progress that has since been made. In this way, attention was often draw away from the fact that an obvious gender imbalance still persists, even if teachers have stopped presenting women and men with different math problems.

Finally, direct sexual harassment was also reported. One former female assistant professor explained how she had gotten inappropriate comments about the way she dressed almost every day while working at her former department. It was not until the university did a sexual harassment survey that she gathered the courage to confront her harasser, who, as it happens, was taken aback, not knowing he had done anything wrong; something which lends credence to the fact that this kind of boundary-crossing behaviour is often considered normal and appropriate by those who engage in it. While this was the only reported case of sexual harassment in our interviews, it is worthwhile keeping in mind that this particular participant was very outspoken. Moreover, our interviews were carried out by a male researcher, which might have discouraged others from stepping forward.

4.2.2. SSH

Sexism was a pronounced category in SSH interviews. Surprisingly perhaps, the most gender essentialist forms of sexism came from women themselves, while the more pseudo politically correct forms of sexism came from men. As such, a few male researchers in SSH would reveal their own gendered bias in subtle ways. Like in STEM interviews this was done primarily by situating themselves as allies in the struggle for equality while rarely being able to refer to any kind of personal initiative or committee work related to gender equality. The clearest example of this was a male assistant professor that – long before the researcher asked a single question – made a big deal out of explaining how he supported initiatives for gender equality in higher education. He later went on to describe himself this way:

[I'm an] undercover feminist … because … there are so many fights that need to be made and there are so many problems in the world and you have to choose which field you expose yourself to, and it can be useful to have some things undercover.

In other words, he does not think gender equality is important enough for him to be open about his support for it because there are "so many problems in the world" that it has to take a backseat for more important things. The implication here is of course that the word "feminist" comes to mean absolutely nothing. While this participant was the clearest example, the process of situating oneself as a male ally in equality struggles in order to *not* take part in said struggle was fairly common.

Among some academic women in SSH, experiences of sexism were often ignored or toned down. For example, when asked if she had ever experienced sexism in academia, one female assistant professor answered:

Oddly enough, no. This may be the way I filter these types of information. Once … there was a former speaker [at X], who had sort of a gender offending comment about my performance in an interview … I think it was, and — you know, it's the way that [shakes her head slightly, squints her eyes together, lays both her hands bare in mid air with a very 'whatcan you do?'/brushing it off-attitude] — it's a tactic … so I'm not gonna expose myself to this.

However, other women in SSH engaged directly in gender essentialist discourse. One female assistant professor puts it like this:

When working in a mixed group with both men and women the discussion is different. … Sometimes it's not as sensitive as it can get with only women. People are offended and people get angry … I think we women often take things more personally than men do, and not having that balance means having all these so-called feminine things here, like —- flowers.

While it is true that women and men are socialized differently, the discourse in the above quote underpins another socialised habit, that is, to generalize and to some extent turn women's behaviour into an essentialist part of the female experience, i.e. "we women often…" and the insinuation that women are overall "sensitive" as opposed to men, who are here implicitly constructed as rational no-nonsense social actors.

Another woman in an SSH department had this to say:

> *I think there's — like the general feeling when you work with only women — and I don't mean to badmouth women, but — if something comes up and it's not dealt with right away, it can fester and smoulder and makes things worse, whereas when you work with men, you get it out and it's done and taken care of*

These are just a few examples, but they exemplify a working culture in SSH in which that which is considered feminine is by default devalued and in which women themselves have evidently internalized this discourse.

4.2.3. Comparative conclusion

Common for STEM and SSH participants was an overall enthusiasm and positive attitude towards their relationships with colleagues and day-to-day work life. However, this attitude was often a charade for different subtexts and problems entirely. Male academics in both SSH and STEM engaged in a process of situating themselves as allies in equality struggles while being more or less non-engaged. Women primarily in SSH engaged in gender essentialist discourse.

4.3. Well-Being and Work-Life Balance

4.3.1. STEM

Overall, STEM research participants agreed that the current academic climate is one in which the workload is very high and that it can be hard to fit all of one tasks into a daily routine that does not involve working in the evenings and on weekends.

As one female assistant professor in STEM put it:

> *"teach[ing] takes a lot of time and it takes a lot of hours of working and you want to still find time for research, so the consequence is that you do research on the weekend or in the evening when you maybe finish prepar[ing] the teaching"*

On top of this comes the challenge of being able to participate in research conferences, which is not factored into the working routine of employees. As a woman assistant professor in STEM put it, "since teaching is so spread throughout the year, you have to find someone to substitute you for your class", meaning that it is the responsibility of the employee to make their own arrangements. However, for those who have started a family or are thinking about doing so, this presents even more challenges. A woman assistant professor explained that "During my pregnancy I … was having a lot of work load and was not coping, and I kind of broke down and I was saying that I was having too much work and it was not taken seriously [by a person in charge]."

It is important to mention here that only **2 out of 5** women interviewees in STEM had children, whereas this applied to **3 out of 4** men. These male academics in STEM tended to speak differently about work/life balance. Many of them spoke of process of prioritizing family over work as a choice with consequences in either direction. One male researcher put it this way: "If I would have stayed here [during evenings and weekends] and been super driven and not … be with my family … I probably could have advanced faster."

As such, both our male and female interviewees were aware of the importance of prioritizing family, but only for the men was this experienced as a choice – not a choice

without consequences or possible regrets, but a choice nonetheless. On the whole, for women interviewees, the challenge of balancing work life and home life was not a choice, but a fact of life. Another clear example of this came from a female postdoc in STEM, who we asked about the way time was spent when both parents were home. She said: "we might both be at home, and I have to be playing with my son or attending to him constantly, but his father can, you know, be on the couch and read a book for some time." Without rushing to steep conclusions about the details of this woman's life, her experience is an example of family as condition on one hand, and family as choice on the other. She has to be attending to her son constantly (*condition*) while he can make a decision to do something else (*choice*).

It is possible that this tendency towards an asymmetry between male and female academics when it comes to work life and family life has an impact on the leaky pipeline. As a woman postdoc in STEM (without a family) put it:

> If I'm gonna have a family, then I'm gonna be there for my family ... But if you look at the examples of women [in academia] who have been able to have kids, [been on] maternity leave ... then you start giving up a little bit in relation to this project.

Once again, being there for one's family is constructed as a taken-for-granted fact of life, and the concerns that this entails makes this woman question her future options in academia. Oppositely, as previously shown, the men tended towards thinking of prioritizing family as a *choice*. In this way, we might ask: Is it a possibility that some men might plausibly not consider the hardships of compromising work life and family life in the same way that women do, because in the end, the underlying assumption is that women will take care of the family?

Another noticeable difference between STEM women and men was the discourse surrounding flexibility. The promise of flexible working hours in academia supposedly helps busy academics balance work and family life. Whereas few STEM women ever praised flexibility in relation to work/life balance, STEM men had a lot of positive things to say about this arrangement. One male assistant professor explained how he tried to "use the flexibility to spend more time with the family". As he pointed out, "that's the good thing about academia, you have this flexibility, there's no [time clock]." Two other male researchers from STEM had very different perceptions of what flexibility meant. Whereas one believed flexibility to be "fun" because you have the freedom to "do what you want", another asserted: "There's no clock you have to punch when you go home, and I think that results in … more than an 8 hour work day", insinuating that flexibility entices you to perform extra duties at work, i.e. not using flexibility to tend to the family.

4.3.2. SSH

Unlike our women participants from STEM every single one of our participants were parents; **8** mothers and **3** fathers. As such, the troubles of balancing work and family life were a lot more pronounced in SSH than in STEM.

In SSH, both men and women experienced the feeling of never being off work; that there was always more to be done. For example, a woman assistant professor in SSH said that working in academia is to be in "a constant conflict" with one's conscious in that "you can always do better, you can always publish more, [and] you can always do

more research. And there is always a lot of work waiting. I find it difficult always feeling guilty because I could always do more."

Whereas this constant pressure of work was a very common theme for both women and men in SSH, only women described the pressure of home life in the same way as they would describe working circumstances. Like one woman in SSH stated in relation to her home life: "You can always do better and [I have to] stop beating myself up for not being everywhere for everybody all the time — that is just a demand that is too high to have for myself." Not only does she take it for granted that she must find a way to tackle her work/life balance, she also experiences a lot of internalized expectations to be both a good mother/wife and a good academic. Notice that her being there for her family is not constructed as a choice she has made for herself, but as an inevitable consequence of starting a family in the first place.

In general, many women interviewees, both postdocs and assistant professors tended to speak of hardships and challenges when it came to compromising work and family life. Like one woman in SSH put it: "It becomes this conflict between the academic way of living and family life … If you are constantly working, how do you take care of yourself and your family? How do you take time?"

Men, on the other hand, tended to talk about the difficulties of juggling work and home life in terms of concern, priorities and choices. As such, one male assistant professor expressed concern by saying: "I wouldn't be surprised if my kid, at 17, asked to reflect upon her childhood […] would probably remember me working a lot." Notice that while he expresses concern, he does not take it for granted that he ought to be home more. During the interview he also expresses the clear need to perform at work, but never mentions the same pressure to perform at home. Another former male employee from SSH, who went on to working at a different university, expressed concerns that were more priority-related when saying: "I came to that point that I wanted some other qualities in life — living with my family … It was a tough decision because I have ambitions for the academic development of [my academic field]." Take note of the fact that while this former employee prioritized family over work, he clearly experienced that *he had a choice*.

For SSH women, on the other hand, the question appeared to be whether they were prepared to make family and their academic career work simultaneously, or quit the academic career and do something else. The women who were still in academia seemed determined to make family and their academic career work out simultaneously. The following quote is a good example of that:

I wake up at, eh, sometimes at 6.00, sometimes at 5.30 … I have [x number of children] and I can only work until 16.00 three days a week — so to compensate for that I have to just wake up a little bit early, just to, you know, read and be up to speed with what I'm gonna do during the day and we all get up at 7.15 and we're out on the road at 08.00, but I drop my [children] off at the school … at 07.50 for me to be able to make it to class at 8.20 when I have to be … and then I simply - it's a mixture of preparing for classes, to do the lecturing, interact with students, eh, interact with the department, eh, go to department meetings, quorums, eh, and I also [name of side occupation] that's like an added 25% job, so I have to do that either in the morning, in the evening or during the weekend.

When it came to utilizing the flexibility of academia, women in SSH seemed to use academic flexibility to attend family responsibilities rather than engage in leisure activities. A woman assistant professor in SSH tried "to start my day early … then I can leave earlier cause my daughter is at home, so they're really flexible here, sometimes if she is sick or something I can work from home and that's great". Another woman in SSH maintained that flexibility is "one of the perks of academia … so — if I have some duties towards my [children], or — my mother who is growing older, I can obviously go and nobody cares." Yet another woman really appreciated the fact that "if I have to go pick up my son if he is sick or something like that, no one has anything to say about that."

In these examples it is obvious that flexibility becomes a means of simply performing other responsibilities in life, such as caring for one's family.   For other women interviewees in SSH, flexibility was used to recuperate, but not in the way one might think. One woman put it this way:

Because I can allocate time in my own fashion, even when I have to work 45-55 hours a week or more, it doesn't matter because I feel that when I need the rest, I can take the rest, you know, I have a chair here and a blanket [points to a comfy looking chair and blanket], so I can just nap if I need to.

Another woman described a similar scenario from when she was pregnant:

I'd come here after teaching and I'd have a mattress here in the office, I would just lie on the floor and sleep, I was completely, like, my energy levels were like this much [using thumb and index finger to indicate tiny amount], so I had a pillow and a camping mattress and would just take a half hour nap, recuperate and go back to work.

In both of these examples, recuperation becomes instrumentalized. Its function is not to enhance life quality or even improve work/life balance. It becomes a way for the academic to work even harder.

As such, as an institutional "service" or work arrangement, flexible working hours are supposed to be a "perk of academia" as one participant put it. A woman assistant professor ventured into an explanation about what she needed in life next to her job in order to feel content and happy. Consider the following brief conversation:

Participant: I need a lot of free time, because I enjoy doing a range of different things. I need to go skiing, I need to sing and I need to dance a lot, and I also need to talk to my friends, go to coffee houses and just live my life.
Researcher: And do you have time for that?
Participant: No.
Researcher: No?
Participant: Not enough, I try making time for it; I use Christmas.

The sad implication here is of course that this participant does not have the time on a daily basis to do the things that make her happy, much less live the life she wants to live. As such, while the thought of flexible working hours conjures up thoughts of more free time, it often ends up being simply a way for academics (mostly women it would seem) to live up to the expectations put on them to invest equally in both family and work.

4.3.3. Comparative conclusion

The qualitative interview process showed that some women and men in SSH felt that their passion for their work was used against them. Because they, as academics, were in a job, which they found interesting, they expressed that this passion for their livelihoods was used as leverage against them to work them harder, the implication being that they should be thankful for the opportunity to even be in academia to begin with. STEM researchers did not express this concern, perhaps because they generally do not have as difficult a time finding work outside of academia.

Most importunate in the interviews, however, was the implication that women interviewees tended to think of their responsibility towards their family as a given, whereas men thought of it as something they could select or deselect at their discretion with the consequences that this entailed. This was true for both STEM and SSH.

On the whole, the work-life balance for employees at the University of Iceland appears to be strongly affected by a combination of big workloads and gendered traditions that construct women as the main family caretakers. However, it was very clear that this discourse was more pronounced in SSH than in STEM.

Here especially male academics praised their flexible working hours and generally had little to complain about. The gender dynamics that work alongside unreasonable workloads are so that women primarily insist that career and family should work simultaneously, while men do not seem to be giving this a lot of thought. The end result is that women are not just more overworked than men. Women also risk a setback in their publication records and careers, both because they take maternity leaves that are proportionately longer than men's and because they generally end up taking on the most of the responsibility for raising children.

4.4. Career Development

For a more in-depth analysis of the interviews relating to this segment, we refer to a publication by Heijstra, Steinthorsdóttir & Einarsdóttir (2016) entitled *Academic career development and the double-edged role of academic housework* in the journal Gender & Education. The article specifically makes use of the qualitative interviews from WP4 and examines the academic labor process and career development of academics from a gender perspective. It makes use of the term 'academic housework' to describe those mundane and undervalued tasks that affect the career development of academics and how the amount of academic housework is unequally distributed between senior academics and newcomers.

4.4.1. STEM

Among STEM participants, women were especially at risk of being charged with extra duties, especially in the realm of gender equality work. It was reported that when a department was forming a new gender equality committee (as prescribed by the official Equal Rights Policy), women are among the first to be asked to join said committee:

> I'm on this equal rights committee for the school, and they asked me [to join]. I'm thinking they asked me because I'm a woman. I don't know. I wonder … I mean each department

here has to send a representative in this equal rights committee for the school, and the department of [X] asked me to do it.

The underlying assumption here is of course that equality work is viewed as women's work and not something men should or need to participate in. When involving male assistant professors in this discussion, many expressed interest in equality issues, but this had never translated into them making any active contribution to improving conditions in their department. As such, women in STEM sometimes end up spending their time doing work that is does not count among promotion criteria, while men consequently end up having more time for research.

When it comes to teaching responsibilities, our interviews reveal a picture in which women in STEM report significantly more gruelling stories related to teaching than do men. One woman felt like she could never allow herself to call in sick or stay at home with a sick child because she, as a newcomer, had been specifically charged with teaching the big classes. Another woman reported being thrown into the deep end of teaching, having to teach three courses at once when she started working at the university. Teaching loads were so immense that one woman had decided to turn it to her advantage and start employing students to do research work for her, so that she could spend less time doing research while still gaining advancement within her field.

When it came to promotion criteria, most STEM participants had few complaints. However, one male assistant professor did complain that the incentive point system with which publication output is measured did not adequately take the quality of publications into consideration.

4.4.2. SSH

In SSH the chores and tasks that create academic capital and in turn dictate the career development of employees are for the most part viewed as an accepted part of the job. As one male assistant professor puts it: "You do this because it's what's expected of you as a staff member." A female assistant professor emphasizes that not doing your part of these chores "wouldn't be popular" and that there is a certain pressure among colleagues to pull your load. However, there is no formal system in place that helps new employees keeping track of these chores and for the most part this kind of academic housework does not give employees any extra points or help them on the path towards a promotion of a higher salary. A woman assistant professor explains:

It was a shock to me how much overtime I had. I knew I was working a lot, and I was getting really ill towards the end [of the semester] … But then I found out because when I asked, the department said: "Oh, you were supposed to keep track of that, not us" and I was like but I'm new, so … and then she said: "I thought you knew what was the right amount". I did not even know I was doing over time. So she said "It's your responsibility to keep track of that".

Other tasks that qualify as academic housework are for example teaching and peer reviewing. When it comes to peer reviewing, newly hired academic do not "expect to be paid for it – it is just part of the unwritten stuff." However, while peer reviewing might increase an employee's symbolic capital, teaching carries little or no prestige. In the SSH department women report considerably more stress than men when it comes to

teaching. As such, some women reported having to have a chair or a mattress in their office to be able to powernap in between teaching and research, while a male assistant professor somehow had the time to go home and watch TV after a long teaching session. This mirrors the fact that women often supervise more BA students in the SSH departments than do men (Heijstra, Steinthorsdóttir & Einarsdóttir, 2016: 9).

As mentioned, the pressure on performing academic housework tasks was generally characterized by an air of initial acceptance. The same was true of the way that participants spoke of promotion criteria during their academia career.

> *There are certain demands that you have to meet, there is no exception. And I feel like they are adequately [set]. I mean it's not being asked of you to have an article in Nature and Science every four years or every year, but they ask of you to have a significant or prestigious publisher to publish your work. I think also — you are being — it is recognized — in more than one way, so if you are a good teacher that is being recognized, and also if you contribute to the administration. So — I can't complain there, at all.*

This is an example of how talk of promotion criteria were sometimes either ignored or glossed over. While it is true that one is expected to have a significant amount of publications to advance, everything in the remainder of our data suggests that one's teaching abilities and track record of administrative duties count for very little when it comes to promotion criteria. This was, however, also mentioned at times, especially by women, who felt like maternity leave and thus time away from academia had negative effects on their career development.

4.4.3. Comparative conclusion

Both in SSH and STEM, academic housework creates a culture in which specifically newcomers and women are disproportionately charged with the tasks that amounts to no prestige and no advantage when it comes to promotion. However, in SSH both women and men reported the woes of having to engage in such tasks, while in STEM it was close to being only women. In terms of career development, one might suggest a development hierarchy based on field, gender and seniority. The difficulties of career advancement seem to concentrate among newly hired women in SSH. At the opposite end of the scale, senior male researchers in STEM might have both the time and space to publish and successfully apply for continued funding while not having to worry about teaching loads and administrative duties as these can be outsourced to newcomers. Again, women newcomers in STEM reported difficulties related to career development far more than did male newcomers.

4.5. Perspectives on the Future

4.5.1. STEM

There was a distinct difference between how respectively men and women in STEM spoke about their perspectives on the future. For many male participants, the future looked promising. Even despite the prospect of the long-hours culture in academia, many male STEM participants were optimistic. One STEM assistant professor puts it this way:

When I took the job here — I made the requirement for myself that in a few years I would still be doing research, I would have fun doing research, and I would be doing this as a normal job 40 hours a week. Otherwise I'd quit. Go work for a programming company or something — and so far it's been ok.

As such, this particular participant has had a good experience with putting boundaries for his own workload. He is able to balance work/life and family and never works more than he thinks is reasonable. If we compare this sentiment to some of the previous analyses of STEM versus SSH workloads, it becomes clear that this optimistic perspective on the future is more of a STEM-related phenomenon. This sentiment also shines through the way another male STEM participant spoke of his future:

I need to make future plans with my wife. She needs to move abroad and do her specialty training … That makes it difficult to pursue an academic career within the University of Iceland. If I wanted to get an associate professor or assistant professor position, those are 5 years positions and -- It's hard for me to plan on a long term thing when I know I´ll be leaving here in a couple of years. So — that does have an effect on how I plan things and I've not been trying to sniff out a permanent position or a long-term position at the moment.

Take notice here that the only future concerns this participant has is that he needs to plan out his future in collaboration with his partner. It is not a question of whether or whether not he might be able to secure himself a position at UI, but a question of whether or not he wants to. It is important to point out here that while there are not many more assistant professor positions advertised annually in STEM than in SSH, the chances of getting an advertised position is much higher for men in STEM than it is for women. As we mentioned in the quantitative part of this report, in the years from 2010 to 2014, the chances for a STEM researcher to secure a position in academia was **95%** for men and **40%** for women.

Women in STEM, on the other hand, had different concerns. Because STEM fields are so male dominated, the pressure of being a woman in STEM meant the pressure of being a role model. One woman STEM postdoc describes it as such:

I think it is frustrating when [young women] look up to me and at the same time I have no idea from where I'll get my pay in two months. They should just know that I've given myself a deadline of 5 years to make this work, and then I'll do something else. Because as much as I love what I do, I don't want to have to put the rest of my life on hold and not see my friends and exclude the possibility of having a family.

In this example she expresses frustration over not being able to live up to the idea of the female role model in STEM fields, but she is also painfully aware that if she wants to start a family some day, she will have to juxtapose this reality with the reality of being an academic. No male researcher in STEM ever expressed these kinds of concerns, or as another woman put it, how to "keep my academic aspirations in sync with my private life?" But the future for women in STEM was not just fraught with frustration over role modeling and work/life balance, it was also just a question of simply being a woman in a world that traditionally favors men. As one other woman put it: "When you get to the higher positions, it's about who can get projects, get funding and so on and for some reason it tends to be [pause] ---- men."

4.5.2. SSH

Concerns about the future was also a stable in the SSH department. The male academics here mostly spoke of their futures in terms of career stability and making ends meet. As one assistant professor put it: "I work considerably more hours than what I actually am paid for." Another concern was how their children might remember their fathers after a working life spent in academia. As one participant said: "If my kid, at 17, asked to reflect upon her childhood — she would probably remember me working a lot." Worrying about long-term effects on one's family was also mentioned in interviews with SSH women. One assistant professor near the age of retirement knew that she would not be able to stop working completely due to a lifetime of low wages. As she said: "I'm just hoping that my plan [to retire] will come true. If I'm working … I don't see myself sitting in a sofa and playing with grandchildren." In this way, while her concerns about the future are certainly economic, these concerns are also strongly tied to her sense of connection with her family.

Others worried that the fact that they had been on maternity leave would have an affect on their future in academia. One woman said: "I worry a little bit that I'm now stuck with few points — and if you're stuck with few points its harder to get the grants, and I do feel the system does not take that sufficiently into account."

However, some women in SSH who had older children and were accustomed to playing by the "rules" of academia were much more positive about their future prospects, as they were able to produce large amounts of research in a short amount of time. As one woman assistant professor put it "I would be disappointed if I'm not associate professor within the next three years." Moreover, good connections within academia were also something that helped make lower concerns for SSH women. As one woman said: "I have good connections within academia and the law schools, both at [X] University and [X], so — I might even be able to teach here — keep my position here and go back and forth and so on. We'll see. "

4.5.3. Comparative conclusion

Comparing STEM to SSH on the question of their perspectives on the future, there is a tendency for STEM participants to generally view the future in a more positive light than those in SSH. This is quite plausibly connected to the fact that the private sector offers more positions to people from STEM than from SSH and as such STEM researchers share an academic experience with less insecurity about their future. However, women in STEM differed from their male counterparts in that some of them experienced a pressure on being role models for the next generation of women. This was combined with worries about starting a family in the future and, more importantly, about whether or whether not the STEM career trajectory would fall to their advantage because of the longstanding tradition for favouring men within STEM fields.

In SSH, on the other hand, future prospects were described in considerably more bleak terms. Here both women and men worried about making ends meet, though women academics were also concerned for how maternity leave might affect their future career.

References

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SWITZERLAND

Farinaz Fassa, Maria Del Rio Carral, Pierre Bataille

1. INTRODUCTION

1.1 The two target UNIL departments and their staff: a short presentation

1.1.1 The STEM and SSH Departments

The University of Lausanne (UNIL) is a higher-education teaching and research institution where approximately 13,350 students and 2,800 academic staff study and work. Under the leadership of an elected Rector and a team of Vice-Rectors, the UNIL is organised around seven faculties, of varying sizes, which have a relatively high level of organisational autonomy, within the limits set by the canton and university-level rules and regulations.

The faculties selected for this study are organised in slightly different ways. Since 2003, the STEM Faculty has been divided into two sections that collaborate in teaching and research: the Section of Basic Sciences (SF) and the Section of Clinical Sciences (SC). The first one is fully integrated into the university organisational structure, while the second one operates in collaboration with another regional institution. Staff appointment procedures there are partly dependent on the needs and resources of the Lausanne teaching hospital (CHUV). So there is an independent Human Resources (HR) Department, and some of the rules and regulations differ from those of the Basic Science Section and the other UNIL faculties. In our case study, we focus (as far as possible) only on the Basic Science departments, although our interviewees sometimes found it difficult to maintain this distinction and also talked about the experiences of early-stage post-docs in the Clinical Sciences section of the Faculty.

The SSH Faculty underwent a structural reorganisation in the mid-2000s, and is now based on four Institutes (the equivalent of the Departments in the STEM Faculty). Each of these Institutes is in turn composed of a number of research centres or units. The Faculty is smaller than the STEM (see Table A2, in the Annex), but student numbers have been increasing rapidly in recent years, particularly in Psychology and Sports Studies.

1.1.2 About positions and appointments at the UNIL

As noted in previous reports (D7.1, D5.2), in Switzerland, university rules depend on the canton. Thus, the structure of academic careers differs from one canton to another. In the Vaud canton, academic positions are no longer "permanent" in the strict sense of the term. Professors and some categories of Senior Lecturers (MER) are offered six-year contracts, renewable for an unlimited number of times, subject to a formal evaluation process. Cases of Full Professors not having their contracts renewed are practically unheard of. Overall, members of the academic community are divided into different

categories that do not necessarily reflect the stability or precariousness of their employment contract: professorial, intermediate and administrative and technical staff. The intermediate staff category is composed of a "lower" and an "upper" level. The lower level includes post-docs (premiers/ière assistant-e-s: Post-doc research assistants) and the lowest position is open to funded PhD students (assistant-e-s diplômé-e-s). These positions are fixed-term, for a maximum of five years, and cover research and teaching activities. The upper level of the intermediate category is composed of temporary and junior lectureships (Maître assistant-e-s – MA) and permanent and more senior ones (Maître d'enseignement et de recherche – MER), which are also sub-divided into MER1 and MER2 categories. The meaning of this distinction varies somewhat between the faculties, but the MER2 positions are usually associated with relatively heavy teaching duties, or even with teaching-only duties, whereas MER1 incumbents are expected to combine teaching and research activities, in similar proportions to the professors. Finally, the professorial category includes temporary positions – Assistant Professors – with or without tenure track (PTC), and permanent "tenured" positions – Associate and Ordinary (Full) professors.

Table 1 presents the translations of the different UNIL staff categories. In our analysis, we will use these translations.

Table 1. Categories of academic employees at the UNIL

Academic status (French)	Categories of academic employees (French)	UNIL abbrev. (French)	Translation
Corps professoral	Professeur.e ordinaire et associé.e	PO & PA	Full and Associate Professor (tenured)
	Professeur.e assistant.e en PTC	PAST – PTC	Assistant Professor with tenure track
	Professeur.e assistant.e	PAST	Assistant Professor without tenure track
Corps intermédiaire	Maître.s.sse d'enseignement et de recherche	MER	Senior Lecturer (tenured)
	Maître et Maîtresse assistant.e	MA	Junior Lecturer
	1er Assistant.e	1er Ass.	PhD Assistant – Post-doc
	Assistant.e diplômé.e	Ass. Dip.	Teaching Assistant – PhD Student
	Doctorant.e SNSF	Doc SNSF	Research Assistant – PhD Student
Personnel administratif et technique (PAT)	Responsable/Chargé de recherche	No official abbreviat-ions	Senior Researcher
	Chercheur.e SNSF Senior		Senior SNSF Researcher
	Chercheur.e SNSF Junior		Junior SNSF Researcher (without PhD)
	Collaborat.eur.rices scientifiques et administratifs		Other scientific staff

In SSH, as in STEM, appointments to permanent (tenured) academic positions (professorships or senior lectureships) are made by a dedicated "appointment committee" composed of internal and external academics and student representatives. For each position to be filled, the Faculty Council appoints a specific committee that examines all the applications, interviews short-listed candidates and submits its recommendations in a report to the Faculty Council. Based on these reports, the Faculty Council can either adopt or reject the proposal made by the appointment committee. The Council also has the right to change the ranking of candidates and to adopt an alternative recommendation for the position. On the basis of the vote by the Faculty Council, the Dean's Office makes a final recommendation, which is submitted to the Rectorate, which makes the final decision. For Full Professorships, the Rectorate usually calls the candidates ranked first (and sometimes second) for an additional interview, before final approval of the appointment.

1.2 Data

1.2.1 Quantitative data

Information on UNIL staff and UNIL rules is taken from the University's general website. Most of these details are publicly available. However, there is a severe lack of publicly available data on the faculties. To build our analysis, we collected the sources of information one by one. The information came from a variety of sources, mostly the website of the Swiss National Science Foundation, data provided by the Central Service of Statistics of the UNIL (UNISIS) and data from other unpublished reports that we have worked on over the last months.

1.2.2 Qualitative data

We selected our interviewees from the lists of post-doctoral students provided to us by various administrations (departments and research centres). Only a few of them had already answered our online survey. Some categories of interviewees – especially those who "leave" academia or those who "move" to another university – were difficult to recruit, in most cases because the information (email, phone number) provided by the administrations was invalid. They were thus recruited through a "snowball", "peer-to-peer" process.

The interviews were conducted by one of the members of our team. Interviews with people still hired by the UNIL were in most cases "face to face". They took place on the campus, at the interviewees' offices or at one of the campus meeting points (cafeteria, or even benches in front of the university buildings). For the interviewees who had "moved" to another university or who had "left" academia, we often used Skype because most of them no longer lived in Lausanne. All the interviews were transcribed *in extenso*. The most common language of the interviews was French – only a few were in English.

Our aim was to collect a range of post-doc profiles, with regard to their sex, their disciplinary field and the position they occupied at the time of the interview. The only factor that we did not control for in the interview recruitment drive was nationality.

However, reflecting the unequal levels of internationalisation among the different academic disciplines, SSH post-docs are more likely to be Swiss, whereas STEM post-docs are more likely to be of other nationalities.

Table 2. Interviewee sample (row %)

Variables & categories		STEM	SSH	Together (col. %)
Sex	female	50	50	50
	male	50	50	50
Age group	<30	10	0	5.3
	30-34	60	44.4	52.6
	35-39	20	22.2	21.1
	>40	10	33.3	21.1
Nationality	Other	90	20	55
	Swiss	10	80	45
Status	AcadPerm	40	30	35
	Post-Doc	60	70	65
Total (N)		10	10	20

The (semi-structured) interviews were carried out from a "life story" or biographical perspective (Bertaux & Kohli, 1984). We invited the interviewees to speak about their academic profile, employment and family trajectories, in order to better understand their vocational aspirations and choices, their expectations and their representation of academic careers. Because our main focus was the analysis of gender inequalities at the early stages of academic careers and the institutional practices from a gender perspective, we also asked questions about their personal experiences of gender relations at work, and about their vision of work-life balance.

In this report, we have focused on how our interviewees talked about academic work in general and their own career aspirations. Our main aim was to analyse their evaluations and representations of academia in order to understand how they might shape the way they deal with institutional recommendations for early stage academic careers.

2. REPORT ON QUANTITATIVE DATA

The aim of this first quantitative section is to give an overview of gender practices in the construction of academic excellence at the UNIL – and, in so doing, to highlight the consequences of these practices in terms of career inequalities between men and women.

It should be noted that we have not been able to gather all the data mentioned in the guidelines – in most cases because human resource or staff management practices vary strongly from one department to another. There is no systematic follow-up of former UNIL employees, for instance. Thus we do not know what becomes of post-docs or lecturers if they leave the institution. Data on research projects is also incomplete, since

there is no central service responsible for mapping on-going research projects in every department. The last kind of missing data is that on academic employees' teaching time. We did not receive any response to our mails asking for the exact number of courses taught in each position. One must also note that, at the UNIL, job descriptions do not distinguish between mandatory and elective courses. So it may be expected that the "real" number of teaching hours is similar to that specified in the work contract (for Senior Lecturers and Professors at least).

2.1 Gender equality in working conditions

2.1.1 Staff sex composition in SSH and STEM

Comparing our two target departments and the UNIL staff composition (Fig. 1), one must note that the overall structure of academic positions differs between the SHS & STEM domains.

In SSH, the "Assistants" (i.e. PhD students hired for teaching tasks) represent approximately one third of all employees. In this department, Teaching Assistants are thus the largest staff category, since the other employee categories each represent no more than 15% of the whole staff.

In STEM, the situation differs: although "Teaching Assistants" also represent a large part of the total staff (around 20%), the largest staff category is here the "PhD Assistants" (i.e. post-docs hired on fixed-term positions with a mixed load of teaching and research). This strong over-representation of precarious post-doctoral positions in STEM is mainly due to the development of several research projects funded by the Swiss Confederation or the European Union since 2000, as previously noted in our WP6 qualitative report (Bataille 2016).

In both departments, the ratio of academic employees at the top of the hierarchy and/or in tenured positions is thus pretty low (0.35 in SPP, 0.16 in STEM). This is especially the case in STEM, where intermediate and potentially stable positions are rare (5.5%) and where the Professors represent only 12% of academic staff. This large PhD and post-doc "bulge", which can be observed in many Swiss universities (Bataille 2016) makes access to professorships particularly slow and competitive. Figure 1 nevertheless shows that the pressure on professorial positions is particularly strong in our two target departments, since the ratio of professor and tenured academic position to other academic employees is 0.46 for the UNILas a whole.

Such a strongly competitive academic context appears to particularly affect the careers of women. Indeed, Figure 1 shows that few women have reached a "professorial" position in the two departments – and especially in STEM, where only 1.4% of female employees are professors while 12.2% of male employees occupy a comparable position.

Figure 1. UNIL, STEM and SSH staff Number and sex composition in % (2013)
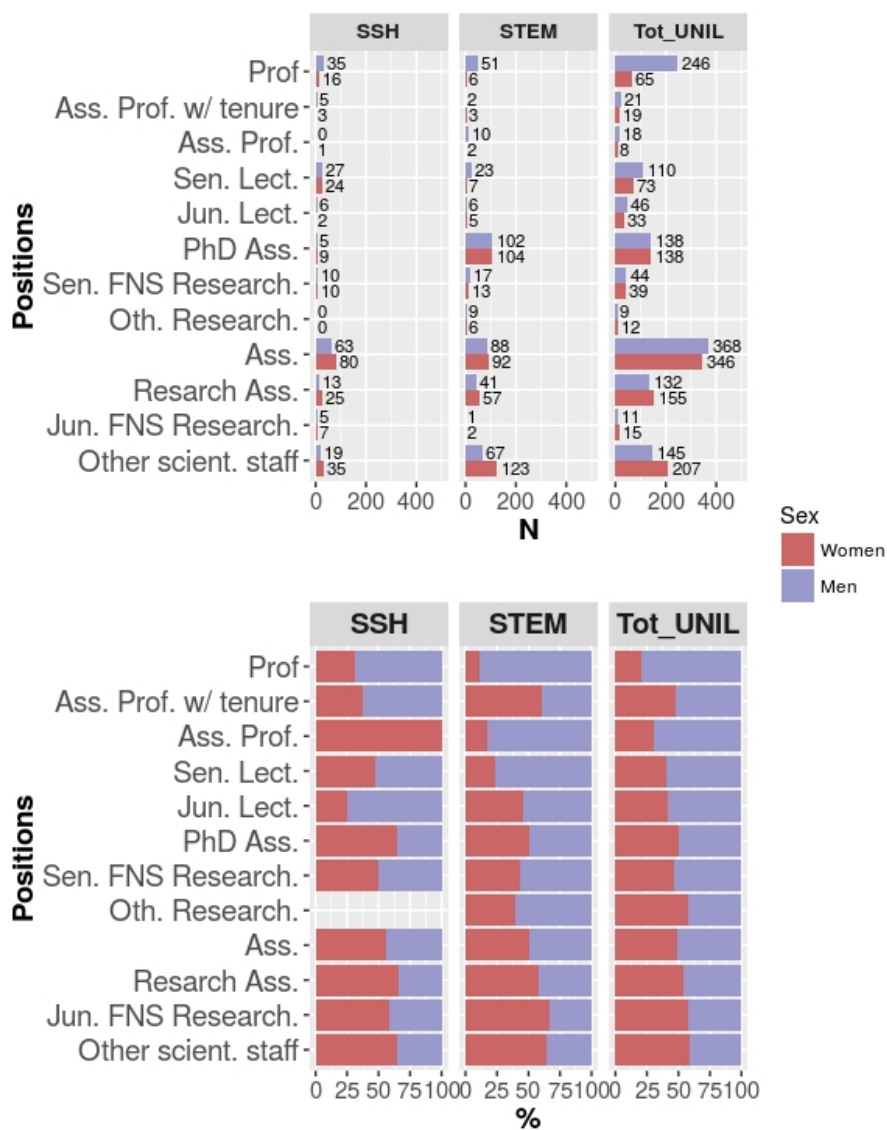
Source: UNISIS

2.1.2 Student sex composition in SSH and STEM

Figure 2 shows the feminisation of the student population according to their level of qualification (Bachelor, Master, PhD).

At the UNIL, the lower level of diploma (Bachelor) is a little more feminised than the higher one (PhD). The feminisation trends of each level of diploma are similar in SSH and STEM. Such trends – recalling the famous "scissor diagrams" – have been underlined for a long time by the many studies on the feminisation of the higher education system, such as the several waves of the "She Figures" survey conducted by the European Commission since 2003 (She Figures 2003, 2006, 2009, 2012).

Figure 2. UNIL, STEM and SSH student composition by gender in % (2013)
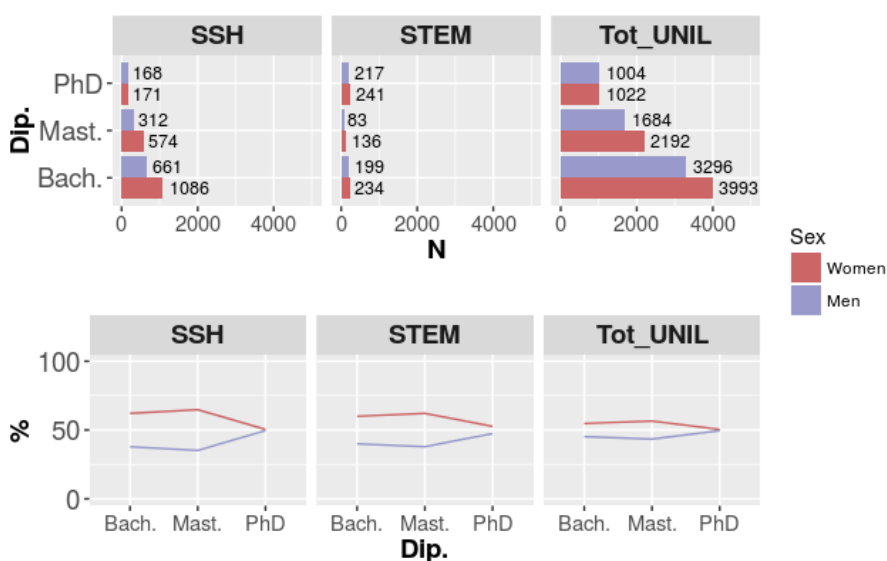
Source: UNISIS

2.1.3 Concluding remarks

The main aim of this first subsection has been to give an overview of the staff and student sex composition of our two target departments, in order to map gender equality in terms of working conditions. We have seen that, in our two departments and at the UNIL, we can observe most of the trends already underlined in the literature on gender inequalities in higher education. Women are thus rare among Professors – in STEM and in SSH – and more numerous at the lower levels of the academic hierarchy. They are also less likely to be PhD students than undergraduates.

One must nevertheless nuance the too homogeneous picture we have just drawn. While this "traditional" gendered structure is undoubtedly observable in STEM, this is less true in SSH. Indeed, some of the intermediate categories of the academic hierarchy (such as

Senior Lecturer or Senior SNSF Researcher) seem almost balanced in term of sex composition in SSH. But such a "balanced" situation does not mean that in these staff categories women and men benefit from similar working conditions, equal career prospects, etc.

In the next subsection, we will therefore take a closer look at the intra-category gender inequalities, which are rather strong among these intermediate positions, as will be seen.

2.2 Gender equality in career development

2.2.1 Gender (in)equalities at both ends of the appointment process

We start this subsection on "gender equality in career development" by examining gender balance at both ends of the academic hierarchy – i.e. among PhD candidates and among the Faculty Councils and the Dean's Office members.

Table 3 represents the feminisation of different categories of PhD students who were registered at the UNIL between 2010 and 2013: the students enrolled as PhD candidates in the autumn semester ("PhD students"); those who began their PhD during the given year ("New PhD students"); and those who completed their PhD during the given year ("PhD completed").

Table 3. PhD students in STEM and SSH (2010-2014)

Status	Department	Sex	2010	2011	2012	2013	2014
PhD students	STEM	Men	303	327	349	359	369
		Women	329	358	366	393	413
		% Women	52.1	52.3	51.2	52.3	52.8
	SSH	Men	141	138	144	168	143
		Women	163	163	166	171	172
		% Women	53.6	54.2	53.6	50.4	54.6
New PhD students	STEM	Men	46	41	58	37	54
		Women	46	40	59	60	77
		% Women	50	49.4	50.4	61.9	58.8
	SSH	Men	8	7	12	15	15
		Women	19	9	17	18	24
		% Women	70.4	56.3	58.6	54.6	61.5
PhD completed	STEM	Men	49	49	55	68	61
		Women	56	52	68	65	71
		% Women	53.3	51.5	55.3	48.9	53.8
	SSH	Men	9	10	8	9	10
		Women	5	14	14	18	21
		% Women	35.7	58.3	63.6	66.7	67.7

Source: UNISIS

The results presented in Table 3 indicate that no significant variations occurred in either SSH or STEM regarding the feminisation of the total number of PhDs registered between 2010 and 2014. As noted in our previous subsection, at this level, women make up on average half of the students.

Within the other PhD categories, some interesting trends can be analysed. For the category of those starting a PhD (1st year of registration) feminisation increased STEM by nearly 10 percentage points during these five years, from 50% in 2010 to 58.8% in 2014. Thus, one may wonder if the "scissors" structure presented before will still be true in five or ten years time, since women are now over-represented among new PhD candidates. Such changes can be interpreted as a consequence of women's educational successes, observed in many Western countries since the early 1970s (Baudelot and Establet 2001; Lemel and Noll 2002). In Switzerland, an "equalisation of male and female educational chances on the tertiary level" has taken place since the end of the 2000s (Leemann, Dubach, and Boes 2010, 319). Nevertheless, one may recall that such phenomenon is not only a mechanical consequence of the increasing feminisation of lower qualification levels (Fassa and Kradolfer, 2012). It also reflects changes in institutional practices or in the relationship of women and their families to gender equity issues.

In SSH, there is no comparable phenomenon. There are large variations during the period, but the numbers are too small to make a robust interpretation. It must simply be noted that, within this department, women are regularly over-represented among new PhD students too, although their proportion tends to decrease a little during the period.

Looking at the feminisation of those who completed their PhD, there is no significant variation in STEM between 2010 and 2014. Over this entire period, women represented around 50% of the PhDs awarded. At the beginning of the 2000s, the average time for completion of a doctoral degree in STEM at the UNIL was 8.8 semesters (approximately 4 years) (Bataille and Goastellec 2015, 187).

Thus, comparing the feminisation of the "new PhD studants" in 2010 and the feminisation of the "PhD completed" category in 2014, allows us to calculate approximately women's attrition during the PhD years. With 50% of women among the "new registrations" in 2010 and 53.3% among those who completed their PhD in 2014, one can conclude that there was no attrition of women students during this period in STEM.

In SSH, the average time for completion of a doctoral degree at the UNIL was close to that in STEM (9.7 semesters) (Bataille and Goastellec 2015, 187). Thus one can also give an approximation of women's attrition during the PhD years. And one must note that there is no significant attrition during the period analysed here (see Table 3).

Nevertheless, as will now be seen, the feminisation at the other end of the academic hierarchy (i.e. among the decision-making bodies in each department – see Figure 1) indicates strong gender inequality inertia.

Before we present the composition of the Dean's Office and the Faculty Council (the two main decision-making bodies in each faculty), some information is needed on the running of the departments at the UNIL.

The management structure of the seven faculties reflects that at the top of the UNIL. Each faculty is led by a Dean (and his/her vice-Deans) on the one hand and a Faculty Council on the other hand. The Deans and Vice-Deans are elected by their Faculty Council and are nominated by the Rector. They are chosen within the professorial members (*corps professoral*) of each faculty. The Faculty Councils are composed of

representatives of the different bodies of the faculties. Deans and their Vice-Deans are elected for three years and can be re-elected once consecutively. Faculty Councils are elected for two years, and their members can be re-elected without restriction.

Within each faculty, the attributions of the Dean's Office and the Faculty Council are not the same in terms of managerial or financial decision-making. All the faculties are strongly independent in terms of their administration and organisation. They each have their own regulations according to their institutional history. Nevertheless, in SSH and STEM, the Dean's Office has to make a financial budget proposal each year to the Faculty Council, mainly based on the funding allocated by the university to the faculty. The Faculty Council can accept or reject this proposal. Moreover, every appointment to a professorial position and on a stable (or tenured) lecturer position has to be approved the Dean's Office and by the Faculty Council.

Table 4. Gender structure at the top of the SSH and STEM since 2010

Dept.			2010–2012				2012–2014			
			W.	M.	Total	% W.	W.	M.	Total	% W.
SSH	Dean's Office	Dean	0	1	1	0.0	0	1	1	0.0
		Vice-Dean	1	2	3	33.3	1	3	4	25.0
	Faculty Council		17	25	42	40.5	21	23	44	47.7
	Total		18	28	46	39.1	22	27	49	44.9
STEM	Dean's office	Dean	-	-	-	-	1	0	1	100.0
		Vice-Dean	-	-	-	-	0	4	4	0.0
	Faculty Council		-	-	-	-	16	28	44	36.4
	Total		-	-	-	-	17	32	49	34.7

Source: Dept. websites

Women are thus largely under-represented within these decision-making bodies in both SSH and STEM. Even if the STEM Dean position has been held by a woman, since 2012, the feminisation of the rest of the Dean's Office is nil – and the feminisation of the Faculty Council is fairly low (only 36.4% in 2012-2014). In SSH, the feminisation of the Faculty Council increased during the period. Nevertheless, women represented less than a third of the Dean's Office membership during these four years.

To conclude this subsection, two main results have to be highlighted:

In recent years, women's representation among PhDs has improved. The proportion of women among new PhD students has globally increased in the two departments. In both STEM and SSH, women represent more than 50% of the PhD candidates. Women are also increasingly likely to complete their thesis.

In decision-making bodies (Dean's Office and Faculty Council), women are nevertheless strongly under-represented – and they are also under-represented among professors.

Even if such results are not entirely surprising, they show that analysis of the period between the end of the PhD and appointment to a stable academic position is crucial for

a better understanding of the low proportion of women at the top of the academic hierarchy.

2.2.2 A gendered analysis of UNIL appointment processes

In this subsection, we will thus focus on the analysis of the appointment processes to stable positions in our two departments, in order to give a better understanding of the institutional mechanisms underpinning the progressive disappearance of women between the end of the PhD and appointment to a stable academic position.

"Promotion", "Recruitment" and "Confirmation": three gendered routes to professorship

Data on promotion or the creation of new professorships at the UNIL is hard to find. Unlike other countries – the Netherlands, for instance, where the records of all promotion and/or appointments processes are publicly available (Brink and Benschop 2011) – there is no systematic documentation of such processes at the UNIL. Indeed, at the UNIL, files documenting the appointment processes are considered to be confidential. Nevertheless, thanks to the work done by the "Bureau de l'égalité" (BEC) for their reports on gender equality at the UNIL, we have had access to good quality data in order to quantify the appointments made between 2010 and 2013.

Moreover, as previously noted, the lack of harmonised data on academic appointments is also due to the highly decentralised UNIL governance model. As in many other areas, practices in terms of human resources vary from one department to another. Thus, because the ways of appointing Senior Lecturers differ strongly between departments, we gathered comparable information in STEM and SSH for appointments to professorial positions only.

Even if our data are partly limited, some interesting trends can be observed. Figure 3 shows the total number of appointments to a professorial position – either permanent (Ordinary Professor, Associate Professor) or not (Assistant Professor) – between 2011 and 2013, according to the department and the method of appointment. We distinguished three methods of appointment: appointment by a public "call for candidatures" (recruitment)[8]; the appointment through the promotion of someone already employed by the Unil (internal promotion); the confirmation of tenure-track candidates (confirmation). Different kinds of assets are needed for success in these three types of access to professorship:

-        in a "promotion" process, one may suppose that social capital accumulated within one's institution is the key asset;

-        in a "recruitment" process, being well integrated in the local social networks is less crucial than having gathered many tokens of excellence in research activities at an international level (and secondly, high-level skills in teaching and academic management);

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[8] Of course, this type of appointment may also concern candidates who were previously employed within the recruiting institution, usually on fixed-term, non-tenure-track contracts.

-        in a "confirmation" process, a mix of these two kind of assets is needed, since being recruited on a tenure-track position implies having gathered enough scientific capital on the one hand and being confirmed in this position implies being considered a good colleague and having developed enough social capital on the other hand.

Figure 3. Appointments to professorial positions in STEM and SSH (2011-2013) by gender
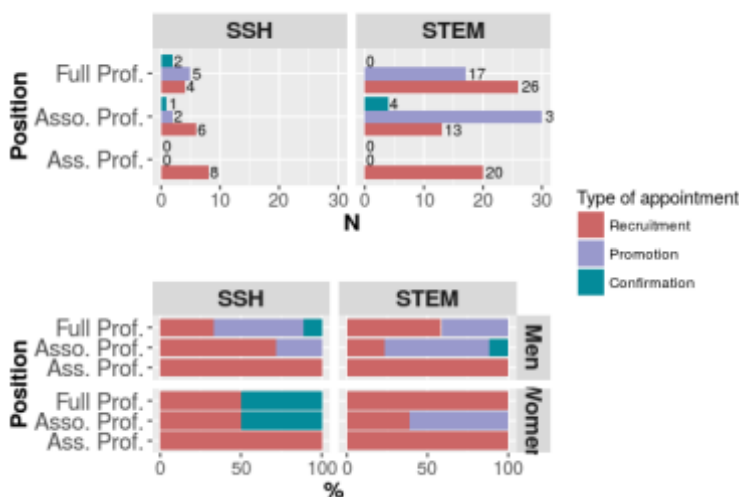
Source: BEC

First, Figure 3 shows that appointment to a professorial position through a promotion process seems to be slightly more common in STEM than in SSH. This first result may appear counter-intuitive. Indeed, the Life Sciences academic field is often cited as a reference for fostering a scientific organisation based on international competition and objective evaluations. Conversely, the social sciences are more often suspected of inbreeding (Godechot and Louvet 2008). These two assumptions are largely invalidated by our analysis.

Secondly, in STEM and in SSH, the ways of reaching a permanent professorial position (as Associate or Full Professor) appear clearly gendered. Indeed, most of the women who reached such positions have been appointed through the "recruitment" channel. By contrast, the men appointed to these kinds of professorial positions since 2011 tend to have been promoted.

Starting from this last result, one may hypothesise that (local) women are less integrated in local networks than men – as is often the case in many academic institutions (Backouche, Godechot, and Naudier 2009).

Thus, those women who are able to reach professorships in this context are more often those who come from outside the institution and who directly apply for professorial positions instead of following an insider pathway, from a Senior Lecturer or Associate

Professor position to a Full Professor appointment. Other research on the "leaky pipeline" in Switzerland has shown that women tend to be less integrated than men in local and international networks (Leemann, Dubach, and Boes 2010). Understanding gendered access to professorships in the UNIL context may shed light on the social mechanisms that lead women to be less integrated in local networks than men.

Appointments at the lower level of the academic hierarchy: less standardised processes for more gender inequalities

As already noted, appointment to academic positions (especially on A or B grade) is decided by a small committee of internal and external academic peers and is subject to validation by the Faculty Council. From application to interview and then to final hiring, most stages of this procedure are not public, especially the first stage between applying for a position and being invited for interview. Although systematic information at this first level is really hard to find, we did have access to information concerning the appointment of academic staff for the SSH department, because some members of our team work on other projects on equality within this department.

Figure 4 presents the sex ratio at each stage of the process for all appointments in the SSH department in 2013.

The graph based on this incomplete but precious data source shows an interesting phenomenon. Contrary to expectations, inequalities within the appointment processes seem stronger for MER or MA positions and non-tenured professorial positions than for tenure-track professorial positions (Ass. Prof. w/tenure track) and professorial positions (Prof.). For MA, MER or Ass. Prof. positions, feminisation decreases between the "application" stage and the "hiring" stage. For appointments at the top of the academic hierarchy, however, between the first stage of the process and the final appointment, feminisation increases slightly in relative terms.

As previously mentioned, appointment practices for academic but non-professorial positions (i.e. the "intermediate" academic positions) vary among departments. Moreover, since such appointments processes are confidential, it is very difficult to learn more about the concrete practices of the appointers. These last remarks may indicate that when practices are less standardised and more informal – as is the case for MA appointments at the UNIL – gender inequalities tend to increase strongly. And, as will be shown in the next subsections, gender inequalities may be stronger for these intermediate academic positions than at the top of the academic hierarchy.

The career sequences between the end of the PhD and appointment to a professorial position appear here as strongly shaped by gender inequalities. Analysis of employment conditions (in terms of salary and working time) during this "intermediate" period confirms this first impression.

Figure 4. Feminisation at each stage of academic appointments in SSH (2013)
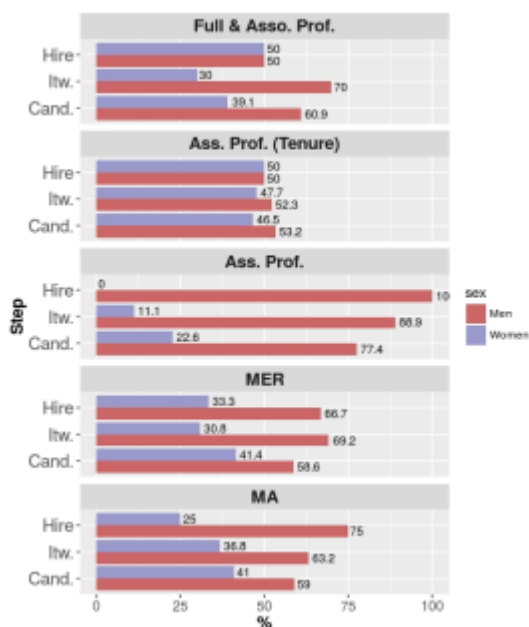
Source: RH SSH Department

2.2.3 Pay and working time

Figures 5 and 6 represent the dispersion and the mean of salaries in the two departments for each position (except the "Junior SNSF Researchers", because of missing data and too small numbers).

Two types of staff categories can be extracted from Figure 5: staff categories where dispersion of salaries is narrow – i.e. where the boxes are small – and those where dispersion is large.

The dispersion of salaries is fairly low among Assistants, Research Assistants or Assistant Professors (with or without tenure). Such dispersion may indicate that conditions of employment are relatively standardised among this staff class – i.e. they do not vary from one individual to another. On Assistant Professor positions (PTC or not) for instance, everyone is paid according to the same wage scale (which is indexed on the employee's length of service from the beginning of his or her contract as Assistant Professor at the UNIL). This is also normally the case for Assistants and Research Assistants.

Figure 5. Annual salary per position and sex in STEM and SSH in 2013

Source: UNISIS

Figure 6. Working time per position and sex in STEM and SSH in 2013
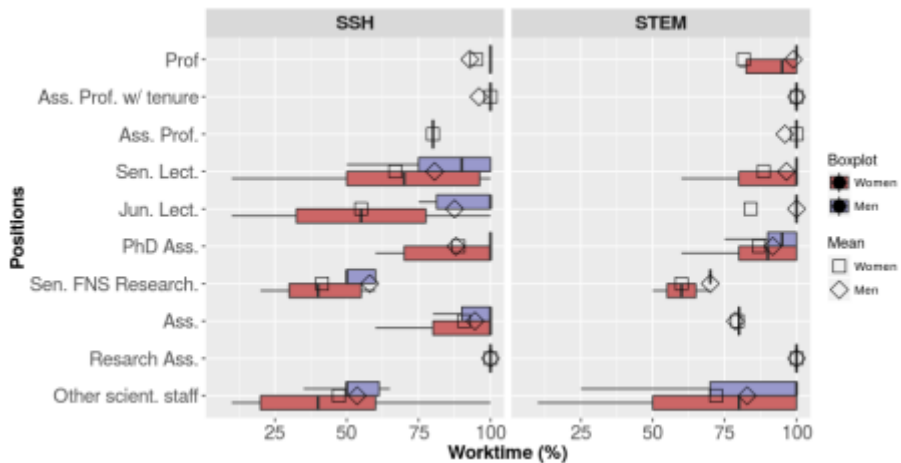
Source: UNISIS

Salary dispersion is greater among Professors (Full Prof. + Asso. Prof.), and among other categories of staff. But it is even larger among the "intermediate" academic positions – especially in the SSH department. Moreover, women's median salaries are often lower than men's in these categories.

One may wonder if such wage differences are linked to age or length of service. Indeed, categories where wage dispersion is larger (especially "senior/junior lecturer" and "other scientific staff") are the ones where previous job experience is taken into account by the UNIL Human Resources to determine the wage of employees. Thus, the wage inequalities underlined might reflect differences in terms of recognised previous job experience between men and women or differences of ages between the sexes. But, as there are no significant age differences between men and women in different academic positions, this large dispersion may most probably indicate important variations in terms of employment conditions among individuals classified in these staff categories. And such a lesser standardisation of employment conditions seems to favour gender inequalities.

These first impressions are confirmed by analysis of the results presented in Figure 6. This second figure shows the dispersion of working time among the various staff categories. It appears clearly that part-time is more common in these "intermediate categories" than at the two ends of the academic hierarchy – i.e. the PhD Assistants and the Professors respectively. It should also be underlined that in these categories, women are in general more likely to be employed part-time than full-time. They are also more likely to be hired on short part-time contracts than men. In SSH, women's median working time is close to 50% among Junior Lecturers, and closer to 70% among Senior Lecturers. For men in these staff categories, median working time is between 90% and 100%. A large part of the salary differences can of course be explained by these huge disparities.

2.2.4 Concluding remarks

In the second subsection of this "quantitative part" of the report, we have focused on gender inequalities in career development within our two target departments. Our analysis shows that inequalities between men and women are deeper in staff categories located in the middle of the academic hierarchy. We have seen that, in these "intermediate" levels, appointment processes and conditions of employment may be less standardised than among Professors or Assistants. We hypothesise that this lesser standardisation may constitute a fertile ground for the manifestation and consolidation of gender inequalities.

2.3 Gender equality in research and teaching

In this third subsection, we will examine one other aspect of the working conditions: the distribution of research and teaching tasks among employees of our two target departments. Research on academic work from a gender perspective has shown that devalued tasks related to "academic housework" (such as teaching) are unevenly distributed between men and women – and that this may explain the particular difficulties women face in reaching a stable academic position (Heijstra, Steinthorsdóttir,

and Einarsdóttir 2016). Thus, one may expect such a phenomenon also to be observable in our two departments.

2.3.1 Research projects

Table 5 gives a first overview of how research activities are funded at the UNIL.

In the last decade, research funding has mainly come from the Swiss National Science Foundation (SNSF) and various partnerships with industry. The European Union contribution is not insignificant (12.1%), but is minor compared with the two previous ones.

Unfortunately, such data do not include a gender perspective and are not available for all faculties. As already noted, data on on-going research project are not systematically collected by the UNIL central services. When we asked for such data, the office of the Vice-Dean in charge of research wrote to us: "Having consulted our archives and talked to my colleagues, the only information I have been able to get (see enclosed) is very general and only gives the total amount of research funding the section received in 2013, with no breakdown by the title of the project or the status of the project leader. Unfortunately, we just don't seem to collect the kind of information you have requested" (email dated 25/03/2015). Thus, we have to gather data on research projects in our two target departments one by one. The result of this systematic data search is presented in the next two tables (Tables 6 and 7).

Table 5. Research project funding from 2004 to 2013

Funding institution	Abbrev.	Funding (CHF)	In %
Swiss National Science Foundation	SNSF	20,459,120	43.7
Commission for Technology and Innovation of the Swiss Federal Administration	CTI	739,487	1.6
European Union	EU	5,677,423	12.1
Partnerships with industry (e.g. pharmaceutical companies) and special mandates	Other third party	19,957,594	42.6
Total		46,833,624	100

Source: UNISIS

Table 6. Research projects in the STEM department that started in 2013

Academic position of lead researchers	Sex	Funding	SNSF - funding category
MER, Privat-Docent	M	1,200,000	Sinergia
MER, Privat-Docent	M	595,000	Disciplinary project funding
MER, Privat-Docent	F	300,960	Disciplinary project funding
MER	F	300,960	Disciplinary project funding
Full Professor	M	6,000,000	Interdisciplinary project funding

Academic position of lead researchers	Sex	Funding	SNSF - funding category
Full Professor	M	792,580	Disciplinary project funding
Full Professor	M	699,222	Disciplinary project funding
Full Professor	M	713,880	Disciplinary project funding
Full Professor	M	713,880	Disciplinary project funding
Full Professor	M	648,441	Disciplinary project funding
Full Professor	M	840,000	Disciplinary project funding
Full Professor	F	918,000	Disciplinary project funding
Full Professor	M	280,000	Agora
Associate Professor	M	424,000	Disciplinary project funding
Associate Professor	M	493,920	Disciplinary project funding
Associate Professor	M	621,888	Disciplinary project funding
Associate Professor	M	438,000	Disciplinary project funding
Associate Professor	F	343,960	Disciplinary project funding
Associate Professor	F	562,920	Disciplinary project funding
Associate Professor	F	638,880	Disciplinary project funding
Associate Professor	M	200,000	Agora
Ass. Professor – Tenure Track	M	511,916	Interdisciplinary project funding

Source: Dept. websites

Table 7. Research projects in the SSH department that started in 2013

Academic position of lead researcher	Sex	Funding	Funding source and category	Gender content
Assistant Professor – tenure track	M	336,214	SNSF Disciplinary project funding	Yes
Assistant Professor – tenure track	F	380,358	SNSF Disciplinary project funding	No
Assistant Professor – tenure track	M	171,312	SNSF Disciplinary project funding	Yes
Associate Professor	F	402,643	SNSF Disciplinary project funding	Yes
Associate professor	M	55,869	SNSF Disciplinary project funding	No
Associate Professor UNIGE & MER UNIL	F	183,592 (UNIL) / 369,593 (total)	SNSF Disciplinary project funding	Yes
Full Professor	F	457,801	SNSF Disciplinary project funding	No
Full Professor	M	379,381	SNSF Disciplinary project funding	No
Full Professor	M	334,024	SNSF Disciplinary project funding	No
Full Professor	M	1,376,821	SNSF – Sinergia	No
Full Professor UNIGE & Full Professor UNIL	F	206,782	European Commission	Yes
Full Professor	F	1,133,605	SNSF – Sinergia	No

Academic position of lead researcher	Sex	Funding	Funding source and category	Gender content
		(total)		
Full Professor	M	161,067 (UNIL) / 600,000 (total)	SEFRI (State Secretariat for Education, Research and Innovation)	No
Full Professor	M	60,000	UNIL-EPFL Collaborative Research on Science and Society (CROSS)	No
MER	M	179,512	SNSF Disciplinary project funding	No

Source: Dept. websites

Table 8 sums up the main information regarding our focus within this section.

Women are largely under-represented among research project leaders and thus only a small share of the research funding is managed by women. This is especially the case in the STEM faculty, where research projects led by women represent only 16.8% of the total amount of funds allocated to research within the department. One can imagine that, with such an unequal distribution of funding, it will be difficult for women to redress the balance of power.

Such a distribution of funding partly reflects the lower feminisation of MER or Professorial positions within the two departments. Among funding project leaders or among MER or Professors in STEM, the feminisation is comparable. But this is not the case in SSH. Within this department, the feminisation of research project leaders is 10 percentage points lower than the feminisation of the MER or the Professors. In this department, men and women seem to be unequally rewarded for their research activities or unequally invested in such kind of task.

Table 8. Funding distribution according to the sex of the leader

	SSH			STEM		
		% Women	% Women on comparable positions in the department		% Women	% Women on comparable positions in the department
Total funding (CHF)	4,227,575			18,238,407		
(women)	1,173,375	27.8	40	3,065,680	16.8	17

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2.3.2 Distribution of teaching tasks

As previously noted, at the UNIL, the job descriptions do not distinguish between mandatory and elective courses. Only the total number of teaching hours is indicated, irrespective of the level or status of the course.

Table 9. Teaching tasks and positions

Positions	N. of courses taught in hours/week
Full professor	6
Associate professor	6
Assistant professor	6
Assistant professor with tenure track	5
MER	6-7
MA	5
Research staff (permanent or non permanent position)	Only research position
SNF senior researcher	Only research position
PhD Assistant with PhD	0-4 (Some PhD assistant are not responsible for independant teaching activities, other are independant)
Assistant	Assistant are not responsible for independant teaching activities, they help/assist the professors
Research Assistant	Only research position
SNF junior researcher	Only research position

Source: UNISIS

In SSP, all permanent academic staff (professors and Senior lecturers) have exactly the same teaching load (6 hours / week), although this may include classes of different sizes and complexity. In the STEM faculty, expectations concerning teaching for tenured professors are usually very low (a few hours a semester), but no data is available on the situation of Senior lecturers.

2.3.3 Concluding remarks

In the third subsection, we have focused on gender inequalities in research and the distribution of "academic housework". Even if we have not been able to compare the exact distribution of teaching tasks within our two departments, information on funding seems to indicate that, in SSH, women are a little less rewarded for their research activities than men.

2.4 Family/Work-life balance

Our last "quantitative" subsection will be devoted to the analysis of the employees' periods of leave. It is important to note that despite intense debates in the public and political sphere in 2007 (Valarino and Bernardi 2010), the Federal Assembly has not adopted a bill on paternity leave. Switzerland is thus "the only European country where men do not have access to any kind of statutory parental or paternity leave" (Valarino and Gauthier, n.d., 1).

Figure 7. Types and duration of periods of leave by gender

in STEM and SSH (2013)
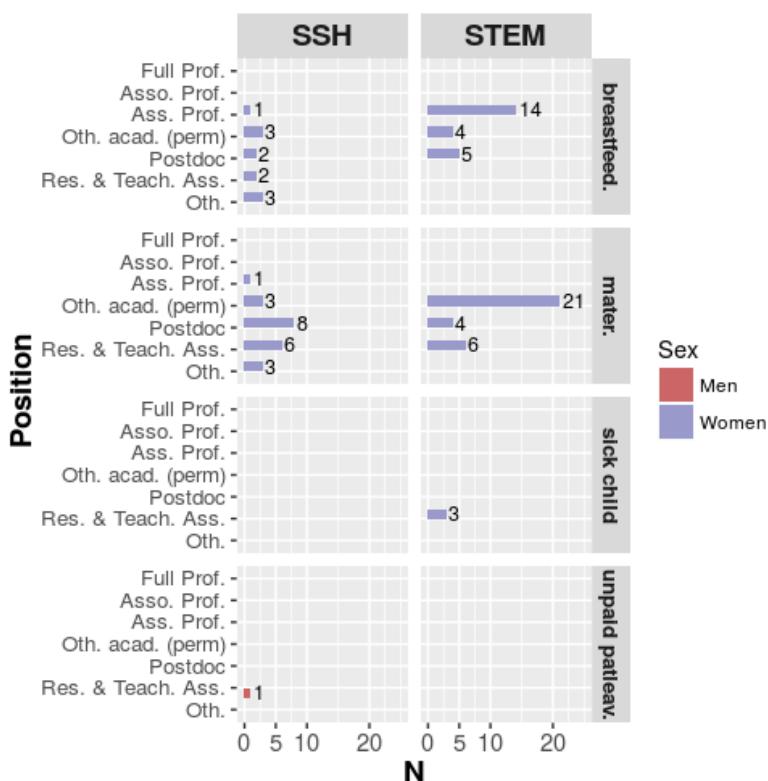
Source: BEC

Figure 7 reports all the periods of leave taken by staff members in 2013.

UNIL's administration distinguishes four types of leave: a 4 months "paid maternity leave"; a 1 month "paid leave for breastfeeding", which can be taken in addition to the previous one; an "unpaid paternity leave" of 6 weeks, which is the only way for men to "officially" take paternity leave; a "paid leave for sick child" of maximum 5 days.

Because of the specificities of the Swiss context concerning paternity leave, no men took leave for family reasons. Only one (probably young) man – a Teaching Assistant – took unpaid paternity leave in 2013 within the two departments. It should also be noted that no men have ever taken "sick child" leave, despite having the right to do so. These results show a very strong gap between men and women on this "leave" issue, which reflects how the "modified male breadwinner" Swiss gender regime (Le Feuvre 2015) can inform unequal gender practices at work.

No permanent professor took leave for family reasons. This may reflect the fact that employees appointed on these position are relatively older – and perhaps less likely to have young children. Nevertheless, one can also underline that women on more or less precarious positions are those who will be the worst hit by such a career interruption.

Figure 7 also shows that, in STEM, many women on tenured non-professorial positions took maternity leave in 2013. Many women "Assistant Professors" also did so. This may indicate that some of the women in STEM wait to reach a given stage in their careers before seriously considering having a child. The trends concerning maternity in SSH differ – and many maternity leave periods have been taken by post-docs.

One may wonder if such differences reflect age differences between women in SSH and STEM; but there is no significant difference between women of the two departments according to their position and their age.

Such a contrast seems rather to reflect differences in term of acceptance of maternity between the two departments. In STEM, where the norm of the masculine scientific habitus is particularly strong, women seem to delay motherhood so as not be diverted from the career track. This tendency to postpone motherhood has already been analysed in the case of French life sciences researchers (Marry and Jonas 2005). In SSH, such pressure seems lower, since women are more likely to take maternity leave in the early stages of their careers. The both departments' rules in term of maternity leaves reflect these differences. Indeed, when they have children, women employees on a temporary position who took a maternity leave can have a contract extension of 12 months (in SSH) and 6 months (in STEM). The larger proportion of women postdoc who took a maternity leave in SSH is probably a consequence of these rules differences.

3. REPORT ON QUALITATVE DATA

3.1. INDIVIDUAL TRAJECTORY

3.1.1. STEM Summary

Of the ten persons interviewed, four were on a type of track that can lead to a permanent job. All of them were aiming for stable professorial positions. The female Prof. PTC failed her tenure track but was hired on a Senior Lecturer position after applying for this position through an open competition.

Most of them were from a European country, with the exception of two women who were from a South-American country (one also having a European nationality). One was a Swiss citizen.

Compared with men, the number of women hired on temporary contracts is higher, mostly because they are more often on post-doc positions. They also outnumbered men as far as interruptions are concerned; the only man who interrupted his academic career (#32) was able to return to the University when his experience in a joint venture with a start-up ended, while the situation was more difficult for women: one interrupted her contract for maternity leave on two occasions and the other did not quickly find a job on her return from abroad (#35).

Table 10. STEM Summary

Variables	MALE	FEMALE
Nationality	1 Swiss (#30) and 4 European citizens (#23, #31, #32, #38)	1 North-American (#29), 1 South-American (#28) and three European citizens (#16, #17, #35)
Tenure tracks	2 Prof. PTC (#23, #38,)	1 Prof. PTC (#16)
Temporary	1 Fellowship Professor (with the prospect of becoming Full Professor) (#30) 2 post-docs (31, 32)	4 post-docs /First Assistants (#29, #17, #28, #35)
Permanent	0	0
Interruptions on career paths (more than 3 months)	1 (#32)	2 (#17, #35)
Previous working experience in the Department	3 (#23, #30, #38)	2 (#29, #35)
Total	5	5

After the interview, #16 failed her tenure track to a professorship. Nevertheless, she was lucky enough to be hired on a stable position in the same department after applying in an open competition for a Senior lectureship. In her view, her failure was due to the lack of publications in too short a time (4 years):

"In my case I think that was the problem, it was the calendar… so there I was, arriving from California, so the time it takes to get settled, in fact it takes a year to get a team together, that is, ready test-tubes in hand so as to [yeah] laughter… The work with the fellowships, because we can't do a thing as long as there is no money and in fact the money to start up your research is not, not provided by the university… first applying for external funds, getting your external funds, starting up, so well it took me a good six or nine months before I could really start the actual experimenting [ahum] and then you are assessed after four years so it's very short in fact in [ahum] in biology. Often it's, it's less than you need to finish a thesis for example [mm mm]; my students hadn't finished their theses so they hadn't published all their work…. So yes, in my case they… I had published something like four or five articles at the time when I was assessed; in the year after I published ten more articles, so [ah yeah] they came just a year too late and I… that was the main problem, it was the lack of publications [yeah, right] when I came up for assessment. I think my personal opinion is that it was based almost entirely on that."

Career paths

Career paths are described by some men (N/T and T) and by one woman (N/T – American) (#29) as smooth and without interruptions.

However, the men's careers are portrayed as highly planned and structured from the start, with very clear objectives. #30 and #38 have partners who used to be in academia, followed them in their international mobility as post-docs, and then left when their child(ren) were born. Coming back to Switzerland after this mobility was the "logical continuation" of being a post-doc:

"Going out was pretty straightforward [yeah]. So, I contacted, … … So I did my PhD in [another Swiss university] (…) I stayed almost one complete year as a post-doc in a lab where I did my PhD and during that time [ahum] I started to, you know, look at other laboratories, in particular in… in other countries, 'cos I wanted to go somewhere else, and which I'm interested in and actually all the laboratories I got really interested in were in the US [ahum], and so I started to contact them, and then during the summer I went to the US for… for a road trip and we visited different places [ok] to see whether we could imagine living there" (Male, #38).

In a similar way, #30 states that his post-doc international trajectory provided "ideal conditions for finding a stable post afterwards," since he first obtained a fellowship as "Professeur Boursier" through the SNSF and recently obtained a job as Full Professor. #23 described the same experience: after working for four years as a post-doc in Lausanne, he was offered a replacement as Junior Lecturer, during which time he was encouraged to apply for his PTC position: "… This is a quite unstable position, and then, after the two years, basically after the end of the first year, I was encouraged to apply for this position which was opened here."

Surprisingly, the same smoothness marked the career of #32, who managed to discover the world of private industry during a post-doc mobility (on a European granty) in a joint venture. His wife also followed him when they decided to come back in Switzerland, where he had studied: "It was from the time I left to work in a start-up, no, it wasn't that any more [ok] it was really, well, it shows you something else, another… another mentality and then in the end there's a lot more openness, I would say, to the world than… than in the academic world [ah yes]. We, well, we are rather enclosed in our own bubble. I… I find if that has its advantages, it's… we are more protected from… (?) than in some private companies, especially the… the small ones [mm mm]" (Male, #32).

However, a structured, planned career is less self-evident for #29 (Female, N/T), who experienced gender discrimination during her PhD in the USA. In addition, in her current situation, she has to manage two different part-time post-docs. As shown by this case, being a foreigner in Switzerland can become an extra challenge for some people, mostly women. #35 experienced difficulties in finding a position on her return from her own country, where she had obtained her PhD (Female, N/T)). #17 (N/T, 2 children) had her first career interruption after three years as a PhD student in France: her contract had come to an end and she became pregnant without having finished her thesis. She obtained a temporary position allowing her to teach (in France) but had to stop work for medical reasons during her pregnancy. Several months after her maternity leave, she finally started her post-doc in Lausanne, but became pregnant again and had another career interruption for maternity leave, against the will of her current boss. She lives on the French border with the younger child and her partner in France with the elder. This situation gives rise to many tensions, doubts and concerns.

Entry into the position (Access to the Department)

All the interviewees describe an open application process but a majority of them already had connections with the Unil, often through their PhD supervisor or a member of their PhD dissertation committee; they had all responded to international public calls either from Switzerland from other countries.

However, it is interesting to note that for one male researcher (#38), his mentor played a role in informing him of an open position: "When I went for a post in the US together with my girlfriend we were fairly… we wanted to come back to Switzerland, it was kind of our aim so pretty early I started to contact people in Switzerland that I knew from my PhD […] then in [another Swiss university] someone told me I should, actually you know. talk to people in Lausanne because my research would fit in very well. So I contacted the head of the department here, and… and then I came here to give a talk. He… he also indicated to me that in a… in a few months there would also actually be some new, uh, tenure track positions."

3.1.2. SSH summary

Of the ten persons working in the SSH Department, five were on tenure tracks, either as Lecturers (Junior Lecturer, MA, four-year contracts that could lead to a permanent position) or as Professors on tenure track. Six persons have another European nationality and four are Swiss citizens.

The other five are on temporary positions: two work as first assistants (this position is normally the first stage in an academic career after the PhD and the length of these contracts does not normally exceed five years: 1 year + 2 x 2 years), two are working as researchers, with their contracts linked to the length of the funded project secured by their supervisor, and the last one (a woman) is replacing someone as Senior Lecturer (MER)

Table 11. SSH Summary

Variables	MALE	FEMALE
Nationality	3 Swiss (#3, #4, #5) and 3 European citizens (#1, #10, #22,)	1 Swiss (#2) and 3 French citizens (#15, #33, #40)
Tenure tracks	1 Prof. – PTC (#3) 2 MA (#4, #22)	1 Prof. – PTC (#33) 1 MA (#40)
Temporary	1 researcher/ first assistants (#10) 2 first assistants (#1, #5)	1 researcher (#2) 1 replacement (#15)
Permanent	0	0
Interruptions on the career paths (more than 3 months)	2 (#3 and #4)	4 (#2, #15, #33, #40) amongst 2 for maternity leave- #33, #40)
Previous working experience in the Department	4 (#3, #4, #5, #10)	3 (#2, #15, #33)
Total	**6**	**4**

Since the interviews, three persons who were on tenure tracks have been promoted to stable / tenured positions (i.e. renewable six year contracts); one (a man) had his upgrading refused, and one woman is still on tenure track.

Career paths

Four persons had been on unemployment benefit since they obtained their PhD (2 men and 2 women).

One man remained without work for more than two years after his PhD. This experience led him to quit the academic environment; he worked as a public servant for two more years. After these two periods, he was able to re-join the academic path in his home country, where he managed to obtain a permanent position.

With this exception, the men's careers seem smooth compared to those of the women. They were supported by a mentor – often their PhD supervisor – who informed them of job opportunities in the Department (e.g. temporary positions, replacement opportunities), or even managed to have a position created that matched their skills.

The academic careers of the four women were interrupted, two for maternity leave (and for one of them with unemployment benefit too). The two other women had worked in other professional areas before joining academia; they described their own careers as atypical.

Their age is higher than the average for these positions. One of the women complained about her PhD supervisor and described her as the biggest obstacle she had met on her academic track. No women really mentioned any mentoring.

Entry into the position (Access to Department)

Most of them obtained their positions by responding to an advertisement. But they were also very knowledgeable about the Faculty: more than half of them had already contributed to its' teaching, either through replacements or as temporary lecturers.

"All that could lead to the creation of a post… as first assistant, that would make it possible to lighten… So yes, from that point of view it was, let's say. The idea that this post might be created, that suddenly I would be a candidate… let's say that that was made easier, yeah" (#1, Male, N/T)

Even amongst those who had not previously worked in the Department, the majority of those we interviewed were informed about the position they occupy by a mentor, who moreover in some cases encouraged them to apply.

These remarks lead us to consider that despite cosmetic openness, access to the department is restricted to people benefiting from a local supporter, who is normally a Professor they met during their PhD (supervisor or member of dissertation committee).

3.1.3. Comparative conclusion

Atypical trajectories are accepted for women in the SSH Department, while it seems totally impossible in the STEM Department. Therefore, maternity is an absolute obstacle on the academic paths of women in this Department as time is a central issue. Both men and women of the STEM Department agreed on that point.

The issue of work-life balance is nevertheless quite complicated in the SHS department as shown by the fact that women with children follow slower career path while the usefulness of family help is recognised by the men (#3, #22, #5).

3.2. ORGANISATIONAL CULTURE AND EVERYDAY WORKING LIFE

3.2.1. Summary for STEM

In which way is it connected with personal relations and the interviewees' professional self-fulfilment?

The personal relations among (horizontal) colleagues are not really mentioned by the interviewees. Collaboration is commonly mentioned by those in junior positions and the work environment is described as friendly, but mainly individualized. The culture is nevertheless agonistic, but the battle is between teams in different universities to be the first to publish "big stories".

Everyone stresses the fact that science is a highly competitive field, but they relate it to other labs in other universities (e.g. male researcher N/T (#30) because of the nature of research work).

In other cases, when it is mentioned, this is due to competitive relationships (a female researcher N/T (#29), "struggle for life"). Nevertheless, a few researchers (#38, #35) describe their lab as friendly or like a "family", but they also stress that a career requires politics and overwork, which leads some to quit academia (#31, #32 and partially #29).

In contrast, the relationship with their boss is described by several researchers (n=4) as supportive. Here is one example of a supportive relationship with a hierarchically superior researchers/professors (male, N/T, #30): "No, I haven't much… I haven't much… I wouldn't say that I, no I don't really think I've a mentor or… or adviser. Up to a point I've done things of course necessarily that the people in the department… they like me. The… the head of the department [ahum], he likes me fairly well, I worked with him when I was a student so in that sense, yes, I think that he has always, he has always supported me when I applied to be fellowship professor or that kind of thing, he has always supported me [ahum, ahum], I think that there… I have always had strong support in the department [right] but I don't feel I've had a mentor in fact."

Two female N/T researchers (#17, #29) attributed more negative values to such a relationship. While one of them does not feel supported by either of her two current post-doc supervisors, the other one expresses an ambivalent and complex relationship with her current supervisor: "He's an extremely nice, he is really very, very nice [right] a bit crazy [yeah] [laughter]." While these qualities of her boss are underlined, he also shows little empathy regarding her pregnancy: "Then you're pregnant, you're exhausted and then you've just given birth and you're exhausted [laughter] [yes] so… well, so yeah, so he expected me to work during my maternity leave. I… I… I… wanted to be able to and it wasn't for lack of goodwill but it's… it's impossible, right [mm mm], and moreover I think I've produced a particularly demanding baby [laughter] (laughter) so… yeah, no [right]. no, working during maternity leave – men need to learn it can't be done [yeah, yeah] [laughter]."

Which elements are recognised by the interviewees as the most supportive for or hindering of their career development?

A supportive element of some male researchers' career development is the relationship to their mentor or boss (4 men, 3 being T and another one N/T). For instance, one male researcher (#30) explains how the Head of Department played a key role in his applications, by writing supportive letters. Also, another interviewee (#38) underlines the Head of Department's support regarding his family's needs. The Head also offered to hire his girlfriend (also a biologist, who had stopped her career in order to facilitate his own) if necessary. "The head of our department also told me that he would support me if I wanted to do one office day […]." "My girlfriend can't work at the moment but I think if she needed to, to (?) money [ahum ahum ahum] and there would be quite some support from the department to, to give her the job and [ok ah uh you…] not, not for a long term but [yeah] temporary uh, [ok] so there's a lot of hum, departments very supportive [ok] in in this respect." The certainty of a job for the future is also a supportive element, as expressed by one female researcher (NT), who wishes to stay in academia but not to advance in an academic career: "My supervisor made it clear that you shouldn't worry, you will always have a, a position here [yeah] and you don't need to worry that the next year I won't renew you or something [ok, ok, ok]. I was probably one of his, one of his post-docs who published the most, so [ahum] he really appreciated it and expressed it openly and, and I felt uh, yeah I'm protected in that sense" (#35)

However, many hindering elements are underlined across the interviews:

The non-anonymous evaluation of publications, mentioned by a researcher who has decided to leave academia (Male, N/T, #31), "disgusted with the political system." Politics as a hindering element is also highlighted by another male researcher (N/T), who sees it as dominant within science when it comes to career: "At a certain level it becomes something of a political game [ahum], in the end science becomes somewhat secondary, in any case it's true that some, some bosses still manage to make time to read articles, etc. in science. I think mine misses that a bit, he tries to come back as often as possible to the lab, to the experiments, etc. but otherwise there's a lot of paperwork, a lot of […]" (#32).

However, other hindering elements are described by women researchers:

Part-time jobs are seen as a way to exploit post-docs (Female, N/T, #29). For this researcher, having an 80/90% part-time job is used by the system to justify low salaries, with the excuse that post-docs are still in training: "No one is invested in our future careers very much… like I mean, for both of my bosses (…) and so I really, feel like this idea that we are in (pronounced in French:) 'formation', that we're being taught something, is really… wrong. because it's an excuse for paying us less, they… it's an excuse for making our contracts temporary, and… and they don't do anything to give back."

Being a non-European foreigner increases this disadvantage regarding post-doc positions, since the type of visa that is given is limited in time and therefore puts on pressure to find other job opportunities. According to this interviewee, a post-doc is an "exploited temporary worker".

Which elements of micro-politics (e.g. distribution of space and equipment, distribution of variously valued tasks in research and teaching) define internal organisational hierarchy?

Money is available in Switzerland and no one complained of a lack of space or equipment or money to travel.

Only one female researcher (N/T, #29) mentioned a poor organisation of work tasks among post-docs in her department, mainly as far as the share of teaching duties was concerned.

3.2.2. Summary for SSH

In which way is it connected with personal relations and the interviewees' professional self-fulfilment?

In the SHS department no one spontaneously mentioned any personal relationships. When asked, the interviewees described academic life as a quite lonely place, "Everyone works a bit separately" (#25), team work never being raised as an issue.

Concerning relations that involve superior hierarchical positions, the career tracks nevertheless show that personal relationships play a huge role ("I have never been anyone's *protégé*, it's very untypical now [yeah] and especially now I've reached this point" (#40), as does the fact of having previously worked in the department: "I was a bit… I had rather the profile of the internal candidate with whom you can start working straight away, who won't create problems [ahum] and who is close to what you are doing, you know, yes, in [ahum] that sense I had [yeah yeah] an advantage, yes." (#3)

Which elements are recognised by the interviewees as most supportive for or hindering of their career development?

Half of the people working in this department said that they benefited from of some kind of local support when they were hired in their current positions (mostly their PhD supervisor). This support can go as far as the creation of a position for someone: "The prof. I was working with was quite involved in that and he developed courses quite a bit there [in another Higher education institution], let's say there was anyway the idea that all that could lead to the creation of a post … for a first assistant, that would take some of the load off him there. So yes, from that point of view that was [ahum] let's say, the idea that this post might be created and then immediately I would be a candidate … let's say that in that respect [ahum]… it helped, yeah" (#1).

The need may come from the requirement to provide teaching or from the Faculty's policies in choosing to develop a particular area of knowledge: "My luck was precisely that this post was created in a… in a university that is more open to these… posts [with that specialisation] compared to other universities. I think I would never have been hired or not easily in another university […] with a profile like that it's very complicated to… to get a post as prof. except in a university like this one which is open to that, but elsewhere it would be very complicated." (#33).

Those who were not in such a position either had to build their own network – "I started so to speak to build, to build up a big network that would enable me to carry on that gave me strength energy and recognition because otherwise I think would eventually have given up" (with the first thesis supervisor) (#40) – or to find a temporary teaching position, as this constitutes a major access to post-doctoral positions. In the whole group of interviewees, one man and one woman entered the Faculty because their work enabled the organization to address urgent teaching needs within their department.

The organisational culture is described as led by performance, which is not really seen as good for science: "I think that all the same there is a culture of performance and scientific production that is expressed in different ways I think and in particular in the number publications things like that which are self-evident, the organisation of scientific events" (#1). Therefore, the interviewees say that they feel pressure to publish in journals instead of writing books. This is especially the case with those who are on tenure track and several yearn to finish this period so to be able to write books – "I would like to publish differently yeah in the sense that there are things I've been wanting to do for a long time and haven't had the time to do, publishing books that I know are not always highly valued…" (#1); "All I would like to do now is to be to devote a year to writing a book and that's in terms of tenure, that's suicidal" (#4) – simply to have a better work-life balance and some stability: "They think that once you're stabilised you won't work anymore [laughter] but of course it's not true […] there have been posts, assistant professor posts for example [ahum] now that could stabilised or with tenure track, you see, well, after four years [ahum]; but frankly there I… I didn't want to apply for something like that because I didn't want to have another four years in a, in a situation like that, as you can imagine [hum], you know how it is… [ahum ahum] you see where you… you have yeah all the time you have to think about racking up the publications, it's a real pressure and it's always a bit like that… so for the moment I'm not applying for those posts [ahum right] [laughter] because, all the same, having a stable post is cool [yeah] and not having the status of prof. for the moment that is no big deal for me." (#40).

As seen above, the people in tenure-track positions stress more than the first assistants the workload of such a temporary situation, mostly due to the obligation to meet the criteria for tenure and to do everything properly – "you get [yeah] the impression you must always be doing everything so… you… you get into committee work there, yeah" (#3, M, T) –, and not being able to say "no".

Which elements of micro-politics (e.g. distribution of space and equipment, distribution of variously valued tasks in research and teaching) define internal organisational hierarchy?

Money is available in Switzerland and no one complained of a lack of space or equipment or money to travel.

On one occasion, a junior post-doc complained that he had to run the website for the institute in which he was working. He managed to get rid of this task (it is now in the hands of Senior Lecturers in stable positions), which he describes as one for young researchers and not rewarding despite what his boss says.

The way teaching is viewed is quite ambiguous; it is described as a brake on research activities but at the same time the youngest researchers in terms of work experience are proud to be able to teach their own courses.

3.2.3 Comparative conclusions

Although the scientific culture is described as competitive in both departments, differences do emerge. In the STEM Department, the junior researchers tend to highlight the collaborative relations with colleagues (even swapping courses), but they also stress that competition is omnipresent: you have to publish your results before another team gets there first: "The pressure is not internal, right, there's no one saying I want to see you working at weekends, on the contrary, they couldn't care less [laughter] (laughter), all that counts is the results [ah yes], no its more of an international pressure on [mm mm] grant applications, the publication of your articles, etc. and yes it's the amount of work there is to do" (#16, F, T). Nevertheless, this agonistic realm is the reality of science and they mostly accept it, which is not the case in the SHS Department, where performance is seen as equivalent to uninteresting science: "It's… it's something that is rather counterproductive… in in terms even, even of production, let's say, anyway, useful production, well, production that will be of use to other people because the articles I've published are the same things you see in all journals, that interest no one and don't interest me either" (#4, Male, T).

Being responsible for other people is clearly seen as a burden for the professors on tenure track in the STEM Department, while no one, with the exception of #22 (senior lecturer, tenured), mention such a concern in SHS. The people in STEM described themselves as pushed to look for money and to write research projects relentlessly, an aspect that may turn against them because science can be slow, experiments can fail and not bring results, despite the work invested.

The same feeling was expressed in the SHS Department by one person who was on a post-doctoral position, but he was somewhat older than his colleagues and said he was shocked by the demands made for a junior tenure-track position: "What I would criticise is that you place people who are really just graduated [ahum] I mean people who you can be sure have never previously held academic posts before [ahum ahum], that seems to me just a preliminary, right [yeah, yeah, yeah], afterwards the institution says to itself: 'Why should I recruit someone who has just graduated when I have a guy who has twelve years of professional experience, who will give me much more?' [ahum, ahum] I think it should hold firm and say 'Look, it's a post for a new graduate, OK, so let's give a chance to someone who has just graduated [ahum] but with a job description that protects him from that'" (#22, Male, T).

3.3. WELL-BEING AND WORK-LIFE BALANCE

3.3.1. Summary for STEM

Which main elements of organisational micro-politics either support or hinder successful harmonisation of work, family and leisure?

Supportive elements from work for WLB: When intensive work is experienced as stimulating and of positive value

For some, the workload is heavy but can be stimulating when clear boundaries are set with other life priorities and the latter do not interfere with work (this is the case for #31 – Male, N/T) who has learnt to set a constant work rhythm – 9h-18h30/19h after having suffered from exhaustion and sleeplessness, but also since he has had children), or when it is experienced with passion: "I mean you are always under pressure and I work, I really work a lot [yeah] and, but, I'm only doing this because I love to do it and [ahum] hum, I know that I work much more than other people hum, working in a company for example [yeah yeah] so I definitely don't have a 9 to 5 job or anything, and I, but you know if the work atmosphere is… is great [ahum] hum, there's nothing to complain about" (#38, Male, T). Some researchers work at night or during the weekend, "because I'm doing science," so they never really "interrupt" their professional/scientific activity: "It's a total investment, otherwise it's not possible" (#30, Male, N/T).

Hindering elements from work to WLB – intensive work rhythm / pressures related to organisation of multiple tasks

Hindering elements concern limited flexibility in time organisation due to the material constraints of the laboratory. This may be an impediment especially for women with young children. Publishing quickly is presented as a pressure that some do not like, but that is inherent to the academic career. "Personally I try to keep to that work rate 8 a.m…. 8 a.m. to 6 p.m. roughly. I know that a lot of my colleagues come later in the morning and end very late in the evening [ahum] or work at weekends, etc. In any case it's more than a 100% job [ok] not me though, not in my case" (#35, M, N/T). One case depicts an extreme situation of discontent related to the sacrifice of family life: (#17, Female, N/T) "No, there I've reached the point where… where I wonder whether the practical family sacrifice is worth it [ahum] but at the same time I know very well that if I give up now… it's final, right, because it's more or less certain that it's final so… so I carry on but I don't believe in it too much [yeah] but I carry on all the same and then, well…." Another hindering element, especially for women with small children (#17, Female N/T, French), but also for one man (N/T, #35) (who has decided to leave academia) relates to the academic pressure to be productive, leaving little room for family priorities or flexibility in the use of their time. Some bosses may not appreciate flexible schedules, because this would mean being less efficient/productive in the lab. As a consequence of this situation, a mother of two feels torn between her personal life and her professional life (#17, F, N/T, French): "annoyed for him but also annoyed for me" because "I'm not accustomed to not doing things well." This seems particularly dependent on the nature of the discipline, which requires working in the lab (less at home) to produce empirical results. The male researcher has decided to leave academia because he does not wish to put his private life into brackets in order to prioritise an academic career. "It's my thesis

supervisor [ok] it's… I have great admiration [laughter] for people who have no doubts [yeah]."

Related to the organisation of time, there is also increased pressure from the juggling of multiple responsibilities (including the future of young colleagues). "I don't suffer but sometimes I think, ok, you know it's normal that you're sometimes stressed and, hum, and that you can't sleep. I talk to other people here and they sometimes have the same [ahum ahum] same problems that you just have lot of responsibilities and (takes deep breath) a lot of work from different sides" (#38, male, T). Having two part-time academic post-doc jobs can be hindering, especially when being afraid of giving one of them up in order to have more free time and envisage having children (female, N/T, #29): "Yeah it's… it's crazy! and so, but at the same time I mean it's uh, enough work that is necessary, so my work-life is really bad right now yeah, yeah I go home and I… I sleep (…) if I was to have children it would really be unsus-unsustainable, I would either have to find a job which was more (?) or stop doing the thing I care about."

Even teaching can be presented as a hindering element, because it is perceived as additional work to the main one: research: "the more teaching you have the more overtime you work" (#16, F, T).

Which family aspects significantly affect (positively or negatively) the balance between work, family and leisure?

Elements from private life supporting career

Career "facilitators" are mainly described by male researchers who are supported by their female partners. This situation is presented both by #30, (Male, N/T) and #38, (Male, T). Also, both partners used to have an academic career and had followed their male companion in their international mobility experiences, but have left academia after becoming mothers (they have also reduced their work rate to part-time jobs, in teaching outside university for instance).

Elements from private life hindering career

In some cases, however, being in a relationship as a couple can be experienced as a hindrance in the sense that the partner's job/professional situation in relation to his/her nationality (validity of the diploma, the language) constitutes a factor seen as a priority with the same value as one's own academic career (#31, Male, N/T) (#29, Female, N/T,) (#17, Female, N/T).

In rare cases, small children can become a hindrance for women, but this seems related to a broader and more complex life situation where the partner is forced to remain in his country of origin for professional reasons and childcare is in short-supply. This impediment tends to become salient in specific critical health conditions, for example, when a baby falls ill: "The problem now is I can't work. When I was doing my thesis… if I got back at 8 then I got back at 8, now I have to be at the crèche at 6 to pick up the baby, otherwise [ahum] they won't leave him outside, it doesn't seem right… [yeah]" – (#17, Female, N/T)

"To be frank personally I'm not proud of what I've done so far here [laughter] (laughter) so I don't know how much patience he has, I don't know how reasonable he finds it that

I well [ahum] I feel terribly handicapped compared to what I, what… what I used to do in the time of the… when I had free use of my time [mm mm mm] and, and well now there are so many constraints in all directions plus the fact that in terms of family all the same it's an enormous sacrifice [yeah] I'm neglecting my little daughter [um um] four days a week and also incidentally my bloke [yeah]." She also stresses the exhaustion she experiences: "When I'm, when I'm (at home in France) there the tiredness aspect [mm mm] which quickly gets the upper hand… so even when I manage to get everything finished… by nine-thirty, ten o'clock in the evening that's something at least, but then at ten in the evening to say well now I'm going to start work work sleep work sleep" (#17, Female, N/T).

Which institutional policies and actions significantly affect (positively or negatively) the balance between work, family and leisure?

#17 (F, N/T) "There is no place in the department where a woman can breastfeed her baby."

3.3.2. Summary for SSH

Which family aspects significantly affect (positively or negatively) the balance between work, family and leisure?

Flexibility[9] and freedom are presented at the same time as being supports and obstacles to a balance between work and private life. This is especially the case for people with children: the freedom and flexibility available in the organisation of schedules and work make it possible to work at home and, for example, to go and collect children from the crèche: "There's a certain flexibility in this job, right, so that's also something which is good, that's to say I can for example, when in the morning I can, I can arrive later, right, so twice a week either I arrive… I arrive later [at work] because I… I take them to the crèche [ahum] or I leave here, say, at 5 [ahum] to collect them" (#3, Male, T). But this flexibility comes at a price; it requires very careful organisation to cope with all the tasks involved: "I have different types of jobs, right, for example in… in the train so [ahum] I… I have a 40 minuteS train journey every morning and evening so then I read, I read things and then after in the evening yes the evening I do a bit of this work and this and that that I do at home for example things I can interrupt at any time [ahum] you… it's not, it's not… [yeah] With the kids, they can sleep for half an hour and if they wake and… if they wake up after 35 minutes I… I leave the computer [yeah] and then tac [yeah] and then that costs me nothing at all so it's [yeah] it's... but I've developed a kind of system like that where I have [yeah] have types of work that that I can get stuck into straight away."

When time is not strictly organised, freedom can easily lead to work overload: "All the same it's a rather extraordinary freedom to be able to organise your work as you want. Personally it's not a burden to me because I prefer that, nor do I have external constraints on the work I do so to that extent it's OK it's… it's' manageable shall we say, well, I can cope but as soon as there are external constraints, we're told to do things with very strict deadlines well then it becomes very dangerous to… [mm] to do it… [mm]

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[9] For ease of reading, all the analysis concerning the SSH department have been turn into grey.

at whatever hour or the day and night but, yes, my seminars, I prepare them at night" (#4, Male, T).

Hindering elements from work to WLB – intensive work rhythm / pressures related to organisation of multiple tasks

The standard demands of an academic career are presented as largely exceeding the "normal" work timetable outside academia, and rarely giving opportunities for leisure. The work load is such that it could create health problems, both physically and psychologically. #22 (Male, T) reported "I passed out in a supermarket would you believe it [ah yeah, laughter] I think if you ask the people who saw me a fortnight ago, I was finishing my evaluation report [yeah] I had spent fifteen hours working on Saturday, fifteen hours on Sunday, and I finished at two or three a.m. Monday morning to hand it in on the Tuesday with flu because otherwise it was no joke and then all the people who worked with me were sick in bed [ahum]… It was, yeah, it was hard [yeah yeah] really hard, I think they were I think the three years that most marked me professionally speaking [ah yeah yeah yeah] ah yeah I really think […] there are times when oh yeah very clearly you can't carry everything and something snaps so you're not present with the students or [ahum] when you ought to… to be there or there's a day when you don't go and teach because you're drained, right, and so physically yeah I think that I… I think I must have lost, no, I must have aged ten years in three years [ah yeah] no, no, five years [laughter] five years in three years [yeah] that's clear [yeah right] so yeah…."

Elements from private life supporting career

So for most of these people, having children would be "unsustainable" without the help of family. "If you want to have a family life that assumes the old-style regime of the male Mandarin, in other words having a wife and a domestic worker, whatever it may be at home whether she's paid or married – it's really at that level [mmm mmm] and it's true you see that very clearly especially from the moment you reach a professorial post" (#4, Male, T).

This help is given mostly by wives, and in some cases husbands, who are outsiders to academic life. Grandparents are also often mentioned because the scarcity of crèches in Switzerland makes it necessary to get extra help in order to cope with the schedules of academia. This help is not sufficient to respond to all the demands of an academic career: #3 (M, T) and #33 (F, T) explained, for example, that despite the help of their relatives, international mobility, even for conferences, is difficult when one has small children. Therefore, they mostly travel in Europe and try to shorten their absences from home: "I don't do it when there's… in Yokohama there's the conference of the International Sociological [ahum]… Association. I… I'm not going; I go to conferences in Switzerland and then in Europe twice a year maybe but I don't travel all the time… so [right yeah]. It also has… It's not the right moment, I don't want to travel a lot for conferences that may interest me, yeah, but still…" (#3, Male, T). This attitude is not a truly chosen one as it could be harmful for the career, since networking at conferences can make a lot of difference for the future.

Elements from private life hindering career

While having children still delays women's careers, the situation has improved in recent years. Atypical careers are accepted and biological youth is no longer considered a definite obligation to be able to progress on an academic track.

Which main elements of organisational micro-politics either support or hinder successful harmonisation of work, family and leisure?

The possibility of working at home improves the balance between work and family, although it seldom creates more time for leisure, as stated by #3 (Male, T) "Then I specialised in family and work [both laugh] I don't and I've also kind of I dunno I don't go the cinema any more so I've greatly reduced leisure activities, going out that kind of thing right so [ahum] and it may be… hum but it's not, yeah it's OK, you have to feel at ease with that kind of…of priorities right [ahum] but well it's OK yeah."

Supportive elements from work to WLB

Academic single women are quite silent about their private lives, which is a telling illustration of the way academia considers private life in relation to gender. It is better not to talk about it, although, and thanks to the efforts of equality offices at institutional level, it is now acceptable to raise issues related to the time required by children's upbringing and to the "reconciliation" of work and private life.

3.3.3. Comparative conclusion

Work overload is an endemic problem in both departments and it creates health hazards. The opportunity of leisure is seen as something which is necessary but also something that diverts from the only thing that really counts, science: "It's a total investment, otherwise it's not possible" (#30, Male, NT). The difference between the two departments lies in the flexibility of the work, which can more easily be accomplished at home for SHS people and for professors in STEM because they no longer work in the labs.

Living with a partner or having a family is often described as increasing tensions between work and private life: "Conflictual relations, no but it's true that we had to juggle so my husband could find a job at the same time [mm, mm, mm] in other places and so on, and there it's my husband who made more… concessions [laughter] [right]. Somehow I was lucky especially as a woman because it rarely [yes yes] goes that way" (#16, Female, T); and: "The question of children didn't come up straight away, it's more now that I'm thinking about that [ahum ahum] in fact I always wanted to have children so the… the question… it wasn't… because I never had the impression there was no place for that, it was more that it's wasn't in my mind after… of course there are gender and cultural and institutional questions that may have influenced that […] for many women it isn't at all like that [hum] they would have wanted to have a child and then they didn't because and often do it later once they've been stabilised anyway [ahum] people talk about tenure-track babies and so on [laughter] now it's a way of doing things and it's clear that institutionally it doesn't encourage you to have children at all that's for we sure we can agree on that" (#40, F, T).

3.4. CAREER DEVELOPMENT

3.4.1. Summary for STEM

How do organisational micro-politics (e.g. internal division of tasks, internal relationships, promotion criteria) support or hinder the interviewees' career development?

Several of the researchers describe organisational micro-politics as a source of stress, frustration or fear. #38 (Male, T) thinks he will be stabilised and has developed his own research, but he is worried that being a professor will mean being diverted from his real interest, science: "I really like what I'm doing, so I hope I can continue this hum, yeah I mean what I'm worried about is just you know that if you, I mean now I'm in a small group so but then, if you advance you get a bigger group and [ahum ahum] then you connect, you lose a little bit of connection [ahum] maybe to, do the actual research that is going on in the laboratory and you're more involved in… with the administrative stuff [ahum] the… that's where I'm a little bit worried that this is maybe not, what I really love to do, [ahum] and I see this maybe with other people that I actually know (?) little bit frustrated because, at one point you, you cannot do any more what you actually want to do [ahum ahum] and, why you chose this track, this career track…."

Leaving academia (reluctantly) has become a personal project for a few interviewees. For one of them, #31 (Male, N/T), the system prevents him from developing "new things" because of the working conditions. The future becomes a source of stress, even anxiety. This same feeling is described by #35 (Male, N/T,): "Some post-docs decide that with all you know you can land in other… other areas that maybe you didn't necessarily want to do at the start… so it's, it's a step down from global well-being, it's… it's the game somewhat [mm, mm, mm] (laughter)." The alternative of leaving the academic world is also mentioned: "I'd be, I'm, I'm fairly open either to everything that has to do with scientific communication or more to do with regulatory affairs, the launch… launching pharmaceutical products… the paperwork for complying with European, Swiss, American rules and so on"

Increased competitiveness is also an aspect of the negative value assigned to micro-politics, connected with difficult relationships among colleagues, which can lead some (#20, F, N/T) to envisage quitting the academic career. But this is not an easy step to take: "As an entrepreneur, as a woman, what happens if you're pregnant? You know you don't have a safety net." Even among researchers who have already obtained a stable position, (#30, Male, N/T) the work pressure is highlighted.

Teaching can be perceived as a burden but is generally valued. For instance, a female researcher (#17) feels frustrated at not being able to teach: "I know very well that if ever I go back I shall go and teach in secondary school, that means suicide… in terms of research… [ah yeah] there won't be any possible way back.

3.4.2 Summary for SSH

How do organisational micro-politics (e.g. internal division of tasks, internal relationships, promotion criteria) support or hinder the interviewees' career development?

The competitive atmosphere and the need to meet a whole set of performance criteria are described as stressful by all the people on tenure track, with the exception of #3 (M), who is confident that he will manage these different requests, as the institution had made an investment in him: "For stabilisation so [yeah] it's also… they need… it's also a… well if they chose an assistant prof. at that point, that was also a gamble you see they made a gamble [ahum] on that person [ahum] then if you if you don't think they made a bad choice [ahum ahum] [laughter] and… [yeah] but of course there's always there's always a but…" (Male, T)

The other interviewees describe the institutional demands as very heavy. One woman (# 40), who could apply for such a position, said that she would not try due to the pressure of instability.

Moreover, all interviewees seem to consider that, although the criteria of stabilisation are more or less clear, the guidelines involved in this process tend to vary over time: "I had the grid and I could more or less see that I was gaining points it was fine you see [ahum] there will always a bit, a bit of a margin and then a bit of politics and all that, but overall you can see it, all the same you can see it, it's not like in other institutes where you have nothing to go on, you don't know what… what they want of you, you don't know who… you have a lot of uncertainty from that point of view so for me it was all the same as a… as a process it was fairly you know fairly cool [hum, hum, hum] [laughter] and… and then after you have lots of people who have post-doc after post-doc and that is total insecurity you see [ahum] so from that point of view I've always been really lucky [laughter]" (#40, F, T); another interviewee (#3 , Male, N/T) stresses the changes that intervened during his tenure-track period. He attributes them to the diverse interpretations that different Deans give to regulations: "Well actually there are… a couple of things there were in my contract [ahum] there are there are things and… then that came from the time [name of the Dean] was the Dean [ahum] then there I'm referring more to… […] I've never been asked for that in any case [ahum] how many publications, it's not… and bah it's not figures like that it's more [ahum] yeah it's 'That's fine' or 'You still need to work on that further' […]".

One woman (#2, Female, N/T) emphasised the consequences of the fact that her PhD supervisor had not supported her, which underlines the importance of being protected or having a mentor in order to succeed in the academic career: "Shall we say the… the doctoral thesis went very, very badly [right] so I was I… I often… I often say that I completed a thesis in spite… in spite of my supervisor, so no, only in the sense that she didn't support me either at the scientific level and very, very little at the level of shall we say in terms of academic career. […] Each time it was a trial that I emerged from, let's say, undermined in the sense that what I was doing had… had never been appreciated, so that being so (breathes in deeply) there, what with those… those institutional moments and those… those…. I'd say it was the big, big things that made I think my situation get… get worse, having said that, if not at the level of teaching which I was able

to do but at the level of re… res… my research I was left so much on my own but let's say that it was not unpleasant in the sense that I am… I was left in peace but shall we say I don't mean to say that I was not integrated in a… and very little interest was taken in what I was doing so something… I think it's a combination of things all working together let's say… anyway I say all that to explain a bit a… a kind a yeah a degradation of a work situation."

3.4.3 Comparative conclusion

Whatever the difficulties in achieving an academic career, most people in both departments emphasise their wish to carry on (9 out of ten in SHS and 6 out of 10 in STEM). In the STEM department, women say that it will be quite difficult if they get pregnant and "lose" time for family reasons, which is not the case in the SHS department. But they do accept this situation as obvious, since they acknowledge that the rules of science are governed by efficiency and productivity: "I guess we have to adapt to that and (laughs) [laughs]... to continue in the system you have to publish and it's that, as the more you publish and in their journals the better you are, it's like that [quiet laughs], I don't know, it… it really reflects, what the researcher is… sometimes it depends on... the, capacity of the researcher to write papers not [ahum], the general, uh point of view of the researcher herself [ahum] yeah I see I know people that deserve positions, they are really good researchers but they don't publish 20 papers a year [ahum] so they don't get positions, but they are really good and, it's a pity that, because of that, they quit academia" (# 35, Female, N/T).

3.5. PERSPECTIVES ON THE FUTURE

3.5.1. Summary for STEM

What kind of measures and actions do the STEM interviewees envision as the most desired for fulfilment of their professional and private life?

On the organisational level (STEM department)

One measure that could improve career development would require professors to be "good leaders", for instance through the implementation of training in "communication skills". Some would consider it helpful to limit the number of PhDs (an over-production of theses has a negative impact upon researchers within academia but also in the labour market).

There is also the proposal to implement appropriate structures within the university so as to conceive of post-PhD careers outside the academic world: "Recently they… they organised a career workshop so… bringing a few people in to explain, well, what our yeah what our skills are [yeah, our… our know-how] right our, our knowledge, our know-how that we could sell outside the academic world just to help us get a handle on it and then so yes they paid 3,000 yes about 3.000 francs for that career workshop."

According to several interviewees, the timing of the academic tenure process, as well as the impossibility of being rehired after a period of period of 5 years (post-docs), should be reconsidered as both limits hinder the production of good science and help to create

a sometimes unbearable pressure on young researchers: "There's a schedule to be observed it's very, very rigid at the Unil, it's non-negotiable [ah yes] that is, that is a feedback I gave to the Rectorate [when] they asked me for feedback on it [laughter] and… and it's true that our whole, our whole Faculty are all convinced that the assessment period ought to be longer because [our field] is a science that takes time…" (#16, Female, T).

At national level (policies)

The fellowship system for post-docs has a major drawback: not being able to contribute to the pension fund, although the positive side is the opportunity to develop personal lines of research.

There is a need to implement paternity leave as a means to reduce the gender gap. The other need is to increase the number of crèches and to facilitate access to them.

An organisational culture based on diversity as a founding principle is necessary (not only regarding gender, but also cultural origin).

"I think it's good… to have a [this uh] this kind of balance [why?]… hum, just to have a balance in the centre I mean I, I was for example living doing my studies with three other, uh, men (quiet laugh) [quiet laugh] I think that was at one (point?) a little bit tiring (small laugh) [small laugh] but in general I think it's, it's very important to have a balanced uh team [ok] whether it's men or women or whether it's like people from different cultures, different ways of thinking [ok], it doesn't matter, too much but just have… have a good balance"

The creation of new stable positions is suggested in order to produce good science: "There are several routes that might be explored if the aim of the University is to produce very good research at a very high level, it would be why not create some more stable posts."

3.5.2. Summary for SSH

What kind of measures and actions do the interviewees envision as the most desired for fulfilment of their professional and private life?

At organisational level (SHS department)

The majority believe that the Faculty is doing well regarding gender equality, but they also highlight the consequences of the broader "culture of performance" on work-life balance. They present this new culture as an increase in workload that mainly has effects on women in a context where the gender regime remains very traditional.

The majority of the sociologists regret that the criteria for doing "good science" privilege the writing of articles rather than books (4 persons, all men, out of 6).

At national level (policies)

A more horizontal hierarchy is suggested by one interviewee, who stresses the pressing need to increase the number of post-doctoral positions and therefore to reduce the salary of Ordinary Professors.

Expanding the childcare facilities is described as a way to facilitate women's careers.

4. General conclusions

The two departments that have been studied seem to have different cultures regarding the ways science is produced and its producers. These specificities have been revealed in relation to the work-life trajectories of the men and women we interviewed. However, it is interesting to note that both departments tend to prioritise work over all other spheres of life.

In the STEM department the production of new knowledge is described as highly competitive, defined by a « race » between labs belonging to different universities. There seems to be a competition to be the first to publish results. Moreover, these need to be substantial. People who work in this department are led to comply with this « necessity » and so they have few possibilities of slowing down. Therefore, any interruption, even for maternity leave, can signify a definitive delay in the career. Although some members of the STEM department stress the need for diversity in research teams, this way of thinking results in giving priority to work efficiency. The performance culture evident in the STEM department is not as clearly established in the SSH department. In the SHS department, interviewees, who included h women who had career paths that would have been difficult to imaging in the STEM department, become critical and described the "rationalization" of science production as being counterproductive in terms of producing innovative knowledge.

While the "academic age" appears impossible in STEM, it seems better accepted in the SHS department. The importance given to teaching is also the source of such differences. In the STEM faculty, this task is usually presented as a burden delaying research activities while it is described more positively in SHS, possibly because competences in this field play a role in recruitments. A significant proportion of this department's interviewees mention previous involvement in teaching as a positive skill that contributed to their recruitment in their current position. However, and even if described as difficult to live with, precarious positions seem to be part of the career requirements in both departments. When the interviewees challenge this belief, through criticising the importance given to work, it seems easier to imagine other professional alternatives in the STEM department (employment in private companies, for example). This is less the case in SHS, where some adopt temporary coping strategies.

Appendix

Table 12. Faculties of the UNIL, abbreviations, and sex of the Dean of each Faculty

Faculty	Abbrev.	Head (Fall 2014)
Faculty of Theology and Religious Studies	FTSR	1 Male
Faculty of Law, Criminal Justice and Public Administration	DSC	1 Female
Faculty of Arts & Humanities	Lettres	1 Male
Faculty of Social and Political Sciences	SSH	1 Male
Faculty of Business and Economics	HEC	1 Male
Faculty of Geosciences and Environment	GSE	1 Male
Faculty of Biology and Medicine	STEM	1 Female

Table 13a. UNIL Staff: Sex, positions and departments (2013)

			SSH		STEM-BIO		STEM-MED		LAW	
			2013		2013		2013		2013	
			M	F	M	F	M	F	M	F
Staff		N of Full Professors (Full-time)	19	8	27	2	61	7	19	3
		N of Full Professors (Part-time)	2	0	3	0	5	0	1	0
		N of Associate Professors (Full-time)	8	5	19	1	52	13	3	1
		N of Associate Professors (Part-time)	5	3	3	3	13	3	16	2
		N of intermediate teaching & research positions (Full-time)	13	6	21	4	110	41	2	0
		N of intermediate teaching & research positions (Part-time)	14	18	2	3	16	12	1	4
	Total	*N of research staff with a permanent position:*	*61*	*40*	*75*	*13*	*257*	*76*	*42*	*10*
		N of Assistant Professors (Full-time)	4	3	2	3	3	0	0	0
		N of Assistant Professors (Part-time)	1	0	0	0	0	0	0	1
		N of intermediate teaching & research positions (Full-time)	4	1						
		N of intermediate teaching & research positions (Part-time)	2	1						
	Total	*N of research staff with a tenure-track position:*	*11*	*5*	*2*	*3*	*3*	*0*	*0*	*1*
		N of Assistant Professors (Full-time)	0	0	9	2	2	3	0	0
		N of Assistant Professors (Part-time)	0	1	1	0	0	0	0	1
		N of research staff with a non-tenured position (Full-time)	1	5	15	11	3	5	6	2
		N of research staff with a non-tenured position (Part-time)	17	30	15	19	0	1	8	8
		N of intermediate teaching & research positions (Full-time)			6	4	1	2	3	1
		N of intermediate teaching & research positions (Part-time)			0	1	0	1	3	4
		N of Assistants with PhD (Full-time)	4	7	51	40	6	9	0	0
		N of Assistants with PhD (Part-time)	1	2	51	64	0	0	2	1
		N of post-docs (Full-time)	1	3	8	3	1	0	0	1
		N of post-docs (Part-time)	9	7	9	10	0	0	2	1
		N of Assistants (Full-time)	44	49	2	2	0	0	15	11
		N of Assistants (Part-time)	19	30	86	90	5	1	55	39
		N of PhD students (Full-time)	13	25	41	57	2	0	2	2
		N of PhD students (Part-time)	0	0	0	0	0	1	1	0
		N of research staff (Full-time)	1	0	0	0	0	0	0	0
		N of research staff (Part-time)	4	7	1	2	0	0	0	0
	Total	*N of research staff with a temporary position:*	*109*	*159*	*265*	*275*	*20*	*23*	*97*	*71*
Stud.		N of students BSc	661	1086	199	234	362	573	363	567
		N of students MSc	312	574	83	136	206	309	183	349
		N of PhD students	168	171	217	241	142	152	140	105

Table 13b. UNIL Staff: Sex, positions and departments (2013)

			GSE		HEC		ARTS		REL	
			2013		**2013**		**2013**		**2013**	
			M	F	M	F	M	F	M	F
Staff		N of Full Professors (Full-time)	19	0	30	8	19	0	30	8
		N of Full Professors (Part-time)	0	0	3	0	0	0	3	0
		N of Associate Professors (Full-time)	3	1	0	1	3	1	0	1
		N of Associate Professors (Part-time)	6	0	8	1	6	0	8	1
		N of intermediate teaching & research positions (Full-time)	5	0	1	0	5	0	1	0
		N of intermediate teaching & research positions (Part-time)	2	0	2	1	2	0	2	1
	Total	*N of research staff with a permanent position:*	*35*	*1*	*44*	*11*	*35*	*1*	*44*	*11*
		N of Assistant Professors (Full-time)	0	2	14	9	0	2	14	9
		N of Assistant Professors (Part-time)	0	0	0	0	0	0	0	0
		N of intermediate teaching & research positions (Full-time)								
		N of intermediate teaching & research positions (Part-time)								
	Total	*N of research staff with a tenure-track position:*	*0*	*2*	*14*	*9*	*0*	*2*	*14*	*9*
		N of Assistant Professors (Full-time)	2	0	0	1	2	0	0	1
		N of Assistant Professors (Part-time)	0	0	1	0	0	0	1	0
		N of research staff with a non-tenured position (Full-time)	3	1	3	2	3	1	3	2
		N of research staff with a non-tenured position (Part-time)	15	19	8	4	15	19	8	4
		N of intermediate teaching & research positions (Full-time)	6	2	1	1	6	2	1	1
		N of intermediate teaching & research positions (Part-time)	1	1	0	1	1	1	0	1
		N of Assistants with PhD (Full-time)	11	5	7	3	11	5	7	3
		N of Assistants with PhD (Part-time)	6	8	0	2	6	8	0	2
		N of post-docs (Full-time)	2	1	1	2	2	1	1	2
		N of post-docs (Part-time)	0	1	5	1	0	1	5	1
		N of Assistants (Full-time)	4	1	29	14	4	1	29	14
		N of Assistants (Part-time)	28	23	38	18	28	23	38	18
		N of PhD students (Full-time)	34	20	18	19	34	20	18	19
		N of PhD students (Part-time)	0	0	0	1	0	0	0	1
		N of research staff (Full-time)	0	0	0	0	0	0	0	0
		N of research staff (Part-time)	1	0	1	1	1	0	1	1
	Total	*N of research staff with a temporary position:*	*113*	*82*	*112*	*70*	*113*	*82*	*112*	*70*
Stud.		N of students BSc	236	170	1054	588	236	170	1054	588
		N of students MSc	148	115	555	342	148	115	555	342
		N of PhD students	80	57	86	55	80	57	86	55

Table 14. Appointments to permanent positions (UNIL 2010-2013)

			2010		2011		2012		2013		Total	
			W	M	W	M	W	M	W	M	W	M
STEM	Prof. Ass. (with or without tenure)	New position	-	7		2	1	3	2	5	3	17
		Promotion	-	-	-	-	-	-	-	-	-	-
		Tenure	-	-	-	-	-	-	-	-	-	-
	Prof. Asso.	New position	1	2	3	3	1	2		1	5	8
		Promotion	2	8	1	6	2	4	3	4	8	22
		Tenure	-	2	-	-	-	2	-	-	-	4
	Prof. Ordi.	New position	2	8	-	8	-	5	-	3	2	24
		Promotion	-	6	-	7	-	3	-	1	-	17
		Tenure	-	-	-	-	-	-	-	-	-	-
	Total STEM		5	33	4	26	4	19	5	14	18	92

			2010		2011		2012		2013		Total	
			W	M	W	M	W	M	W	M	W	M
SSH	Prof. Ass. (with or without tenure)	New position	-	1	2	2	-	-	2	1	4	4
		Promotion	-	-	-	-	-	-	-	-	-	-
		Tenure	-	-	-	-	-	-	-	-	-	-
	Prof. Asso.	New position	-	-	-	1	-	4	1	-	1	5
		Promotion	-	-	-	1	-	1	-	-	-	2
		Tenure	1	-	-	-	-	-	-	-	1	-
	Prof. Ordi.	New position	1	-	-	3	-	-	-	-	1	3
		Promotion	-	4	-	1	-	-	-	-	-	5
		Tenure	1	1	-	-	-	-	-	-	1	1
	Total SSH		3	6	2	8	-	5	3	1	8	20

Table 15. Types and duration of leave periods by gender

		STEM		SSH	
		2013		**2013**	
Types of Leaves	**Position**	**Male**	**Female**	**Male**	**Female**
Paid maternity leave – 4 months (80 days)	Full professors	-	0	-	0
	Associate professors	-	0	-	0
	Assistant Professors	-	0	-	1
	Other permanent teaching & research positions	-	21	-	3
	Post-doc	-	4	-	8
	Assistants & doctoral students	-	6	-	6
	Other	-	0	-	3
	Total	-	*31*	-	*21*
Paid leave for breastfeeding – 1 month (20 days)	Full professors	-	0	-	0
	Associate professors	-	0	-	0
	Assistant Professors	-	14	-	1
	Oth. permanent teaching & research positions	-	4	-	3
	Post-doc	-	5	-	2
	Assistants & doctoral students	-	0	-	2
	Other	-	0	-	3
	Total	-	*23*	-	*11*
Unpaid paternity leave – 6 weeks	Full professors	0	-	0	-
	Associate professors	0	-	0	-
	Assistant Professors	0	-	0	-
	Post-doc	0	-	0	-
	Assistants & doctoral students	0	-	1	-
	Total	*0*	-	*1*	-
Paid leave for sick child – max 5 days	Full professors	0	0	0	0
	Associate professors	0	0	0	0
	Assistant Professors	0	0	0	0
	Post-doc	0	0	0	0
	Assistants & doctoral students	0	3	0	0
	Total	*0*	*3*	*0*	*0*

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SLOVENIA

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1. INTRODUCTION

1.1 Test Institutions

STEM: Department of Agronomy, Biotechnical Faculty, University of Ljubljana, Slovenia

The Biotechnical Faculty (BF), established in 1961, includes 7 Departments: agronomy, biology, forestry, landscape architecture, wood technology, animal science and food science, and technology. In 2013, there were 566 employees and almost 70% of them were engaged in pedagogical and scientific research activities. The Department of Agronomy (DA) has been selected for the GARCIA project. The department provides university level, advanced professional, and postgraduate education, as well as scientific research and technical and consulting work in connection with agriculture. In December 2013, there were 105 people (58 women and 47 men) employed in 6 chairs (sub-departments) of the department; some of them (pedagogical and mostly research personnel) are engaged in 3 Research Programmes and 16 research groups (basic, applied and developmental research work).

SSH: Fran Ramovš Institute of the Slovenian Language, Research Centre of the Slovenian Academy of Sciences and Arts (ZRC SAZU)

The Research Centre of the Slovenian Academy of Sciences and Arts (ZRC SAZU), established in 1981, is the leading Slovenian research centre in the humanities, and it covers natural and social sciences as well. ZRC SAZU comprises of a network of researchers and technicians (320 in total) within the framework of 18 institutes. The Institute of the Slovenian Language was established in 1945. Since the establishment of ZRC SAZU in 1982, the Institute has developed sections for lexicological, etymological-onomastic, dialectological and terminological dictionaries. In 2013, there were 43 employees, of which 35 were researchers (23 women and 12 men) and others were technical personnel.

1.2 Specificities of Quantitative Data Collection

The data for the quantitative part of this report was collected from two different institutions. The data of the Biotechnical Faculty (BF) in connection with STEM testing was mostly collected from the Human Resource Office and the Service for Academic Affairs, particularly data regarding working conditions and career development of academic personnel. An important source was also the Yearly Reports of the BF – providing information on research projects – and the BF webpage – providing information on mandatory and elective subjects. All data of the Research Centre of the

Slovenian Academy of Sciences and Arts (RC SASA) were collected from their Human Resource Office. For the requested BF items, all data were obtained, while in RC SASA the following items were not available or applicable:

Gender equality in working condition

- Sex ratio of PhD candidates;

Gender equality in career development

- Sex ratio of the staff with a temporary position (full professors, associate professors, …) in the SSH department as regards to their vertical promotion;
- Sex ratio of PhDs (ongoing, newly entering and obtained) in the SSH department;
- Sex ratio of postdocs (applicants and newly entering) and evaluators in the SSH department;
- Sex ratio of assistant professors (applicants and newly entering) and evaluators in the SSH department;
- Sex ratio of associate and full professors (applicants and newly entering) and evaluators in the SSH department;

Gender equality in research and teaching

- Sex and academic position (full professors, associate professors…) of the staff in the STEM department as regards to mandatory courses/hours taught;
- Sex and academic position (full professors, associate professors…) of the staff in the STEM department as regards to elective courses/hours taught.

1.3 Specificities of Qualitative Data Collection

This report is based on 20 ethnographic interviews conducted at two test institutions: The Slovene Language Institute ZRC SAZU (SSH) and the Biotechnical Faculty, University of Ljubljana (STEM). The interviews were conducted in the period from October 2014 to February 2015.

At the SSH institution, there were 9 female and 1 male interviewees (this is the institute where women significantly outnumber men, hence the gender disproportion). The average age at the time of interviewing was 37.6 years and all the interviewees were early career researchers (3 assistants with a PhD and 7 research associates). All are full-time employees, 3 with permanent and 7 with temporary contracts.

The interviewees work at different departments of the Institute of the Slovenian language. None of them has led postdoctoral projects financed by the Slovenian Research institution[10] or received other postdoctoral fellowships from the international scientific institution or spent several months or years abroad.

At the STEM institution, there were 5 female and 5 male interviewees, with the average age of 36.5 years at the time of interviewing. All are early career academics (1 postdoctoral researcher, 2 assistants with a PhD, 5 with the title assistant professor, but

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[10] In Slovenia, a PhD student obtains the postdoctoral status if he/she is successful in applying for a basic research project at the Slovenian Research Agency. If he/she obtains the project, there is no selection procedure, and he/she becomes the principal investigator of his/her postdoctoral project (a mentor in not required). The candidate who applies for the postdoctoral project is subordinated to internal department (or faculty) policies.

work on positions of assistants with a PhD, and 2 assistant professors). All are full-time employees, 5 with temporary and 5 with permanent contracts. Postdoctoral students from the STEM (BF) sample are temporarily employed PhD holders who are officially assistants with PhDs, either teaching assistants or research assistants. The difference between the two assistant titles relates to better opportunities for teaching assistants to become permanently employed if they succeed to be promoted to the next phase (assistant professor) on time and in accordance with the promotion criteria of the university. Only 1 of the interviewees is currently a postdoctoral student working abroad. Three male interviewees with temporary contracts have already been promoted to the title of assistant professor, but are currently employed and paid as research assistants and a teaching assistant (1) because of the systemisation of their positions.

The following table shows the structure of interviewees at the STEM and SSH institutions regarding their position, sex and presence of children.

Table 1. Interviewees in the STEM and SSH departments regarding their position, sex and presence of children.

	Male	**Female**	**Total**
STEM Department			
Assistant professors with children	2	2	4
Assistant professors without children	2	1	3
Postdocs/assistants with a PhD with children	0	0	0
Postdocs without children	1	2	3
Total	**5**	**5**	**10**
SSH Department			
Assistant professors with children	0	6	6
Assistant professors without children	0	1	1
Postdocs/assistants with a PhD with children	1	1	2
Postdocs/assistants with a PhD without children	0	1	1
Total	**1**	**9**	**10**
Total Interviewees	**6**	**14**	**20**

2. REPORT ON QUANTITATIVE DATA

The quantitative part of the report is organised according to four fields: gender equality in working condition, gender equality in career development, gender equality in research and teaching, and work-family balance. The analysis is based on statistical data, stressing variations, differences and similarities by sex (m/f) and department (STEM/SSH). In this regard, tables with the number/percentage of women and men, separately for STEM and SSH departments, are provided for all four fields.

2.1 Gender Equality in Working Condition

2.1.1 Summary for STEM

The data on the level of all departments of the BF shows (Table 1) that in the observed period the positions of full professors are steadily dominated by males by the ratio close to 60:40, with just a low percentage variation each year. Even greater disparity between men and women can be seen at the level of associate professors, which reached the ratio of 70:30 in 2013. The opposite ratio (approximately 40:60 to the benefit of women) can be seen at the level of assistant professors, which is, however, getting equalised (50:50) at the end of the observed period. More or less stable ratios were observed at the level of assistants where women slightly outnumber their male colleagues (45:55). Thus, at the STEM level, the relations between men and women academics employed full-time can mainly be seen as a scissor-shaped curve. Taking into account the part-time employment, the data shows that at all academic levels mainly men take part in this type of working arrangements; most probably, this is their second job – in addition to another 100% employment in some other organisation or institution.

Table 2: Sex ratio of the STEM institution

STEM (in numbers)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of full professors (full-time)	26	17	28	18	29	19	30	22
No. of full professors (part-time)	0	0	1	0	1	0	1	0
No. of associate professors (full-time)	27	13	26	12	19	11	22	9
No. of associate professors (part-time)	1	1	1	2	3	2	2	1
No. of assistant professors (full-time)	12	15	11	19	13	14	16	14
No. of assistant professors (part-time)	2	0	2	0	1	0	2	0
No. of assistants (full-time)	39	45	38	46	37	47	38	49
No. of assistants (part-time)	1	0	1	1	3	1	2	2

STEM (in %)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of full professors (full-time)	60.5	39.5	60.9	39.1	60.4	39.6	57.7	42.3
No. of full professors (part-time)	100.0	0	100.0	0.0	100.0	0.0	100.0	0.0
No. of associate professors (full-time)	67.5	32.5	68.4	31.6	63.3	36.7	71.0	29.0
No. of associate professors (part-time)	50.0	50.0	33.3	66.7	60.0	40.0	66.7	33.3
No. of assistant professors (full-time)	44.4	55.6	36.7	63.3	48.1	51.9	53.3	46.7
No. of assistant professors (part-time)	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0
No. of assistants (full-time)	46.4	53.6	45.2	54.8	44.0	56.0	43.7	56.3
No. of assistants (part-time)	100.0	0.0	50.0	50.0	75.0	25.0	50.0	50.0

As regards the sex ratio of researchers that are not designated according to academic degrees, the data shows (Table 2) that women mainly carry out research activities at the BF. During the entire observation period, they prevail over their male colleagues, both on tenure as well as non-tenure positions. Here, it should be emphasised that at the BF the non-tenured position is a predominant form of researchers' employment, which, however, encompasses a relatively small share of all employees at the BF.

Table 3: Sex ratio in the STEM institution regarding permanent/temporary positions and staff grades

STEM (in numbers)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of researches with a tenure position	1	3	2	3	3	4	3	6
No. of researches with a non-tenure position	14	21	30	17	22	23	19	22

STEM (in %)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of researches with a tenure position	25.0	75.0	40.0	60.0	42.9	57.1	33.3	66.7
No. of researches with a non-tenure position	40.0	60.0	63.8	36.2	48.9	51.1	46.3	53.7

Women also prevail among the PhD candidates at the BF; during the observed period, their share even slightly increased from 62% to 67% (Table 3).

Table 4: Sex ratio of PhD candidates in the STEM institution

STEM (in numbers)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of PhDs (ongoing)	105	172	108	177	70	131	54	111

STEM (in %)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of PhDs (ongoing)	37.9	62.1	37.9	62.1	34.8	65.2	32.7	67.3

2.1.2 Summary for SSH

The same as in STEM testing institution, the data for the SSH testing institution RC SASA shows (Table 4) that during the observed period, higher academic positions are dominated by men. At the level of research advisors (equivalent to full professors) and senior research fellows (equivalent to associated professors), these positions are predominantly occupied by men (approximately 60:40) while the positions of research fellows (equivalent to assistant professors) and research assistants (equivalent to assistants) are dominated (approximately 40:60) by women. As a result, the gender ratio imbalance of academic positions indicated as a scissor-shaped curve is also present in SSH testing institution. However, contrary to the STEM institution, in the SSH institution part-time arrangement is more typical for the female academic personnel at the upper levels while at the lower academic levels, men outnumber their female colleagues.

Table 5: Sex ratio of the SSH institution

SSH (in numbers)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of full professors (full-time)	30	21	29	21	26	17	31	23
No. of full professors (part-time)		1		1			1	1
No. of associate professors (full-time)	18	15	17	16	15	16	19	14
No. of associate professors (part-time)		2	1	3	0	3	0	1
No. of assistant professors (full-time)	17	32	20	31	21	31	18	37
No. of assistant professors (part-time)	3	3	2	2	2	3	5	2
No. of assistants (full-time)	10	15	12	20	15	24	11	15
No. of assistants (part-time)	3	1	4	1	3		2	

SSH (in %)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of full professors (full-time)	58.8	41.2	58.0	42.0	60.5	39.5	57.4	42.6
No. of full professors (part-time)	0.0	100.0	0.0	100.0			50.0	50.0
No. of associate professors (full-time)	54.5	45.5	51.5	48.5	48.4	51.6	57.6	42.4
No. of associate professors (part-time)	0.0	100.0	25.0	75.0	0.0	100.0	0.0	100.0
No. of assistant professors (full-time)	34.7	65.3	39.2	60.8	40.4	59.6	32.7	67.3
No. of assistant professors (part-time)	50.0	50.0	50.0	50.0	40.0	60.0	71.4	28.6
No. of assistants (full-time)	40.0	60.0	37.5	62.5	38.5	61.5	42.3	57.7
No. of assistants (part-time)	75.0	25.0	80.0	20.0	100.0	0.0	100.0	0.0

A bit less than half of all the research personnel at the SSH institution are tenured (Table 5). During the entire observed period, men slightly predominate in this group. Accordingly, among researches with temporary and non-tenured positions, women prevail. However, in the last two years (2012-2013), the differences between men and women are diminishing.

Table 6: Sex ratio in the SSH institution regarding permanent/temporary positions and staff grades

SSH (in numbers)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of research staff with a temporary position	20	34	21	32	23	26	22	18
No. of research staff with a tenure position	59	56	61	56	59	54	60	55
No. of research staff with a non-tenure position	36	61	38	64	41	60	41	52
SSH (in %)	**2010**		**2011**		**2012**		**2013**	
	M	F	M	F	M	F	M	F
No. of research staff with a temporary position	37	63	39.6	60.4	46.9	53.1	55	45
No. of research staff with a tenure position	51.3	48.7	52.1	47.9	52.2	47.8	52.2	47.8
No. of research staff with a non-tenure position	37.1	62.9	37.3	62.7	40.6	59.4	44.1	55.9

Since the SSH institution is only a research (not a teaching) institution, the data on PhDs is not available.

2.1.3 Comparative Conclusions

Irrespective of the different disciplinary character of both testing institutions, the unbalanced gender proportions of academic positions are rather similar (indicated as a scissor-shaped curve) and typical of both institutions. Since SSH is a research institution

with almost half of the researchers employed on the temporary basis, a direct comparison regarding tenured/non-tenured positions with STEM, which is principally a higher education institution with mostly tenured positions (employment for an unlimited time) of its academic staff, is not possible. However, in both institutions women more frequently occupy temporary and non-tenured positions than men do.

2.2 Gender equality in career development

2.2.1 Summary for STEM

During the observed period, there were just a few vertical promotions among the academic personnel with the permanent position at the Agronomy Department (AD) of the BF. In this regard, no significant differences between men and women were demonstrated.

Similarly, considering the vertical promotions of the faculty staff with the temporary position, there were just a few cases with no significant differences between sexes.

In the observed period, there were also just a few cases among the academic staff at the AD that, due to a very small number, do not point to any significant differences between sexes.

The data regarding PhD students at the AD shows a varied picture (Table 6). While during the observed period, the numbers and the shares of ongoing female PhDs are significantly higher than those of males, the shares of PhDs newly entering and PhDs obtained are steadily increasing, but from the gender point of view are highly varied – in some years women outnumber their male colleagues while in other years men dominate.

During the observed period, just one postdoc (female) was employed and the members of the selection committee were also all women.

The data regarding applications and newly entering assistant professors at the AD shows that there were just a few such cases during the observed period; two men and one woman applied for this position and all of them were chosen. Among the evaluators, men strongly prevailed.

Table 7: Sex ratio of PhDs (ongoing, newly entering and obtained) in the STEM department

STEM (in numbers)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of PhDs (ongoing)	9	14	9	15	8	14	5	13
No. of PhDs (newly entering)	8	4	6	4	0	7	0	1
No. of PhDs (obtained)	6	3	2	7	2	4	6	4

STEM (in %)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
No. of PhDs (ongoing)	39.1	60.9	37.5	62.5	36.4	63.6	27.8	72.2
No. of PhDs (newly entering)	66.7	33.3	60.0	40.0	0.0	100.0	0.0	100.0
No. of PhDs (obtained)	66.7	33.3	22.2	77.8	33.3	66.7	60.0	40.0

During the observed period at the AD, there were no new applicants for associate or full professors.

In the period between 2010 and 2011, all six heads of chairs at the AD were men, while in the period of 2012-2013 one such position was held by a woman. In the entire period, the position of the vice-dean was occupied by a man, while the positions of assistant vice-dean of the department were occupied by woman. The data for boards and committees is available for the Senate of the AD for the period of 2010-2012. In these two years, the gender ratio of the Senate was 57:43 in favour of men (Table 7).

Table 8: The frequency of responsible rules (heads, boards and committees) of research units /groups /centers) distributed between genders in STEM department

STEM (in numbers)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
Heads of chairs	6	0	6	0	5	1	5	1
Vice dean of the AD	1	0	1	0	1	0	1	0
Assistant vice dean of the AD	0	2	0	2	0	2	0	2

STEM (in %)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
Heads of chairs	100.0	0.0	100.0	0.0	83.3	16.7	83.3	16.7
Vice dean of the AD	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0
Assistant vice dean of the AD	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0

As regards the salaries, the data for the AD shows (Table 8) that throughout the observed period, male full and assistant professors have higher incomes than their female colleagues. The opposite is true for associate professors and assistants. Over time, in case of all four academic groups, the gender gap in salaries is decreasing, but it still exists.

Table 9: Salaries in the STEM department by gender and academic grade

STEM (in numbers)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
Full professors	4,988.03	4,045.61	4,840.00	3,942.84	4,619.51	4,006.59	4,329.12	3,799.89
Associate prof.	3,544.59	4,057.08	3,260.51	3,854.68	3,353.20	3,603.81	3,225.86	3,346.52
Assistant prof.	2,676.08	2,620.50	2,691.17	3,013.19	2,600.79	2,732.20	2,633.03	2,485.58
Assistants	2,362.83	2,679.77	2,206.88	2,556.39	2,216.95	2,490.48	2,436.08	2,675.29

STEM (in means)	2010		2011		2012		2013	
	M	F	M	F	M	F	M	F
Full professors	471.21	−471.21	448.58	−448.58	306.46	−306.46	264.62	−264.62
Associate prof.	−256.25	256.25	−297.09	297.09	−125.31	125.31	−60.33	60.33
Assistant prof.	27.79	−27.79	−161.01	161.01	−65.70	65.70	73.72	−73.73
Assistants	−158.47	158.47	−174.76	174.76	−136.77	136.77	−119.61	119.61

2.2.2 Summary for SSH

The data on vertical promotion for the Fran Ramovš Institute of the Slovenian Language (FRISL), the SSH testing institution, which is only available only for 2013, shows that more women made progress in their career than men.

Table 10: Sex ratio of the staff with a permanent position in the SSH department regarding their vertical promotion

SSH (in numbers)	2013	
	M	F
No. of full professors (full-time)	0	1
No. of associate professors (full-time)	1	3
No. of assistant professors (full-time)	1	3
No. of assistants (full-time)	0	1

SSH (in %)	2013	
	M	F
No. of full professors (full-time)	0.0	100.0
No. of associate professors (full-time)	25.0	75.0
No. of assistant professors (full-time)	25.0	75.0
No. of assistants (full-time)	0.0	100.0

In the observed period, there was just one departure of a male assistant with a PhD.

The data on applicants and newly entering research fellows (senor advisers), which is also available only for 2013 (Table 10), shows that one male applicant and one man entering into this position, as well as one male member entering the selection committee. The data for other academic grades were not applicable.

Table 11: Sex ratio of assistant professors (applicants and newly entering) and evaluators in the SSH department

SSH (in numbers)	2013	
	M	F
No. of applicants	1	0
No. of newly entering assistant professors	1	0
No. of evaluators (members of the selection committee)	1	0

SSH (in %)	2013	
	M	F
No. of applicants	100.0	0.0
No. of newly entering assistant professors	100.0	0.0
No. of evaluators (members of the selection committee)	100.0	0.0

Regarding the frequency of responsible roles, the data for SSH is also available only for 2013 (Table 11). While the head of the research unit was a man, the institute's

committee is composed with the ratio of 40:60 in favour of women, as well as the heads of research groups (ratio of 33:67).

Table 12: Frequency of responsible roles (heads, boards and committees) of research units /groups /centres) distributed between genders in the SSH department

SSH (in numbers)	2013	
	M	**F**
Heads of research units	1	0
Ratio in boards and committees	2	3
Heads of research groups/centres	2	4

SSH (in %)	2013	
	M	**F**
Heads of research units	100.0	0.0
Ratio in boards and committees	40.0	60.0
Heads of research groups/centres	33.3	66.7

Salaries for which data is available for 2010 and 2013 (Table 12) show that in all cases women are better off than men, with the exception of senior research fellows in 2010.

Table 13: Salaries by gender in the SSH department

SSH (in numbers)	2010		2013	
	M	**F**	**M**	**F**
Full professors	4,640.71	12,125.74	4,764.59	7,651.89
Associate professors	6,033.63	5,752.57	5,668.33	8,050.87
Assistant professors	2,353.14	19,675.64	2,955.32	19,338.61
Assistants	426.04	4,756.81	414.8	8,247.72

SSH (in means)	2010		2013	
	M	**F**	**M**	**F**
Full professors	-3,742.5	3,742.5	-1,443.65	1,443.65
Associate professors	140.53	-140.53	-1,191.27	1,191.27
Assistant professors	-8,661.3	8,661.3	-8,191.65	8,191.65
Assistants	-2,165.4	2,165.4	-3,916.46	3,916.46

2.2.3 Comparative Conclusions

Due to a small number of cases in both testing institutions during the observed period regarding gender in career development, no generalisations are possible. However, some tendencies are clearly indicated: vertical promotion of women is supposed to be more common in the SSH than in the STEM institution. It appears that in both testing institutions new entrances and departures particularly at the beginning of the scientific career (PhDs and postdocs) are not gender specific. Among the evaluators for the selection of new personnel at all academic levels in both institutions, men prevailed. In both institutions, men mainly occupy the responsible roles. However, women are more

often present on these positions in SSH than it is the case in STEM. The gender gap considering salaries is present in both institutions, however, while in STEM men receive higher salaries, the opposite is true in SSH.

2.3 Gender Equality in Research and Teaching

2.3.1 Summary for STEM

As data for 2013 reveals (Table 13), among leaders of international and particularly national projects at the AD (in this period of time no local or internal projects were carried out) men predominate mostly among full and associate professors. However, project leaders among assistant professors are mostly women.

Table 14: Sex and academic position of staff in the STEM department regarding funded research projects (European, national, local, internal)

STEM (in numbers)	2013	
	M	F
No. of funded European research projects – full professor	4	3
No. of funded European research projects – associated professor	6	0
No. of funded European research projects – assistant professor	2	6
No. of funded European research projects – assistants	0	0

STEM (in %)	2013	
	M	F
No. of funded European research projects – full professor	57.1	42.9
No. of funded European research projects – associated professor	100.0	0.0
No. of funded European research projects – assistant professor	25.0	75.0
No. of funded European research projects – assistants	0.0	0.0

STEM (in numbers)	2013	
	M	F
No. of funded national research projects – full professor	14	6
No. of funded national research projects – associated professor	5	4
No. of funded national research projects – assistant professor	2	3
No. of funded national research projects – assistants	0	0

STEM (in %)	2013	
	M	F
No. of funded national research projects – full professor	70.0	30.0
No. of funded national research projects – associated professor	55.6	44.4
No. of funded national research projects – assistant professor	40.0	60.0
No. of funded national research projects – assistants	0.0	0.0

Among the holders of mandatory courses (Table 14) male academic staff prevails – particularly among associate professors. In this regard, the sole exception are assistants among which women strongly dominate.

Table 15: Sex and academic position of staff in the STEM department regarding mandatory courses/hours taught

STEM (in numbers)	2013	
	M	F
No. of mandatory courses – full professors	16	12
No. of mandatory courses – associated professors	13	3
No. mandatory courses – assistant professors	14	7
No. mandatory courses – assistants	1	4

STEM (in %)	2013	
	M	F
No. of mandatory courses – full professors	57.1	42.9
No. of mandatory courses – associated professors	81.3	18.8
No. of mandatory courses – assistant professors	66.7	33.3
No. of mandatory courses – assistants	20.0	80.0

An identical picture is revealed on the basis of data on elective subjects (Table 15). In this case, the male academic staff also covers the most elective subjects, with the exception of assistants of which 100% are women.

Table 16: Sex and academic position of staff in the STEM department regarding elective courses/hours taught

STEM (in numbers)	2013	
	M	F
No. of elective courses – full professors	14	6
No. of elective courses – associated professors	4	2
No. of elective courses – assistant professors	8	2
No. of elective courses – assistants		1

STEM (in %)	2013	
	M	F
No. of elective courses – full professors	70.0	30.0
No. of elective courses – associated professors	66.7	33.3
No. elective courses – assistant professors	80.0	20.0
No. elective courses – assistants	0.0	100.0

2.3.2 Summary for SSH

At FRISL, the vast majority of research projects are led by women (Table 16), particularly those subsidised by the national founds. Among leaders of these projects, female research advisers and research fellows prevail. Additionally, female research fellows lead three European projects and a female research adviser leads one local project. Male senior research fellows coordinate only two national projects and one local project.

Table 17: Sex and academic position of staff in the STEM department regarding funded research projects (European, national, local, internal)

SSH (in numbers)	2013	
	M	**F**
No. of funded national research projects – full professors	0	3
No. of funded national research projects – associated professors	2	1
No. of funded national research projects – assistant professors	0	4
No. of funded national research projects – assistants	0	2

SSH (in %)	2013	
	M	**F**
No. of funded national research projects – full professors	0.0	100.0
No. of funded national research projects – associated professors	66.7	33.3
No. of funded national research projects – assistant professors	0.0	100.0
No. of funded national research projects – assistants	0.0	100.0

2.3.3 Comparative Conclusions

In this part of the report, we can compare both testing departments only from the view of management of research projects. From these statistics, it is clearly demonstrated that in the STEM department male researchers far more often coordinate research projects, while in SSH the opposite is true.

2.4 Family/Work Balance

2.4.1 Summary for STEM

In Slovenia, in accordance with current legislation, women are exclusively entitled to 28 days of maternity leave for themselves and 105 days of parental leave, which can be shared with their child's father, while men have the exclusive right to 90 days of paternity leave. This rule is clearly mirrored in the statistics on maternity/paternity/parental leave at the AD (Table 17). The number of days women spent on this type of leave is significantly higher than the number of days spent by their male colleagues. In terms of academic position, this leave is most commonly taken by female associate and assistant professors and at the lowest extent by male full professors.

Table 18: Number of days of maternity/paternity/parental leave by gender in the STEM department

STEM (in numbers)	2013	
	M	**F**
full professors	15	252
associated professors	63	260
assistant professors	77	260
assistants	15	252

As regards to other types of leaves due to family care, the data for the AD shows (Table 18) a fairly low number for both women and men. It is remarkable that this type of leave was not used at all by any full professor of both genders and male associate professors.

Table 19: Number of days for other types of leaves due to family care by gender in the STEM department

STEM (in numbers)	2013	
	M	F
Full professors		
Associated professors		1
Assistant professors	2	3
Assistants	3	5

2.4.2 Summary for SSH

The statistics on maternal/paternity/parental leave referring to FRISL (Table 19) show quite the opposite practice. This type of leave was rather rarely used by both genders, particularly by males – senior researchers used just two days.

Table 20: Number of days for maternity/paternity/parental by gender in the SSH department

SSH (in numbers)	2013	
	M	F
Full professors		
Associated professors		
Assistant professors	2	22
Assistants		15

To the contrary, in FRISL, other types of leave due to family care are more frequently used among its personnel (Table 20). However, among the beneficiaries women (research and senior research fellows) almost exclusively prevail.

Table 21: Number of days for other types of leaves due to family care by gender in the SSH department

SSH (in numbers)	2013	
	M	F
Full professors		
Associated professors		408
Assistant professors	2	445
Assistants		408

2.4.3 Comparative Conclusions

As regards to the family/work balance, obligations of the STEM and SSH testing departments basically do not significantly differ between each other. Namely, in both departments care for children and other family members is basically taken over by

women, most frequently by assistant professors, and in much lesser extent by men of all academic stages.

3. STATISTICAL GENDER EQUALITY INDICATORS

Gender-sensitive indicators are useful tools for measuring change in implementing gender equality principles in scientific research organisations (e.g. Huyer and Westholm, 2007). Based on the analysed statistics presented in the previous sections, a list of key indicators from the above sections are provided hereafter, which refers to position/process/change regarding women/men in their scientific career:

Gender equality in working conditions

- The ratios between women and men at different academic ranks in both the STEM and the SSH institutions confirm a leaky pipeline phenomenon to which women are persistently subjected;

- The ratio between women and men working as researchers on a temporary project basis: women are more often in a disadvantaged position, particularly in SSH;

Gender equality in career development

- The ratio between women and men as evaluators for the selection of new personnel at all academic levels in both the STEM and the SSH department, which is strongly in favour of men;

- The ratio between women and men in managerial positions in both the STEM and the SSH department, which is strongly in favour of men;

- Differences in wages between women and men in the STEM and the SSH department, which does not show a unique picture: in STEM men at higher rank positions are disadvantaged, while in SSH the opposite is true;

Gender equality in research and teaching

- The ratio between men and women involved in management of research projects, which is more frequently a domain of men in the STEM department than in the SSH department where women take lead;

Family/work balance

- The ratio between men and women involved in care for children and other family members in both the STEM and the SSH department, in which women, with the exception of full professors, are most frequently engaged.

4. REPORT ON QUANTITATIVE DATA

4.1 Individual Trajectory

4.1.1 Summary for STEM

Postdocs

Both female and male interviewees from this group were recruited by the Department of Agronomy through the Young Researchers Scheme in academic institutions or the industry. They believe that they were selected for these jobs mostly because of their previous (undergraduate) collaborations with their PhD mentors. One of them describes the selection process:

> *"There was a public call, but even before that, when I was finishing my diploma with prof. X, she suggested that I apply for the young researcher position. I graduated, handed in all the required papers and soon I had a position and an office. It was all very smooth, I was really lucky."*

Only 1 interviewee was selected and recruited as a young researcher from another faculty without previous collaboration.

Both female and male interviewees started PhD studies because of their research interests. They wished to continue researching after their graduate study, although they did not have a clear idea about the academic world. Except for 1 male interviewee, they all continued studying as young researchers after their B.Sc. One of the interviewees was first (after his B.Sc. from agronomy) permanently employed in the extension service, and after a while, he decided to continue his scientific career as a new challenge in his life. One of the interviewees went to the private sector, but came back to the STEM institution after obtaining a postdoc project financed by the Slovenian Research Agency.

Most of the interviewees from this group spent some time abroad, encouraged by their supervisors. They also take part in international conferences.

This group of interviewees successfully moved from PhD research to a temporary job position as preferred candidates of their mentors who have provided them with enough projects or teaching opportunities to keep them at the faculty. However, the majority of them, as researchers (research assistants), have unsecured jobs, which provokes constant stress and fighting for new research projects. The only teaching assistant, who is supposed to become part of the permanent teaching staff, holds a more secured position (F1).

Assistant Professors

In our sample, this group of interviewees consists of 3 women and 2 men with permanent job positions. They all obtained academic titles as assistant professors. However, only 2 have systemised jobs according to this title, while the other 3 are paid as assistants with a PhD. Most interviewees so far had a continuous career at the STEM institution (from postgraduate studies to today), with the exception of one female interviewee who left the faculty immediately after she completed her PhD, but after 2 years she returned as a postdoctoral candidate.

In this group, there is a difference between those holding research position and those who have teaching position. Compared to the former, the trajectory of the latter was less intense in terms of the struggle for research projects. They perceive their positions as secure and stable. One of the interviewees thus described the process of obtaining this stable position:

"At that time, I was invited to apply for a job. I was also negotiating with the Agricultural institute of Slovenia. But (the professor from the STEM institution) called me and offered a position of an assistant on trial. I knew what it meant – if one manages to pass the trial successfully and on time, he/she gets a permanent position of an assistant. Of course, I accepted the invitation. I was also interested in that field of agronomy."

The interviewees holding research position have often had several temporary contracts. One of them describes his career in the following way:

"For all this time, I had a temporary contract that was renewed several times. In spite of my publication record and number of diplomas and MA theses that I supervised, I still do not have a permanent contract."

The interviewees from this group were also recruited by the Department of Agronomy through the Young Researcher Scheme. The interviewees were selected for these jobs mostly because of their previous (undergraduate) collaborations with their PhD mentors. As one of the interviewees describes:

"I graduated in 2005, and already before graduating, I was told by my supervisor that, if he gets an opening for a young researcher, he would choose me. And that actually happened and that was it."

4.1.2 Summary for SSH

Postdocs/Assistants with a PhD

All interviewed researchers with the title of an assistant with a PhD were recruited at the ZRC SAZU under the framework of the Young Researchers Scheme.[11] Under the supervision of a research mentor from ZRC SAZU and an educational mentor from the Faculty, they successfully finished their PhD studies and got an opportunity to continue with their work at the Institute. They were able to retain their position after obtaining a PhD and keep it until today, so their career is uninterrupted and static in a way that they work at the same institution since the time they were graduate students. Some of their

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[11] The Young Researcher Programme was introduced in 1985 to prevent Slovenia from lagging behind in scientific and technological development. The main goals remained the same: to renew and rejuvenate the research personnel in research institutes and universities, and to educate qualified professional research staff also for the industry and other non-academic institutions. Young researchers are employed for a specified period, and receive salaries, cost-covering scholarships and material expenses, including small equipment. In addition to their postgraduate studies, they work on basic and applied research projects or programmes, and within the period of training and education at home, they can also study abroad (from 1 to 12 months). Recently, the Slovenian Research Agency has introduced some novelties: young researchers for the business sector, public calls for mentors of young researchers instead of applicants, thematically oriented public calls by Government priorities, and possibilities for young researcher applicants from foreign countries (also for postdoc applicants).

colleagues, however, had to leave after obtaining a PhD degree. According to an interviewee,

"A (male) colleague, who graduated just a bit later than me, although we were both good, could not stay. So it was not totally certain that any of us will keep the position."

All of them believed they were recruited because of their personal characteristics, ability to work in a team (working in groups is the basic form of work at the institution), reliability, the fact that they managed to finish their PhDs in time, and the possession of important linguistic, terminological or dialectological knowledge required to work at the institute.

The selection process was informal and based on the previous knowledge of the candidate or a recommendation by a professor from the faculty. The following male interviewee has collaborated with the institute before coming there as a young researcher:

"Already as a student, I knew professors, some of which also worked at the Institute. Towards the end of my undergraduate studies, I have also worked at a project of the institute."

No real open call or an interview of several candidates preceded the selection of candidates.

Research Associates

The majority of interviewees in this group (4 out of 7) have also joined the Institute through the Young Researcher Scheme, and the employment at ZRC SAZU was their first job. Here is a typical summary of a career trajectory:

"When I was close to the end of my BA studies, a professor (from the University) approached me with the proposal to continue with MA and PhD studies as a young researcher. She sent a recommendation to the institute and I was selected for the young researcher position. Once I completed my PhD, I was able to continue working at the institute. So the Institute was my only employer so far."

Two of interviewees got a YR status late at the age of 29 and 30 respectively. They came to the Institute based on recommendations of their professors or a previous collaboration with the institute. For example, one of the interviewees came to the institute when she was in the third year of her postgraduate study. She worked together with her female professor, who was also employed at the institute. She worked together with her on a project under a personal contract, and afterwards the professor invited her to the institute as a young researcher. Another interviewee was a brilliant student at the faculty, where her professor invited her to apply for the position of a young researcher, not at the Faculty, however, but at ZRC SAZU, as there were more possibilities to be recruited. After finishing the programme, she, without any second thoughts, got a permanent position as an assistant with a PhD.

For three of the interviewees working at ZRC SAZU was not their first job. One of them had an academic position teaching at the Faculty of Social Sciences, but she and all others also combined different jobs in the sphere of (primary and secondary school) teaching, teaching foreign languages, teaching Slovene abroad, working with organisations of Slovenes abroad, etc. The reasons for their employment lied in their

references, experience and specific knowledge. Once they got a position at the Institute, their remained there, except for one interviewee, who returned to secondary school teaching after completing her PhD, but then resumed working at the Institute after a year and a half, because there was a need for her specific knowledge of local dialects.

Also in this group of the interviewees, personally knowing key persons and their recommendations were the way to get an employment rather than an open call. Here is how the interviewees describe the way they got their current position:

"X knew me, and then I participated in symposia and I wrote articles. How Dr. Y got to know about me, I do not know. I was a young researcher, I completed all my duties on time, and obviously, someone lobbied for me. There was also someone at the Ministry (of Science and Education) who lobbied for me, but I do not know who that was."

"I came to the institute because I already collaborated with prof. X. She was also my PhD supervisor and we have worked together on a project. And then she asked me if I was interested for a young researcher position and invited me to apply at the call. I was told that she got a mentor position and that I should apply."

"I taught together with prof. X, and she was also employed at the institute. So she recommended me, I got some assignments as for a trial period, and then I got the position."

4.1.3 Comparative Conclusion (STEM and SSH)

At the STEM institution, the Young Researcher Scheme was the principal way of recruiting both researchers and teachers who are now at the early stage of their career (postdocs/assistants) and those who have the title of assistant professors. This implies that the candidates for the assistant professor positions are being recruited among familiar candidates (former students) for postdoc/assistant positions, and among the existing faculty members.

In terms of job security, the opposition between different titles (assistant vs. assistant professor) proved to be less relevant than the opposition between teaching and research positions. Assistants in teaching have stable and permanent position, while assistant professors having a research position work on temporary contract basis and depend on funds secured by research projects.

At the SSH institution, most of the interviewed researchers experienced a rather smooth, stable and uninterrupted career path, although all of them were aware that it was not taken for granted that they will be able to retain their position after graduating. Only 1 researcher (research associate) experienced leaving the institute and then coming back after some time. While in the postdoc (assistant with a PhD) group, there are researchers who changed several jobs (including non-academic ones) before coming to the institute, they have not experienced joblessness. The interviewees have not emphasised different treatment of male and female researchers (but rather generational differences). Only 1 (female) interviewee stated that at the institute, there was a preference for a (concrete) male candidate, but he could not graduate in time, so she got the position.

Interviewees at the SSH institution seem to have more "smooth" and stable career paths then their colleagues at the STEM institution. They are not internationally mobile, do not

compete for projects and are mainly involved in the collective work (lexicography, writing dictionaries). While they are satisfied with such relatively stable positions, they are also aware of the fact that immobility, a low publication record and a lack of experience with project applications make them uncompetitive and pose problems for their promotion to higher titles, as having projects, international experience and a good publication record are among promotion criteria.

At the STEM institution, previous collaboration and good relations with a mentor appear to be decisive for a continuous career. At the same time, such dependence on one's mentor poses serious problems and prevents development of career paths according to one's aspirations and interests. Some interviewees described their mentor as a very paternalistic person who introduced a hierarchical communication and did not allow autonomy, and they stress that having/choosing a more influential mentor may be decisive for the continuity of one's academic career.

In both institutions, most of interviewees did not experience joblessness and built their career within a single institution. In addition, the interviewees in both institutions did not stress significant differences between men and women.

4.2 Organisational Culture and Everyday Working Life

4.2.1 Summary for STEM

Postdocs

As to the organisational culture, all interviewees report good relationships within their research groups led by their mentors, while there are quite distant relationships with other research groups at the departmental level. They recognise a kind of internal politics among the heads of the chairs or leaders of research programmes. They all recognise that the main reason of such 'rivalry' among the research groups is the most valued production of scientific articles as the main criterion for obtaining research projects. Some of them stress that the most visible research group can afford better equipment and laboratories to which smaller groups have harder access, and consequently, the latter have lower quality of research results, less publications, etc.

They all describe their working environment as appropriate. Usually, they share an office with another colleague. Talking about equipment, they refer to appropriate office equipment; however, some of them would like to have better equipped laboratories or computers that are more powerful. In addition, some of them complain about state regulation for purchasing equipment, which sometimes makes it difficult to perform research:

"My office is OK, bright and large enough, technical equipment is also satisfactory. Everything is as it should be. If something does not work well, it suffices just to say it and the problem would be solved. The only problem are public tenders. We have to wait for all the requests for equipment to be collected. One cannot do anything if a computer breaks – that system becomes dysfunctional."

All interviewees have been involved in teaching activities since their PhD studies, running demonstrations. Interestingly, despite time-consuming (and for the majority of

them non-obligatory) teaching they understand their involvement in teaching as a new challenge, as an introduction to work with students, as an investment in the future. They see teaching as a positive experience in their lives.

3 male interviewees were aware of the poor administrative support at the departmental or faculty level. They believe that the existing administrative office should provide a much better support.

Assistant Professors

All interviewees emphasise relatively collegial relationships in their research groups or chairs and quite distant relationships with other research groups at the department level. Only 1 female interviewee stressed that she collaborates with colleagues at the department irrespective of the group they belong to. The interviewees attribute the responsibility for such a conflicting climate mostly to the heads of research groups who hinder the wider cooperation at the department level and consider it undesired. They believe that such a conflicting climate is a consequence of the constant competition for the ever-scarcer research funds. Moreover, some of them identify a gap among generations: in seeking for excellent results, the older generation rather orders the analyses abroad, instead of engaging younger associates, in order to keep the authorship only for themselves. Such tension is also identified between researchers and university teachers. Researchers believe that university teachers occupy more secured jobs, while university teachers believe that teaching is undervalued compared to researching, because various kinds of time-consuming teaching activities is not recognised as scientific work. Some, however, observe that university teachers and researchers are 'natural allies' because they do not compete directly for the same funds. They see teaching staff as less ambitious, seeking the status quo, compared to more ambitious and aggressive researchers.

The interviewees describe their working environment as appropriate: 3 (2 female and 1 male collocutors) are alone in their offices, one shares the office with a colleague, and the last one intentionally stayed in the office with two other colleagues. Talking about equipment, they refer to appropriate office equipment; however, some of them would like to have better laboratories or computers that are more powerful.

The majority of interviewees are critical of the administrative support at the department or faculty level. They believe that the existing administrative office should provide much better support, particularly in project administration.

4.2.2 Summary for SSH

Postdocs/Assistants with PhD

The interviewees work in different sections where they prepare specific dictionaries. If necessary, colleagues from different sections work together, but according to the interviewees, this happens in rare situations. Each researcher has a specific task in different preparation steps, where tasks are very clearly divided and some researcher's autonomy and wishes are taken into consideration. According to an interviewee, the work is very dynamic and requires a whole team by everybody taking on a task. Thereby, the main scientific criteria of the Institute are the ability to work in a research group,

precisions in the preparation of dictionaries, and completing work according to the schedule. The work is very transparent and the main communicational values are to express personal opinions and stand behind them, as well as the ability to compromise.

All interviewees also pointed out that they have not prepared a project proposal yet, but just commented some parts of projects. The preparation of projects or the decision regarding who will be a project manager is in the hands of the head of the institute. Usually, the leader of the section or the head of the institute, who has enough scientific results and references to be a project leader, form the projects.

All interviewees are satisfied with their working space (some have their own offices, some share an office) and research equipment.

According to the interviews, the younger researchers are not very engaged in the financial occupations of the institution. All leading decisions and financial management are in the hands of the head of the institution and their two assistants/deputies (1 male and 1 female researcher). A male researcher also leads the basic research programme, which provides basic thematic and financial sources. The interviewees have not yet been involved in a European project or other large international projects.

Research Associates

All interviewees are working on the main tasks of the Institute, which is to compile linguistic materials and use them for the creation of basic Slovenian language dictionaries and a linguistic atlas. The interviewee from the Terminology Section is also a terminological advisor, which takes a lot of her time. The leaders of sections have to prepare different reports as well. Lots of them organise different meetings with foreign experts for whom they prepared dictionaries.

Generally, the interviewees did not complain about gender problems or different expectations from male and female researchers, or hierarchical problems. The leaders of sections are young people who are introducing mutual and friendly relationships. According to all interviewees, there is a positive competition among researchers and critics are positively accepted among them. The basic work is performed in groups, and each researcher has to finish his or her tasks in definite time. Because of teamwork, due to which everyone has a special role, the interviewee F5, who is temporarily employed, feels somehow safe, as without her work, the section would not be successful. Although the head of the institution is a man, all interviewees also stressed that he is very sensitive to family obligations, maternity leaves, child illnesses as well as permits colleagues to work from home. He did not burden female colleagues when they were on maternity leaves or taking care of sick children. In the past, working from home was not so usual, but nowadays many researchers take this opportunity. However, the researcher who takes on nursing or is sick has to finish weekly tasks irrespective of the illness. Serious health problems are the only exception.

The interviewees stress the intergenerational gap and differences between older and younger generations as a source of problems and difficulties. According to the interviews, the older researchers are oversensitive and the younger researchers should be more tactful with them. Some of them have already retired, but still work for the institution. As they work without payment, it is difficult to demand from them to complete tasks in time. However, they are still very important, because they are working

on dictionaries. Nevertheless, as the approaches to dictionary composition changed a lot, their work is not adjusted to contemporary needs and technological skills. In addition, older researchers do not stick to deadlines and are more relaxed vis-a-vis tasks and assignments, which often jeopardises successful functioning of the whole group working on the same task (dictionary).

All the interviewees are satisfied with their working space and equipment.

4.2.3 Comparative Conclusion (STEM and SSH)

Interviewees at the STEM institution stress the relationship with a mentor as a key factor for the success and stability within the department. At the SSH institution, the mentor's role is not that decisive, and the interviewees emphasise the collective spirit, the ability to work in group and collegial relations as most important features of the work culture. Also, the rather distant and competitive relations among different groups are emphasised for the STEM institution, while in the SSH institution no such relationships were described as salient. There are no significant gender-based differences between the STEM and the SSH institution.

4.3 Well-being and Work-life Balance

4.3.1 Summary for STEM

Postdocs

The interviewees have rather defined working hours and tend not to work in their private time, or, if necessary, they only perform specific tasks (answering email, but not writing scientific articles). They tend not to work on vacation and feel that they do not have enough time for sports and leisure activities. A male interviewee said that he does not have enough time for hobbies and leisure, but he also said he never works outside working hours. A female interviewee stated that she does not work after working hours, but that definitely negatively affects her publication record. She states that her partner is very against 'sacrificing' free time for writing articles.

The interviewees think they have enough support at the institution for balancing work and family life.

They find the very nature of their work stressful – the fact that research cannot bring immediate results that would bring satisfaction on daily basis and that it is not always one's results that guarantee a stable position and acknowledgement.

Assistant Professors

Most of the interviewees, both male and female, stated that they manage to establish a balance between work and private life. The female interviewees praised the flexibility of their profession – that they can, to a large extent, organise their own time, and combine work with leisure activities.

"I got very used to a flexible work regime, and if someone would 'put me into a box, I would really feel miserable. I also believe I am more efficient this way."

"For some time now, and particularly since I had a child, I have no boundaries between work and private life. I organise my agenda in the way that is most optimal for me. If I would like to ride a bike, I would just go at 2 pm and no one would say anything. That is the freedom that I have here, no one interferes, and then in the evening I sit and work, so it is really all mixed."

"If I would have to clearly separate work and free time, it would be much more difficult for me and would negatively affect my well-being. I come to work as late as at 9 am because I have my yoga class in the morning. This is how I let off steam."

To manage both family and professional life, the interviewees often rely on their parents and their grandparents. Most of the interviewees stated that they have their partners' support and they share tasks and responsibilities when it comes to childcare and household duties.

4.3.2 Summary for SSH

Postdocs/Assistants with a PhD

The interviews have strictly defined working hours and are satisfied with them, as they give their working day a structure and contribute to better organisation. The interviewees are satisfied with the balance between work and private life and generally consider themselves healthy and feel well. A female interviewee stated that she works after working hours only if necessary, but mainly dedicates this time to her two children. As she has a partner in the military, her career is subjected to his professional needs. A male interviewee, on the other hand, does not work at home and spends his time with the family.

The interviewees find the institutional support for balancing work and private life well organised and satisfactory; they also stress that their partners and other family members support them to pursue their career.

Research Associates

The interviewees have strictly defined working hours and are satisfied with them, as they give their working day a structure and contribute to better organisation. Most of the interviewees stated that they manage to balance work and private life.

"We manage somehow. It is true that sometimes I have to sacrifice some of my private time in order to do something for work. My partner is not an academic and for him it is logical to have work-free weekends, but we do not have serious problems because of this. Sometimes, I work in the afternoon, especially when I need to write and article. I do not believe that others manage to do everything at work."

Some of the interviewees stated that they managed to establish a balance between work and private life after periods of exhaustion or illness, which they took as a warning that something needs to be changed:

"When I came to the Institute, I worked whole days for the first two years and a half. I worked in my office and then I would go home and continue working. I got terrible health problems with my intestines and digestion. I also did not have a quality relationship with my partner. If I have no quality relationship, I also cannot work well. Maybe I am not a typical researcher. I cannot sacrifice my health for my career."

The interviewees with grown-up children point to the fact that their working routines and relationship between work and free time are now very different and easier to manage compared to the period when the children were small and required more care *and attention.*

"When kids are small, it is quite difficult to combine work and free time. You need a clear plan and agenda – you have time for work when you take them to the kindergarten until they come back and then again when they go to sleep. But you cannot work all nights either. When the kids grow up a bit, it is much easier to organise your time."

Just like in among the STEM interviewees, blurred balance between work and free time is not seen as a source of frustration, but as an alleviating factor and source of joy:

"Q: Do you work during weekends and on vacation?

A: Definitely. I can survive first three days of vacation without work, but then I have to do something. Not because I have to, but because I like to, this bring me joy. I have to do research and read academic stuff - that is the best way to spend time for me. To have time to read on vacation. No one forces me to do so and no one expects that from me. That is what I want, because I enjoy it."

"My free time is usually combined with some work. I cannot even say that I have some specifically free time. I take my laptop everywhere with me at the weekends."

As important factors regarding managing work-life balance, the interviewees list their partners, their and partners' parents, as well as the satisfactory institutional support at the level of the state (maternity leave, kindergartens) and at the level of the institution; they describe their institution as family-friendly, supportive and flexible. They particularly praise the possibility of working from home certain days in a week, which was not common at their institute, but is frequently used now.

4.3.3 Comparative Conclusion (STEM and SSH)

The interviews suggest that for both STEM and SSH, for women the blurred boundary between work and life is an advantage, since it enables them to organise their time in the most suitable way. Men, on the other hand, tend to have work more clearly separated from family and private life. In both groups, interviewees would like to have more free time for sports, hobbies and leisure. Generally, they are satisfied with the way they manage to balance work and private life, with the institutional support on the state level, support from their family members, and within the institution where they are employed.

4.4 Career Development

4.4.1 Summary for STEM

Postdocs

All interviewees in this group successfully passed the first sieve – they were selected by their mentors among other PhD candidates as being appropriate to stay at the faculty. After a successful and on-time completion of their PhD studies, they proved as appropriate candidates to stay at the faculty. However, they will stay on these positions or move to the next one only if they, together with their mentors, provide enough research funds through applying for projects. The majority of research assistants are in unsecured job positions because of the systemisation of jobs which is limited to the teaching staff. As researchers, they are completely dependent on the success regarding their project applications.

As already stressed, most of the interviewees see their mentors as the most important factor for their career development. Their success depends on the mentor's willingness and ability to socialise them step-by-step into the academic world (research group, faculty) and research and teaching activities. They stress that they were constantly under their supervision, but they still enjoyed enough autonomy. The interviewees point to the closeness of the Slovenian academic sphere as an obstacle for career development. Also here, they depend on their mentors and their networks:

"The Slovenian research sphere is very close and difficult to penetrate. I still need some time to build my own network. My mentor indirectly included me in his networks, but he is the one who controls everything there. But he is also quite supportive."

Mentors were the ones who provide projects for research teams and as their mentees, they are expected to implement clearly defined tasks. One of the shortcomings stressed by some interviewees was attributed to scientific writing. Some mentors solved the issue by co-writing with their mentees, while others expected from their mentees to learn from the example of already written articles. Those mentees who have been abroad because of student exchange or grants emphasise that they missed seminars about scientific or clear writing in Slovenia. In the context of the current demand for scientific excellence, scientific writing is recognised as a very important skill obtained during the PhD socialisation.

Associate Professors

As in the group of postdocs, interviewees stress the role of their mentors as decisive for the success of their academic career. On the other hand, the interviewees are more critical toward their mentors in this group than among postdocs. The majority of them describe their PhD mentors as inexperienced, non-consolidated, ignorant, paternalistic, etc. They had to find the other way out:

"There are mentors, who are not really mentors. Also my mentor provided minimal pedagogical and research support to me. We spoke a little at the beginning, and then it was all left to me to decide and judge what is feasible and what is not."

According to the interviewees, the winning trajectory in the scientific space is related to the moment when they got permanent contracts, which also greatly depends on their

mentors. They describe that this moment does not really depend on their efforts and excellence and is sometimes even unexpected. According to an interviewee, she was surprised to get the permanent position despite constant warnings of her PhD mentor that she should start looking for a job somewhere else. Another interviewee got the permanent position at the very beginning when she applied for a teaching assistant position. She 'inherited' the demonstrations of several courses of her professor who retired at that time. A male interviewee got a permanent contract after 11 years of prolonged temporary contracts, because his mentor recognised his 'universal characteristics'. According to the interviewee, his wide knowledge and personal characteristics like curiosity and efficiency were the decisive factors that made the mentor select him and not some other candidate for a permanent job.

4.4.2 Summary for SSH

Postdocs/Assistants with a PhD

The criteria for a good (younger) researcher are the ability to work in team, to complete tasks in time, and to be socially responsible, reliable and precise. Due to the specific nature of work at the institute (lexicography), the quality of work on dictionaries is more decisive and required than the criteria that the contemporary knowledge-based society demands researchers to meet.

The early career researchers describe their work at the institute in terms of tasks, fulfilling prescribed tasks and differentiate between this work and the research, and their own academic interests. The latter remains in the domain of their self-initiative, free time and also private financing.

> "My work at the institute, which is assigned to me and prescribed, does not suffer; but my own research suffers a lot, as there is no time left for it and for publications."

The institute does not cover the conference costs or the researchers, and they need to pay these costs on their own if they want to go to a conference.

One of the interviewees stated that she would like to publish a book, in which she would present her PhD research, but she does not have time to complete it. She has been working on it for 3 years. In her words, the problem are work priorities in the institution, as all efforts of the employee are put into the preparation of a dictionary and not into other important scientific criteria.

Although they are not excellent according to the European and national scientific criteria (publications in international journals, citations, talks at international conferences, participation in international projects, scientific awards, membership in additional boards) because they do not have enough time, money or moral support from the head of the institution, their permanent positions refer more to the quality of their work on dictionaries than to the criteria that the contemporary knowledge-based society demands researchers to meet.

Younger researchers do not apply for projects, as they do not meet the required criteria. They just comment on some parts of projects, but they do not take an active part in the preparation process. Because of that, they do not acquire appropriate skills for project writing.

Research Associates

As already presented in the section on Postdocs, the main problem of the researchers at the institution is not having enough time to do research and especially for writing scientific articles. As the main purpose of the Institute is to create basic Slovene language resources, with which the institute has been occupied since its establishment in 1945, the researchers are forced to educate themselves for the preparation of dictionaries. Of course, self-initiative to work on articles, to publish books and to attend conferences is appreciated by the head and the leader of the section of the institute, but the biggest focus is on dictionary work. Some interviewees also admitted that they are not ambitious and encouraged enough to travel abroad. They preserve the links with foreign institutions, but they are not very active at international conferences or projects.

Another difficulty that interviewees encounter is that they should not refuse any request for the preparation of dictionaries. Besides, as in the past, the older colleagues did not prepare the dictionaries according to deadliness since the Slovenian Research Agency was not strict in this matter, the younger researches have to finish their past work as well as do the current work. Furthermore, as in some sections there is a huge gap between the older and the younger generation, there was no development in digital technologies and other research approaches, which additionally complicates the current work and lessens the competitiveness of researchers in the knowledge-based society.

One of the interviewees mentioned problems regarding a project, which she was not forced to prepare. Because of the abundance of ordinary work, she resists to prepare international projects, especially since the chances for success are slim.

Construction of excellence according to which a good researcher is the one who works in the team and fulfils duties related to dictionary publication, to which most research associates, are not satisfied with their publication record and do not consider themselves good enough to be principal investigators in research projects. They also explain that there is a silent agreement that only certain researchers apply for projects officially (also in cases when someone else writes project proposals); these same researchers are eligible for application due to better publication records – which implies that there is a difference between researchers as regards their priorities and work:

> *"There are three or four persons at the institute who have a good enough publication record, the rest of us are under the average. As I said, I am able to produce two articles per year at most."*

> *"At the moment, there is a tendency to have it somehow defined who applies for projects. It is not generationally defined, but these are the researchers who have enough publications and the best chances to get a project."*

Several (female) researchers have stated that these "eligible" researchers are mostly men who also occupy the leading position at the institute.

Despite the fact that extensive publication, international networks and applications for projects are not required from most of researchers, the interviewees are aware that these are the scientific criteria required for promotion. Because of this, the researchers are satisfied with their well-structured work regimes and low responsibility level, but

they are also aware that in the times of shrinking funds they are not competitive enough.

The way work is organised at the institute also hinders the researchers to develop their own research interests. According to an interviewee, individual research aspirations and careers are not valued enough. The group work (which is largely technical and does not count for promotions and for research excellence) is given absolute priority. Research remains in domain of free, private time.

4.4.3 Comparative Conclusion (STEM and SSH)

At both the STEM and the SSH institution, early stage career researchers depend on other people for securing funds – either mentors (STEM), or those eligible to apply for projects. This perpetuates the situation in which certain less valued tasks and activities that do not lead to higher academic excellence are assigned to younger researchers. In turn, being busy with these activities, they remain uncompetitive and not able to autonomously define the path of their career development.

Such position of younger researchers is mostly generationally defined, but in the case of the SSH institution, there is an indication that those who are able to perform 'real' research according to their competences and personal interests are mainly men who then apply for projects or 'land' their name for applications written by others.

Interviewees at both SSH and STEM point to the difference between their work (often prescribed, assigned, technical, work on project which is not necessarily close to their research interests) and the research in which they are interested, but unable to do because of the work overload and lack of support by their superiors. The latter thus becomes their 'private issue', but still important and required for promotions and stable position within the research group.

4. 5 Perspectives on the Future

4.5.1 Summary for STEM

Postdocs

All interviewees are afraid of an uncertain future. They wish to create their own families and have more secured jobs. In this respect, they either expect much better support for project applications, redefined criteria for scientific excellence with more reasonable demands (they expressed criticism towards the unrealistic pressure to write so many scientific articles on short-termed research projects), or support at the faculty level, which would assist them in finding alternative jobs according to their competences obtained.

> *"Sometimes, there are very short, unreasonable and unrealistic deadlines for some project-related work. An even bigger problem is the high demand for publication of many articles, which requires isolation and continuous work."*

Being satisfied with their career mentors, they still express the need for seminars in which they could learn or improve their knowledge in scientific writing. Finally, the most salient expectation pertains to those among the interviewees who, after their PhD, have

either established a start-up company or preferred to work through applicative projects with extension services and other final users of their knowledge (states, ministries or industry). They even proposed the creation of a new job connecting science and industry. According to them, such a job would be financed from several resources and they would be much more satisfied conducting applicative science in a 'real environment' than writing prestigious scientific articles.

Associate Professors

Despite permanent contracts, all the interviewees are aware of their still uncertain positions. Both male and female interviewees employed as university teachers are concerned about their jobs, since they depend on the number of students enrolled at the faculty. If there is an insufficient number of students, the existence of mandatory or optional courses is endangered. Therefore, they wish for a 'status quo' at the faculty level and some structural changes at the national level, which would lead to better employment of their students. In this regard, they believe it is necessary to redefine the scientific excellence criteria in Slovenia in order to put a greater emphasis on the science-industry relation or to better value applicative projects and efforts that are connected with the final users of their knowledge.

The interviewees employed as researchers are also aware of their temporary positions despite permanent work contracts. They depend on the successfulness of various research projects, and in such circumstances, they all wish for an improved cooperation at the department, faculty and outside the faculty. They recommend a much better mentorship than the one they have experienced, which is crucial for an appropriate socialisation into the academic world and for the survival in the circumstances of enhanced academic competition.

4.5.2 Summary for SSH

Postdocs/Assistants with a PhD

The main expectations of the interviewees are related to the reconciliation of work on dictionaries and their own research interests:

"I wish for more balance between the two aspects of my work – dictionary making and research. This year, I will maybe manage to improve that balance a bit."

"There is not enough time. Given the circumstances in which we work, work on dictionaries and research are two separate things. I would like to research more."

One interviewee wants to publish a book and get more knowledge on writing projects. The other wants to obtain a job at the institute and become a successful and brilliant scientist. The third interviewee gave more attention to her personal life, as she had some serious health problems in the past as a postgraduate student. She would like to be a good professional scientist, stay healthy, and have a good relationship with her partner and family.

In general, the interviewees still envision their future within the institute, and do not plan or wish for a new job or radical alternations in their research careers.

Research Associates

The main expectation of the interviewees is better reconciliation of work on dictionaries and article writing as well as individual research work. The interviewees want more time for research and individual work that would make them more competitive and enable better chances to shape their research career according to their own interests:

"I would like to have an opportunity to research those phenomena that interest me. To have a secured job and stability with basic conditions for work and research. All this sounds very simple to me. I think that is something every researchers wants."

They also want to be better informed about promotion procedures and criteria and have better institutional support to fulfil these criteria (funding for conferences, support for spending some time abroad):

"I think that we need a systematic care for enabling promotions – support and encouragement for researchers to do what enables them to fulfil the promotion criteria."

One of the interviewees stated that she also wants to have clearer directions in which way the institute is developing. The question that arises is how to preserve dictionary work in contemporary academia, which increasingly gazes upon quantitative and not qualitative indicators of excellence. As the institutions in Slovenia that work in the field of linguistics are in conflict relations with one another, one interviewee said that she would like to collaborate more with other colleagues from other institutions in Slovenia and abroad.

Despite they are aware of their unstable positions due to unpredictable and reduced funding, most of the interviewees see their professional future in the framework of their section at the institute. The interviewees who are not permanently employed want more social security, which can, consequently, motivate them to do more individual research work.

4.5.3 Comparative conclusion (STEM and SSH)

Interviewees at both institutions feel unsecure about their future. In the current situation, even having a permanent contract does not automatically imply job security. The interviewees strive towards improving those competences that would lead them to better security. They would like to have better institutional support and to be better informed about how they can plan, manage and direct their own academic careers.

At the SSH institution, the interviewees see their future tight to the institute and the research group where they currently work, and do not envision radical career changes or movements. The STEM interviewees are more open to possible changes, to projects such as establishing a start-up company or working through applicative projects with extension services and other final users of their knowledge (states, ministries or industry).

All the interviewees in both the SSH and the STEM institution are rather satisfied with the institutional system (maternity leave, institutionalised childcare, shared leave for childcare between parents) and did not suggest substantial changes that they would want to take place in this field.

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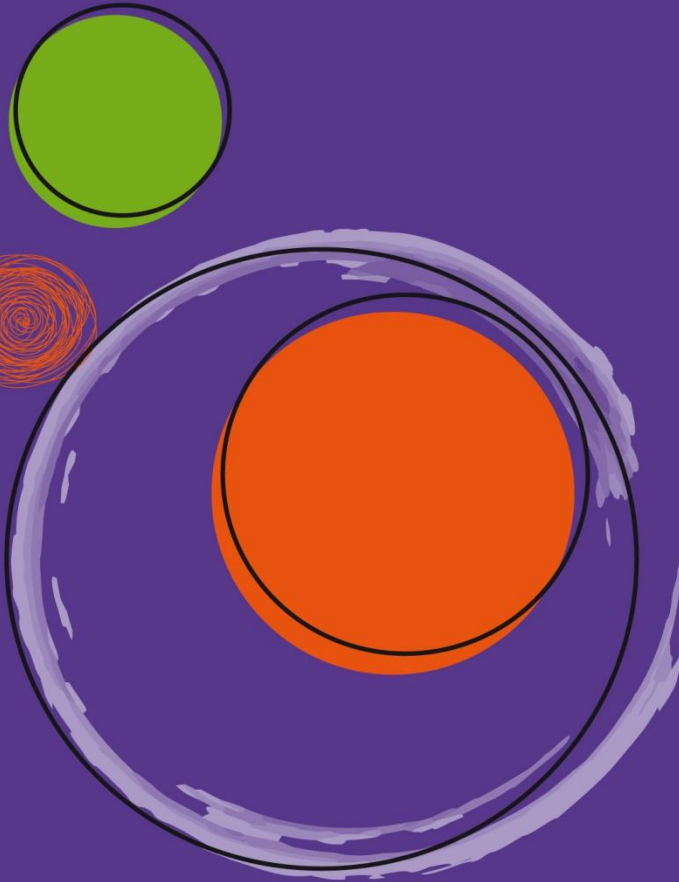Huyer. S. and Westholm. G. 2007. Gender indicators in science. Engineering and technology: an information toolkit. Paris. Unesco Pub.