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*"Above the Glass Ceiling?" Preliminary
report of Postal Survey of University
Professors in the UK*

AND

*"Merit, Luck, and a good Nanny?" Exploring
the Intricacies in the Career Trajectories of
Women Academics in Psychology and
Engeneering*

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About the Project

The normative concept of gender equity which exists in European societies is contrasted by a reality in which women in top-level positions are by no means a common occurrence.

Against this background, the European Research Training Network Women in European Universities, funded by the European Commission, is a joint research project of partners in seven European countries.

Its scientific programme aims at assessing the professional status of women in academia and at analysing the reasons for the under-representation in positions of authority in European Universities.

The network structure includes regular conferences and meetings to provide a forum to present outcomes, exchange knowledge and to discuss about research planning as well as findings and outcomes.

The **Training Paper Series** are essays authored by the doctoral students of the project in every research phase. They give an introduction to the research topic and an overview of the findings in the research country of the doctoral student.

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1 Abstract

This paper is concerned with gender differences at UK universities and sets out to discuss the relationship between career advancement, formal achievements and informal support systems and gender. The data for this study come from a quantitative postal survey sent out to all female professors in thirteen specific disciplines in UK universities. The questionnaire was designed to examine the extent to which career-influencing factors, positive as well as negative, and current professional activity differed between female and male academics who, as full professors, have achieved a substantial degree of professional success. The results show, *inter alia*, that male academics enjoy higher current incomes, although lower rates of job satisfaction, and higher mobility before promotion than their female colleagues. Family patterns and commitments are somewhat different between female and male academics. However, our data also suggest that experiences of informal features of the academic workplace may also tend to be different, with associated impacts on career trajectories.

2 Introduction

The aim of the WEU network is to establish the nature of the academic careers of women professors as well as to identify the reasons for the under-representation of female academics in professorial positions in European universities. The empirical part of the research project comprises of three parts: the first is a contextual and statistical analysis of already available data¹, the second is a quantitative postal survey, and the third is qualitative in-depth interviews². In this research paper some findings from the postal survey conducted in the UK, comprising the quantitative second part of the project, are presented.

The issues relating to women's under-representation in top positions in academia in the UK and Europe are in the public sphere, and much discussed by the mass media. Female journalists are asking: "They [women] are there in great numbers, but are they progressing to take top jobs? And if not, why not?" (Weale, 2003). What is being observed here is that within many educational institutions, females are doing increasingly well, indeed, overtaking their fellow male colleagues, be this in the proportion of girls taking A-levels and the grades that they are receiving, or in the proportion of women among graduates (now over 50 per cent: HESA 1998/99). In 1966, only 27% of the undergraduate student population were women, the figure in 1998/99 has risen to 53.9% and approximately 55% in 2000/01, and among taught postgraduate students about 52% were women in 2000/01. Despite these promising figures, women students remain under-represented in some subject such as engineering and technology with 18%, in contrast education shows a staggering 73% in female participation. However, going up the academic ladder, the proportion of women decreases. Among research students, it drops to about 45% for 2000/01, and Morley (2000) states that only 39% of those obtaining PhDs are women. Similarly, among those in permanent academic employment, only 41 per cent were women in 2000 (HEFCE, 2002). Again, there are notable variations between disciplines, with 44% women in education (i.e. far lower proportion than among students) and 12% in engineering and technology.

Some questions that result from these numbers are: what is the career path of those who decide to stay in academia and develop a career to a high position. What is the character of this path and what are the requirements for women who

¹ Results from this first research project are available under the section Field Guide II at www.women-eu.de

² Results from the qualitative project are available under section Field Guide IV at the same address.

take it? And is it the same path that men take? Or is it more winding and more slippery?

This paper continues with an overview of the existing literature on the topic of female under-representation in professorial positions in UK academia. It also explains the concept of the ‘glass ceiling’ and shows some of the developments since its first terminological use in the 1970s. The review ends on a summary of the research objectives and is followed by a description of the methodology underlying the project. Our study aimed to develop possible explanations for the under representation of female professors at universities in the UK, through an exploration of the social, cultural and educational ‘shaping’ of career trajectories in these settings.

This gives insight into some of the difficulties the researchers encountered prior to and during the period of data collection, which we hope will be of use to other researchers undertaking research in this area. Following the methodology section, the results from the survey analysis are presented, with ‘female’ results compared to ‘male’ results. We begin with an overview of variables on social capital, including family background, marital status, and family responsibilities. This is followed by the presentation of career profiles, focusing on institutional mobility. The final two sections look at appointments and informal networks, and factors hinder women to gain access to such networks, bearing in mind the claim sometimes made that ‘old-boy networks’ do not give access to women. General views and personal experience of discrimination and possible policies to support women are then considered.

3 Literature Review

In reference to the title of this paper ‘Above the Glass Ceiling’ it seems appropriate to take a closer look at where the term ‘glass ceiling’ originates from. It was first used in American management literature in the late 1980s (David & Woodward, 1998) and is a metaphor, then usually referring to women’s experience of striving to reach senior posts in management and not being able to attain them, and attributing this to subtle, more or less invisible barriers (ibid.). With the publication of Miriam David and Diana Woodward’s book *Negotiating the Glass Ceiling*, the concept has been transferred to the situation of women in academia. In their book, they bringing together the accounts of women professionals at British higher education institutions who were members of the ‘Through the Glass Ceiling Network’ established by the authors in 1990. In the late 1980s, both editors had become heads of departments in Social Science at what are now considered new universities, but then were polytechnics. Given the experience they had gained on how factors such as networking play an vital part in the career advancement of academics

and senior administrative staff, and how these were specifically utilised by men, they decided to develop a group aiming at the specific needs of aspiring women academics.

“Because of the persistent gross imbalance of the sexes at the highest levels in higher education, all of the network’s members will have experienced difficulties during their careers in securing promotions and in enduring the cut-and-thrust of life as a manager within their institutions. Not all members, however, would necessarily endorse a feminist analysis of their experiences.” (David & Woodward, 1998, p. 6).

The network provided a forum for peer support and career development for women who had risen to middle management positions either in academia, administration or information services (e.g. registry and library). The central idea was to have ‘congenial peers’ supporting each other in matters of career advancement or tension management in present posts (ibid.).

Our use of the concept in our title reflects our focus on women who have achieved a considerable and visible level of professional success: full professorships in UK universities, where the title ‘professor’ is more restrictive than in many countries. We were interested in the extent to which women’s path to this level might be different from men’s because of invisible barriers; and in the extent to which, once the high level had been reached, it could be said that women and men to have achieved equality- or whether there might still be ‘glass ceilings’ still to break through.

The report of the Hansard Society Commission on “women at the top” (1990) studied the situation of senior women in the public realm, in corporate management, as well as trade unions, the media and universities. Some of the barriers to equality that impact on women across the professional board were identified to be:

“(…) unnecessary age bars and excessive mobility requirements; informal selection procedures which tend to be inconsistent, secretive and not open to accountability; stereotyped assumptions among selectors about women’s career availability and intentions; unspecified selection criteria which change with the candidate, the use of word-of-mouth or old-boy networks to find potential candidates, to the exclusion of women; prejudice by selectors about what is ‘right’ for women, in particular that women are best suited to their traditional roles as wives and mothers.” (p. 24)

Though not all of these barriers fully apply to academia many women will have had at least a taste of them.

Another recently publicised issue relating to the employment of women in higher education is the issue of pay. The second follow up report of the Hansard

Commission (2000) highlights this in their review of higher education. Based on the evidence given by the AUT to the Equal Opportunities Commission's Equal Pay Task Force (Bett Report, 1999) they report:

“Nearly half of all male academic staff (49%) were at the top of their (usually more senior) scale whilst scarcely a quarter (26%) of women were in a similar position.” (p. 15). This resulted in an increase in pay differentials between women and men since the late 1990s.

Within the Women in European Universities Network, the need for undertaking a quantitative survey emerged from the previous work of the project on a contextual analysis of existing statistical data for the UK and other countries. There it was found that UK data bases and availability of data did not cover many areas, so that it is difficult to gain a full picture of academic women in this current situation. Vázquez-Cupeiro (2002) points out that there is a lack of historical data, and that existing empirical studies either cover particular historical periods, or focus on specific case studies, or constitute portraits of academic women thereby focussing on their perceptions and experiences at university. For her book *Academic Women*, Brooks (1997) also encountered difficulties in obtaining statistical data in order to establish such variables as the number of academics staff by gender and grade of post/research grade. Of her attempts to obtain data she writes:

“A number of universities were unhappy with the idea of presenting ‘league tables’ of statistics on the appointment and promotion of women academics. Aggregates of universities include, University of London, University of Oxford and Cambridge and universities in England and Wales. Comparable statistics from new universities and polytechnics in England and Wales proved more elusive. A period of communication between June-September 1992 failed to persuade the Department of Education (DFE) to assist in the production of equivalent statistical material to the USR³ for new universities and polytechnics.” (p. 135).

In the light of these experiences, it seemed necessary to collect a new data set that could establish a fuller portrait of women professors in UK higher education. Our review of some of the existing literature raises a number of questions pertinent to such an exploration: for example, how do the career paths of female professors differ from their male peers in regard to pay, mobility, role of mentors, and family patterns?

³University Statistical Records (USR)

4 Methodology: Quantitative Approach

This section outlines the theoretical basis to the research design and the resulting choices made regarding the method of the enquiry. It describes the process of sampling, including some of the limitations experienced as well as some extended replies to the survey, and the units of analysis as well as units of data analysis.

4.1 Survey design

In order to investigate the characteristics of the career trajectory of female professors at European universities in relation to gender equality in higher education the European Research and Training Network constructed a questionnaire that was to be sent to a sample of professors at universities. We selected a range of well-established disciplines (across all participating countries), with different representations of women: (1) Biology, (2) Chemistry, (3) Computer Science, (4) Economics, (5) English Language & Literature (in UK), (6) History, (7) Law, (8) Management, (9) Maths, (10) Physics, (11) Political Science, (12) Psychology, and (13) Sociology. To enable the identification of specific issues within the career paths of female academics, the survey sought to include a sample of male professors matching the female sample in discipline and approximate age group. In this quantitative approach, the male professor sample takes the character of a ‘control group’ in order to establish specific gender issues.

As the literature review identified, there had been little or no use of surveys for this specific population, those who have reached the position of full professor, in the UK to date. Therefore, this current project enables an identification of social and professional variables that indeed describe the career trajectory of women academics who have reached the post of full professor.

The survey method also enables access to information from a sample that is geographically widely dispersed. With the help of advanced information and communication technology the survey could have been conducted technologically via internet and electronic mail. However, it was concluded that, in the context of British higher education institutions, the method of postal survey would achieve a higher response rate. This decision was based on the observation that while the dominant mode of communication in academia may well now be e-mail, this does not necessarily make it the best method for a survey. Characteristic of this mode of communication are the messages which are usually brief but very high in quantity. It is not unusual for a British academic to find more than fifty e-mails in their ‘inbox’ on a daily basis. It is therefore not surprising that some are not answered or other ways of drastic reduction of response effort are sought. Thus the assessment taken by the

researchers on this project was that a formal letter including the questionnaire, sent by post, stood a higher chance of success than an e-mail that can be deleted with the a single click of the mouse.

Some of the technical elements of the survey were carried out on behalf of the network by Surrey Social and Market Research, a commercial research company based in a neighbouring university to Royal Holloway. The company designed the questionnaire layout from the draft prepared by students, in collaboration with the network members based at Royal Holloway. This included arranging for the questionnaire to be printed and posted, sending a reminder cum thank you letter to all participants⁴, undertaking data coding and capture, as well as supplying a SPSS ready data file. Both sampling and data analysis were carried out by the network's doctoral students at Royal Holloway.

The design of the female and male professor samples were different, and are considered here in turn. Due to data protection legislation no complete list of female professors in the UK could be obtained from an official source or the employing institutions. Hence, the sample was constructed by finding the relevant information about female professors on the internet. The information required was their full name, professorial title and status, academic department, and postal address. The web-sites of all higher education institutions (offering one or more of the subjects named above) listed by the Higher Education Funding Council⁵ were consulted, which comprised a total of 129 institutions. The process included going through each web page of every department (using the disciplines' name or related ones such as 'social science') that was to be represented in the survey. The approach adopted involved opening the staff page and identifying any female professors in the relevant discipline within that department. In some cases this was rendered difficult for reasons such as: (a) the web page was under construction, (b) the academic titles were not stated, (c) first names were not stated, thereby hindering the identification of gender, (d) there were no photographs photos to help verify names, and (e) access to staff details was unavailable.

The final survey set included all identified female professors in the relevant departments with a full title, including such special titles e.g. 'Karl Mannheim Professor of Sociology or 'Jean Monnet Professor of Law'. Visiting and Emeritus Professors (usually unpaid retired staff) were not included. The sampling method will have excluded the small number of professors who are working in departments whose title is not clearly related to the selected disciplines but should only have included members of the particular disciplines in multi-disciplinary departments.

⁴ All these documents appended.

⁵ HEFCE (2003) list of higher education institutions in the UK at <http://www.hefce.ac.uk/unicoll/HE>

A different approach was taken for sampling of male professors. The possibility of using the same technique as for women was contemplated. However, it would have been virtually impossible to construct a sample that would have matched the female one in term of age. It was therefore decided to send each female professor two copies of the questionnaire including a letter⁶ asking them to fill in one themselves and pass the other on to a male professor in their department, matching age if possible.

The sample comprised a total of 417 female professors. However, as every sample member received two questionnaires a total of 834 questionnaires were sent out. Given the method of constructing the male sample it is not possible to ascertain how many questionnaires were actually passed on to male colleagues. A combined reminder and thank you letter was sent out to all female professors three weeks after the initial mailing. This combined letter was sent to avoid the need to identify who had returned the questionnaire, given the need to preserve anonymity.

4.2 Difficulties in Designing the Survey

Prior to settling for this method of sample design several other possibilities of gaining access to the required information on female professors in the UK were looked at. Here they will be considered briefly in turn, thereby highlighting some of the methodological difficulties frequently encountered in survey projects and in research on underrepresented groups. Within the Research and Training Network the survey of female and male full professors has been carried out parallel in seven countries. Each European country has had been able to specifically fit the research and survey design according to what was judged to be best for the outcome of the project. In several countries it was possible to obtain a list of all female professors holding all necessary information (Vázquez-Cupeiro, 2003). The same approach was initially tried in the UK though it was already anticipated that data protection legislation⁷ might hinder such access. As a starting point councils and agencies concerned with higher education institutions were contacted. This was first done by visiting their web-page and then contacting them via telephone. A list of the organisations is given below.

⁶ Copies of all letters appended.

⁷ Great Britain, Home Office (1998). Data Protection Act 1998, Chapter 29. HMSO.

- The British Council
- Higher Education Funding Council England (HEFCE)
- Higher Education Statistics Agency (HESA)
- Universities UK
- Equality Challenge Unit (ECU)
- Association of University Teachers (AUT)
- Higher Education and Research Opportunities (HERO)

Figure 1 List of Sampling Sources Approached

However, though some of these organisations specifically address the issue of gender equality among professionals, including academics, none of them either held a list or would have been able to allow us access to such information. Those organisations that did provide information, e.g. HESA, HEFCE, ECU and published reports and downloadable material from their web-sites could not release any information to help with the sampling. Indeed, without considerable expenditure on data sets, it has proven impossible to retrieve information e.g. on the numbers of female professors in each discipline in relation to male professors in order to establish the measure of an overall sample. This has been reported on in an earlier research paper of the network (Vázquez-Cupeiro, 2002).

4.3 Survey Responses

A total of 153 completed questionnaires were received from female professor, and a total of 62 completed questionnaires were received from male professors, thus resulting in a 26.9% overall return rate, but with women considerably more likely to return their questionnaires.

	Questionnaires	Returns	%
Female professors	417	153	36,7%
Male professors	417	62	14,9%
Total	837	225	26,9%

Table 1 Numbers and percentage of postal survey response

Of those in the sample who did not return the questionnaire, ten were unable to do so either because they were away, were under time restrictions, or had difficulty passing the questionnaire on to male colleagues. It is possible that some female respondents had no equivalent male counterpart, or that some males received the questionnaire from more than one female colleague. Two questionnaires were sent back after the cut off point. It is necessary to

acknowledge that the overall response-rate was low, which might be due to the lengthiness of the questionnaire (17 pages); because the targeted group is generally very busy and immersed in paper work; and the unfortunate circumstance of another survey being sent out at the same time to some respondents.

The mean ages of respondents indicate that the procedure to sample men in the same age-range as the female sample was successful with an average age of 53.3 years for women and 52.6 years for men. Further on socio-demographic factors, 80% of female and 82% of male responders were born in the UK. As for the region of current employment the results show that women are slightly more based in London and the South East (43.8%) than their male peers (35.5%). Otherwise the distribution was overall even across the UK. Similarly no systematic bias could be read from the distribution of female and male professors across the different types of institutions that exist in the UK. The highest rate of female respondents came from Pre-1992 universities (40.5%) followed by those from the Russell Group (37.9%) with no significant difference to the figures of male respondents from either of these groups. Indeed, 17% of female professors are at Post-1992 universities and 21% of male professors

As mentioned previously, the survey was sent out professors in selected disciplines. The distribution of respondents according to discipline and gender are shown in Table 2. Other than there being an under-representation of male professors of English, the distribution of respondents is comparable.

	Maths	Physics	Chemistry	Biology	CompSc.	English	History
Women	1.3%	0.7%	2.0%	9.8%	2.0%	11.8%	11.1%
Men	1.6%	--	4.8%	14.5%	3.2%	6.5%	12.9%
	Sociology	Polit. sci.	Psych.	Law	Econom.	Engineer.	other
Women	9.8%	3.9%	17.0%	9.2%	14.4%	1.3%	7.6%
Men	11.3%	--	14.5%	11.3%	12.9%	--	6.4%

Table 2 Distribution of respondents' disciplines

During the period of data collection the research company involved not only received returned questionnaires but also e-mails including inquiries, comments and suggestions. These were of some methodological interest for the current project as well as the following one involving in-depth interviewing of male and female academics.⁸ For example, one male respondent indicated that he had

⁸ A further qualitative analysis is currently taking place with the aim to establish the nature of the academic careers of women academics from lecturer to full professor in engineering and

thought that the problems of reconciling dual academic careers were a particular problem, as was ‘the biological clock’ factor, with the resultant double burden on all but the most super-human of women, among whom he counted two of his female professorial colleagues.

4.4 Analysis

The work on the data involved three stages. The initial stage required to reach the final data set included tidying up the data, thereby identifying problems and their resolutions, also including such that needed to be resolved at a later analytic stage. A check of variable labels and data coding frequencies was run on all the data and the output was scanned visually. The data set was transferred to a SPSS⁹ file and all discrepancies were checked to ensure they were the result of re-coding and not of data changes¹⁰. This work was undertaken by the survey institute who had collected the data.

The second stage of the analysis involved running raw frequency tables in SPSS for each of the 84 questions and sub-categories.

Having reached the third stage the researchers were able to test some of the hypotheses on the data that had been developed in the previous section. The results from these cross-table analysis are presented in the following sections, beginning with variables showing the ‘social capital’ including family background, marital status and family responsibilities etc., followed by ‘cultural capital’ including qualifications and institutional mobility. More specifically, some features of the career trajectory of female professors are presented, seeking to ascertain variables thought to indicate career success and/or hurdles. Further it was sought to identify whether the women who had reached such a high position had experienced gender discrimination, sexual harassment, as well as their opinions on equal opportunities, positive action, factors important for appointments and their understanding of why women are under-represented at top level.

psychology. These result will be available in a further training paper soon to be published. Further details at: www.women-eu.de

⁹ SPSS is a PC based soft-ware package assisting statistical and quantitative analysis

¹⁰ Measows, D.: explanation of work performed (audit trail) SSMR

5 Principal Findings

The results from the survey analysis are presented in the same order as described in the analysis above. Hence, we will start with an overview on basic descriptions of the respondents, such as socio-demographic characteristics also known as ‘social capital’. We then move on to ‘cultural capital’ in which academic qualifications of the respondents are described and their current work and position is illustrated. Throughout all descriptions and graphic depictions of findings the results from the female respondents are contrasted to those of the male respondents. However, as the response-rate of the male professors was significantly lower than that of their female peers we have been forced to be cautious about generalising on the basis of these results.

5.1 Family background, marital status & family responsibilities

In the paper on the survey results of the Spanish questionnaire (Vázquez-Cupeiro & Fernández, 2003) a reference was made to the hypothesis that a connection exists between the educational and occupational status of parents, and the success of daughters in academia. The idea here is that the higher the qualification and employment success of parents, specifically fathers is, the higher the success of daughters. Table 3 shows that, for our respondents, 75% of male academics’ fathers did not complete university or have any equivalent qualification whereas in the case of female academics the number decreased to 55%. This shows that women professors are more likely to have an advantaged background which supports the above hypothesis. However, it also alerts us to the possibility that women who did not have that kind of background may find it harder to establish a career in academia, or at least this might be said for women who belonged to the generation of this study.

<i>Education</i>	Women	Men
Primary school	7.2%	6.6%
Vocational school/unfinished secondary education	13.8%	18.0%
Secondary school	28.9%	45.9%
Unfinished university education	4.6%	4.9%
University education	25.0%	13.1%
Postgraduate education	8.6%	3.3%
PhD	5.9%	4.9%
N/A	6.0%	3.3%

Table 3 Father’s highest education level

As for mothers' highest level of education, our data show that more mothers are without a university degree. Most (85%) of the male professors and 65% of the female professors have a mother who did not obtain further academic qualifications after secondary school. These figures, too, suggest that the women in this study come from an advantaged background, 45% had mothers with some kind of higher education degree.

Moving on from family of origin to the present status of the academics and their marital status it was found that the vast majority of men and women were married, though with a slightly higher proportion of women were divorced (26.4%, and 21.3 for men) or separated from their partner.

	Single	Married	Separated	Widowed	N/A
Women	8.6%	76.3%	12.5%	0.7%	1.9%
Men	9.8%	88.5%	1.6%	--	--

Table 4 Marital status

A further hypothesis related to cultural capital suggests that successful women are more likely than men to have a partner who has the same or a higher level of academic degree and/or status. The figures from the survey fully support this suggestion, with 58% of the women respondents living in a partnership with someone who is either a faculty member, research scientist, or university administrator. Only 35% of men are in a partnership with someone of either these categories. Similarly, it is of interest to establish the educational level of partners.

	First degree	Post-grad. degree	PhD	other
Women	18.9%	37.9%	37.1%	6.1%
Men	22.6%	45.3%	15.1%	17.0%

Table 5 Partner's highest education level

As expected, women are more likely to be living in a partnership with someone who has an academic degree than men are. Indeed, 55.3% of women and only 30.9% of men had a partners who were faculty members. Despite these circumstances, one fifth of the female professors felt that overall their partner had a better position against 3.6% of their male peers who shared that opinion.

In contrast to several Southern European countries (e.g. Italy, Spain) which have seen birth rates drop drastically in the last 20-30 years, England has not registered such a marked decline. Two-thirds of the total survey population had

children, with more than half who had children having at least two. However, 33.3% of women and 23.3% of men had no children

The figures show that women are more likely not to have children than their male peers. Some women might decide against children because of the likelihood that women are more involved with child-care, thus finding two such demanding jobs as family and academic career difficult to combine. Thus women who have made that decision might be more likely to become professors. Or as far as the findings from this study showed, women with children agreed that the issue of after school child-care affected their ability to perform their job. 44% stated that this infringed on their work 'very often/often', in contrast to only 19.6% of male professors who felt the same. Indeed only 8.7% of men felt it happened very often, whereas 20% of women had that experience. At the other end of the scale, 13.3% of men stated that they had never experienced a conflict between family responsibilities and demands of work, whereas only 7% of women were able to make such a statement. This shows that women professors are much more aware of their double-role and the work-load they carry when they do have a family.

Having measured the perceived difficulties of such a double-act and the higher rate of women experiencing conflict, one might generally ask to which extent sacrifices are required along the career trajectory up to professor. Interestingly, both women and men showed a similarly high rate on sacrifices to personal time. 80% of both groups reporting this was 'very often/often'. In regard to social time 48% of women stated that they sacrificed such time 'very often', and 37.1% of men. However, male respondents were more likely to state that they had sacrificed time with their children for their work. Bias towards women changes however when responders were asked how this had affected their time with their children. Here 50% of male professors stated that this sacrifice was at least 'often', whereas in female professors 41% made that claim. Finally, professors were asked whether in reaching their present position they had specifically decided against having children. Here 20.2% of women affirmed this as against 16.4% of men. Moving from child-care to domestic work, unsurprisingly 54.8% of male professors and 11.3% of female professors explained that they did less than half of the chores in their household.

All in all, the vast majority of female professors are married, though a significant group are divorced. They show a clear tendency to have partners who are academics themselves. On the work-related side, child-care and the effects of child-care have a stronger impact on female professors with children in their career trajectory and private time than they do on their male peers. But women professors were less likely to have children.

5.2 Qualifications and institutional mobility

Before assessing gender differences in being promoted or appointed to a chair it is interesting to see in terms of qualification whether the PhD was obtained from the current university (as is often the case in other EU countries) and what level of institutional mobility is apparent in women academics before becoming full professor. Both female and male professors did their PhD in the UK with over 90% in both cases. However, 20.3% of women in contrast to 10.7% of men obtained their PhD at the university they were currently working at. This is already an indicator of lower mobility for women than in men. Mobility has been regarded an important positive factor in the career advancement of academics. Also, time spent staying abroad can be seen as an indicator of an academic's reputation and qualifications, in the sense that it usually involves securing travel grants to do so as well as being involved in and having access to international networks. Therefore it can be regarded as part of the person's 'academic capital'. However, mobility that interrupts a career, e.g. through following a partner, may be disadvantageous.

	Women	Men
Before completed PhD	27.5%	21.7%
Between PhD and first lectureship	24.0%	14.3%
Between first lectureship and professorship	39.7%	42.9%
Since professorship	17.6%	13.0%

Table 6 Working abroad longer than three months

Women academics show a slightly higher rate of institutional mobility, specifically before they completed their doctoral study and before gaining a first lectureship. A similar pattern emerges when we look at the number of institutions female and male academics have been at between starting the first academic post and their first professorship.

	none	one	Two	three	four	five	> six
Women	9.2%	33.6%	29.0%	14.5%	3.1%	4.6%	6.3%
Men	11.1%	38.9%	27.8%	16.7%	3.7%	--	1.9%

Table 7 Mobility between first lectureship and first professorship

Again, women show a slightly higher rate of institutional mobility with a cluster toward the end of the scale with rising numbers of institutions. Several reason can be found that explain this pattern of mobility. Firstly, as is apparent from Table 6, women are significantly more mobile after their PhD and their first lectureship. This could be explained by the difficulty of securing a first tenured

position and by wanting to use the time in a way that would enhance their academic profile. Also, going abroad after finishing a degree (not only first degree) is very popular and regarded as desirable for academic careers in the UK. Secondly, mobility could be explained by the higher rate of women following their partners than is the converse. As we have seen, as a large proportion of women respondents have partners in academia this seems quite plausible. If these were men ambitious for their career, and if ambitious men move more, then women's mobility may not carry the same capital value. Thirdly, the second peak in female mobility after promotion or appointment to professor, a time when the academic receives more autonomy, could be seen as a phase of 'enjoying the fruit' of having reached the top of the academic ladder. Also, given that women are more involved in family and domestic responsibilities, it can be hypothesised that by the time they have gained a professorship their children might have reached an age where they need less constant supervision, freeing up the woman academics to go abroad more.

The next interesting point was to look at how long it took female and male academics from a) their first degree, and b) their PhD to the promotion or appointment to full professor, as shown in Table 8.

<i>Promotion to first chair</i>	6-20 years	21-30 years	31-44 years
Women	16.5%	64.6%	17.4%
Men	14.4%	63.0%	22.9%
<i>Appointment to first chair</i>	12-20 years	21-30 years	31-35 years
Women	30.5%	53.2%	16.1%
Men	42.2%	49.9%	7.7%

Table 8 years from first degree to first chair

If anything, women appear to get promoted to chairs a little bit faster than their male peers. However, the difference is not great and must be seen in the light of the small male population of this study. Having said that, male professors are more likely to receive their first appointment to a chair within twenty years of their first degree or ten years of getting their PhDs (Table 9).

<i>Promotion to first chair</i>	0-11 years	12-21 years	22-37 years
Women	25.9 %	49.8%	23.7%
Men	22.3%	52.9%	25.8%
<i>Appointment to first chair</i>	2-10 years	11-19 years	20-28 years
Women	28.75	44.8%	27.0%
Men	36.3%	45.2%	18.1%

Table 9 years from PhD to first chair

There is an understanding that the under-representation of women at professorial level could be due to their difficulties in succeeding in the promotion procedure. The responses to the question ‘how many times did you have to apply for appointment to a chair before you were successful?’ show that this is not necessarily the case. 63% of female professors and 47.4% of male professors declared that they had been successful at their first attempt. And nearly equal percentages of about one in four male and female academics applied only once unsuccessfully before becoming a professor. Male academics show a slightly higher persistency in applying several times. Therefore, it could be the case that men ‘try the waters’ sooner, and women may be more inclined to give up if they are not successful, or not to try until they are almost certain of success.

With the promotion of or appointment to a professorship the work profile of the academics is likely to change. As mentioned above, the position usually gives the professor more flexibility as well as more space for creativity and in decision making. It is therefore not untypical for professors to be involved in other academic and non-academic positions and activities with the UK and/or abroad. To begin with we looked at whether any other position at the current university is held other than the chair.

	Women	Men
Head of department	16.2%	12.8%
Head of school	9.6%	8.1%
Head of research unit	31.1%	35.4%
Dean	6.5%	5.7%
Vice Dean	6.5%	--
Deputy Principal	4.4%	8.6%
Vice-Chancellor	--	3.0%
Other	16.1%	8.0%

Table 10: Other academic positions

On the whole there is no significant difference here between women academics and men. However, where respondents filled in other positions they held than the ones selected it showed that female professors showed a wider spectrum of positions than their male peers. Where only few male professors stated that they chaired further committees, examining boards, working parties and teaching units, female professors showed to be directors of various degree programs and other more specific titles of the pre-selected posts (see table 10), which on the whole indicates a stronger involvement with the student population. However, it can also be interpreted as a way of enhancing managerial roles.

In questions on additional positions within the academic realm of the UK but outside of the current university, women on average showed more involvement in, e.g. being members of editorial boards, or of academic journals. Table 11 gives percentages of female and male professors ticking ‘yes’ to any of the selected positions.

	Women	Men
Editorial board of UK journal	78.5%	71.9%
Board member of UK grant-awarding inst.	42.6%	38.5%
Referee of research-funding bodies	93.2%	85.0%
Expert witness for national enquiry	31.5%	29.2%
Executive member of professional association	44.8%	54.7%
other	92.8%	93.5%

Table 11 External academic position

As for external academic positions held abroad there is no significant difference between men and women in participating in overseas journals, being members of decision-making bodies in scientific institutions, or acting as experts to international academic organisations. However, in regard to participating in international projects, women showed to more likely (66.9%) than men (57.1%) to take part in such activities. Provocatively, one could ask whether this might indicate that women are more likely to channel energy into projects that might not have the same impact on career advancement than those given preference by men, but we cannot establish this from our data, especially as our respondents were successful women and men.

Along a similar line, respondents were asked to what extent they had given a presentations at public meetings within the last two years. 41.4% of male professors claimed that they had not once given such a presentation, whereas a total of 39.4% of female professors stated that they had given such presentations often or very often. Again, there seems to be a stronger involvement of women in activities involving the public, or mass media that are considered to be part of a senior academics’ role (and specifically so on the UK). However they can be time consuming and carry less weight in e.g. promotion application. In summary, women are more likely to have done both (international projects and public talks), and less likely to have done neither. Also, women who succeed, especially in male dominated subjects where they stand out more, may attract the media’s eye.

The last topic in relation to ‘qualifications and institutional mobility’ are sources of income, additional earnings, personal rating of salary, and salary band. Our data indicate that typically about 90% of respondents’ income comes from their

basic salary, and this applies for women and men alike. As for the satisfaction over pay, the survey found that women professors are generally more satisfied than their male peers. Indeed, a total of 26.7% of men stated that they were either unsatisfied or very unsatisfied with their academic salary, whereas only 17.9% of women were of the same opinion. As for the salary band, male professors in 2001 were four times more likely than female professors to earn a gross salary from their university of more than £ 60,000.

	up to 39k	40k – 49k	50k – 59k	> 60k
Women	12.6%	53.6%	29.1%	4.6%
Men	14.4%	37.7%	27.9%	19.7%

Table 12 Gross University Salary Band

Table 12 fully supports the claim that women do not receive the same salary than their male peers, not only within the lecturer, senior lecturer and reader positions, but also at level of full professor. However, it must be stated that professorial salaries are negotiated in the UK and this could be a strong factor in the pay advantage of men.

6 Specific Findings

6.1 Career trajectory

Having established how long it can take to obtain a professorship and some of the features along that path, as well as some of the characteristics of the post itself, the intention is here to focus on some of the more specific intricacies of developing an academic career. To begin with we will look at what professors regard to be important variables in the promotion to full professor.

	Women	Men
Co-operation with faculty members	59.8%	49.1%
Other personal contacts	48.4%	41.5%
Positive discrimination programs for women	6.2%	0%
Creation of new posts, expansion of HE	16.2%	24.5%
Formal or informal position in non-academic world	32.1%	26.0%

Table 13 Factors enhancing promotion to chair

The most striking result in table 13 is the variable ‘positive discrimination program toward women’ to which all male responses said ‘no’ and 93.8% of women professors also showed opposition. A possible reason behind such a

perception for women is concern over being regarded a token, and for men the fear of being discriminated against. Also, women professors give a higher importance to co-operation with faculty members than men do. This coincides with previous findings in 5.2 where female professors showed a higher involvement with students. The hypothesis that women academics are more inclined to say 'yes' (in relation to work) to academic as well as non-academic members of their department/faculty is broadly supported by the figure shown in table 13. Finally, the last figure in the table shows that women are slightly more convinced that formal and informal positions outside of academia are important in career development, which might explain why more women showed engagement with the media.

Moving on from what professors see as important factors in career advance in general, we will now look at what specific factors are thought to have helped the respondents in their career development. Here the focus is on what kind of people were regarded as helpful. In the questionnaire we asked the respondents to differentiate influential people by gender as well as into categories of positive and negative. Both female and male professors rated male senior member of staff at their institution as important, both with well over 60%. Male heads of department at current institutions were highly rated by female professors with 69.4% against 44.4% in male professors. Male partners were rated as very important by 81.1% of women professors, whereas only 72.2% men so rated their (female) partners. 39.1% of female respondents felt that male friends were important to their career, and only 18.6 of male respondents felt the same. It may be that some of these male friends are colleagues, which could explain why they are given that amount of weight. As far as negative evaluations of male directors, colleagues or partners etc. are concerned, twenty-five women rated their male head of department as a negative important person, whereas only four men shared that opinion. Despite the fairly small numbers on these specific ratings, the male-negative count showed women to rate men as more negative than men did themselves.

With respect to important female figures, 38.2% of women agreed that a female senior member of staff at their current institution was important, against 22.7% of the male population. However, it must be taken into account that men may not be confronted with the same difficulties as women academics are, and may be less likely to be looking for a female senior person to e.g. support them. And there are less likely to be females in senior positions to give support. Again, on the issue of friends, 54.4% of female professors agreed that female friends take an important role in shaping a career, and again men rate friends less, with only 23.3.% of male professors reporting positively in relation to female friends. Rather strikingly are the results on women as negative influences on shaping a career. A total of 25 female professors felt that female senior members of their

institution and female heads of department had a negative impact on their career, whereas only a total of three men expressed this opinion in the same category. Hence, women are important in women's lives and careers, but women are equally aware of other women who are not fulfilling a positive role.

Respondents were also asked whether they had been helped in their career by a colleagues or someone else in regard to obtaining a research grant, travelling overseas, writing articles or books, and obtaining a position. They were also asked to differentiate between women from men who had helped them.

<i>Male person</i>	Women	Men
Obtaining research grant	71.2%	69.2%
Travel overseas	68.1%	68.8%
Writing articles	82.5%	87.9%
Obtaining position	74.7%	68.0%

Table 14 Male person helping in career

On the whole (Table 14) there is no large difference between female and male professors in regard to receiving help from men and both men and women are less likely to have received help from women (Table 15). However, women are more likely to have received specific forms of help from women than men were (except for research grants). Again, it can be noted that women are less likely than men to be in a powerful position in which they can offer such help.

<i>Female person</i>	Women	Men
Obtaining research grants	46.0%	50.0%
Travel overseas	54.0%	37.5%
Writing article	70.7%	63.2%
Obtaining position	56.7%	35.3%

Table 2 Female person helping in career

As the respondents in this survey have reached the high academic position of full professor it is interesting to see whether they extend the support they received themselves to the next generation of junior colleagues. This is significant in the light of claims that some senior women, who often have a rather secluded position as they are alone in a male dominated area, take on a so called 'queen bee' status, in which they are not concerned with the needs of the next generation of female academics. Respondents were asked to state how many female and/or male junior colleague they had helped in one or several of the four instances. 65.8% of female professors and 82.9% of male professors stated that they had helped at least one or more male junior colleagues in

obtaining a research grant. Differences in percentages showed to be similar in the instances of helping with travel abroad and obtaining a position, though slightly tilted toward female professors in regard to help writing an article.

On the side of helping a female junior colleague the figures from female and male professors are virtually identical. However, on the last variable ‘helping to obtain a degree’ 46.9% of female professors and 64.0% of male professors stated that they had helped a female colleague. This shows that men are just as likely to help women as they are to help other men. The reason can be found in the more powerful positions some male academics have especially in regard to networking within and outside of the their higher education institution.

At this stage it is necessary to see whether the claim that women academics spend more time on administrative work than their male peers is valid. If this were to be that case, then more administrative work would lead women to loose time for other more career-advancing work, such as research.

<i>Teaching</i>	0-17 %/time	20-40 %/time	45-70 %/time
Women	42.7%	51.1%	6.3%
Men	43,3%	50.0%	6.7%

Table 16 Time spent teaching

At the level of full professor women and men seem to be spending the same amount of time on teaching regardless of the time-categories they stated. On a general note, only a very small percentage of professors seem to teach more than 50% of their working hours.

<i>Research</i>	3-33 %/time	35-55 %/time	60-100%/time
Women	59.1%	26.6 %	12.3%
Men	54.0%	32.7%	13.0%

Table 3 Time spent doing research

The situation seems to be similar for the time spent on doing research, however, a slightly higher rate of female professors were only able to invest up to one third of their time on research: 32.7% of male professors could spend up to half of their time on research in contrast to 26.6% of their female peers.

<i>Administration</i>	0-25 %/time	27-50 %/time	55-80 %/time
Women	59.5%	33.6%	7.0%
Men	57.3%	36.1%	5.5%

Table 18: Time spent on administrative work

The time spent on administration does not seem to strongly support the hypothesis that women professors spend more time on administrative tasks. 22.4% of female professors explained that at least 20% of their time was used for this work, in contrast only 14.8% of men spent that amount of time. And, again, 7% of women spending half of their time on administration and only 3.3% of men.

Considering the amount of working hours that are required in order to successfully climb up the academic ladder, and the many different roles that the posts require, and that academic salaries are not necessarily the highest in comparison to senior positions in industry and business, the question emerging is: how do professors feel about their work; are professors satisfied with their job, and would they make the same career choice again?

In respect to teaching, a total of 40% of female professors stated that they felt overloaded ‘often’ or ‘very often’. However, at the other end of the scale a total of 30% of women also stated that they never or not very often felt overloaded with teaching. Men were much more likely to say that they were overloaded with teaching than to say that they were not. As for administrative work, women were more likely to say that they felt confronted with too much administration (72% for very often and often). 9.7% of men and 4.7% of women stated that they ‘never’ or ‘not very often’ felt overloaded. In this respect men are less likely to complain about administrative work than women. Both male and female professors clearly indicated that they were overloaded with serving on committees, with about 64% for both women and men on the answers very often and often.

	very often	often	occasionally	not very often	never
Women	17.8%	30.9%	34.9%	12.5%	3.9%
Men	4.8%	22.6%	38.7%	21.0%	12.9%

Table 19 Symptoms of overwork

Nearly four times as many female professors than male professors experienced symptoms of overwork very often. 38.7% of women felt such symptoms either often or very often in contrast to 27.4% of their male peers. Indeed, 12.9% of male professors never experienced any symptoms of overwork, whereas only 3.9% of women were able to say the same. One reason for this result may be the fact that women are more involved with family responsibilities, such as child care and domestic work.

But in how far does this impact on women's perceptions of being satisfied with career progress? 28.3% of female professors were very satisfied with their career progress and 49.3% were satisfied. Their male colleagues were not quite as enthusiastic, with 17.7% of them stating 'very satisfied' and 46.8% 'satisfied'. In fact, 11.4% of the men were either not very satisfied or not at all satisfied.

Nevertheless, would the academics who had succeeded in climbing the academic ladder choose this career path again? Here, too, women showed to be more positive with 85.5% of them stating 'yes', against 73.8% of men. This lets us conclude that the female professors are successful women who feel the strains of their job and admit to feeling overworked but who are enjoying their success. They are by no means a totally 'aggrieved' group.

6.2 Women in academia

In this last section we will look at the opinions men and women professors have on the place women have in academia and why women are under-represented at the level of full professor. We will also look at some of the opinions relating to the promotions and appointments before assessing how large the impact of discrimination against women is and in which stages of the academic career trajectory it takes place. Also experiences of sexual harassment and bullying are measured.

The Hansard Committee (1990) investigating the reasons for the under-representation of women at top positions in society argue that barriers created by discrimination in recruitment and promotion include: informal selection procedures, stereotyped assumptions about women's availability and intentions, and old-boy networks among others. In our survey, respondents were asked to indicate how strongly they agree or disagree with statements that imply some of these barriers.

On the statement that women's under-representation was due to women's preference, 14.5% of men agreed and 22.5% women agreed. To the suggestion that women lacked the necessary qualifications there was no marked difference between men and women, the vast majority of both sexes disagreed with the statement. A much stronger discrepancy between male and female opinions was measured in regard to whether women's being isolated in a mainly male environment was a factor. 56% of male professors agreed strongly or agreed with this, whereas 77.7% of female professors did indeed strongly agree, or agree. This suggests that men are not as aware of the male dominance of many disciplines as women are. However, it may also be an indication that many of the respondents were male professors in subjects that have a higher rate of women academics.

On a more societal level, it was asked whether the under-representation of women was due to society's discrimination against women. Again more women than men agreed, with a marked difference of 20% between male and female ratings. The influence of informal networks which are often enough referred to as 'old-boy' networks split the opinions of professors most markedly. 88.1% of women agreed and agreed strongly on this point, whereas only 45.9% of men did, indeed over 20% of men disagreed with this perception. The reason for this situation might include that men are not aware of the way they network, or how their networks exclude women, or they are in disciplines where a stronger gender mix is experienced and problems seem less apparent.

This level of awareness or non-awareness of men toward the situation of women in academia is further assessed in the opinion-rating on the following statements:

- a) Women are accepted as professors in my discipline.
- b) Women are accepted in positions of leadership in research.
- c) Women are accepted in top university positions.
- d) Women have to achieve more than men to receive the same degree of recognition in my discipline.
- e) Power in the academic world is primarily based on informal networks.

Statement a) received a total of 100% agreement from male professors, but only from 85% of women. Similar results were obtained for statement b) with only two men disagreeing but 32 women disagreeing. Responses to statement c) produce a similar result. The perspective changed in d) and e) when a total of 79.1% of women and only 35.5% of men strongly agree or agree that women have to achieve more in order to receive the same degree of recognition. As seen before men are less aware of the impact of informal networks (or do not want to admit to their impact) as 51.6% agreed or strongly agreed to statement e) but 74.2% of female professors recognised this statement as valid. An interpretation of these results is that men perceive the world to be better for women than women do.

It was suggested by the Hansard Committee that selection processes can be influenced by unspecific selection criteria that can change from candidate to candidate. This perception seems to be shared by women. On the question whether certain factors have an impact on the promotion of applicants, the results are shown in Table 20.

<i>Impact on promotion</i>	Women	Men
Candidate's nationality	27.9%	9.7%
Age	67.4%	61.3%
Religion	8.5%	3.2%
Gender	41.5%	12.9%
Sexual orientation	13.3%	3.5%

Table 20: Factors that play a role in promotions & appointments

Women show in all five instances that, in their opinion, appointments and promotions are influenced by such things as nationality, age, religion, gender and sexual orientation at their university. A significant difference from women is the opinion of 87.1% of male professors that gender does not play a role in the process of promotion.

Further awareness of discrimination in the female population showed in the question: do you know of a specific instance and women who has been discriminated against? 38.4% of female professors stated that they did, but only 13.1% of male professors did so as well. In regard to specific experiences of discrimination during their PhD half of the women had not, but the other half had with 25.6% stating occasionally. Nearly 80% of men had never experienced discrimination during their PhD. Moving on to the time when working as a lecturer a similar picture emerged, however, a higher rate of women who encountered discrimination occasionally with 36.7%. The further up the academic ladder women rose the less experiences of discrimination they made as 61% had never been discriminated against during their application for a professorship. However, our survey does not include the women tracked out of successful academic careers by discrimination.

As for personal experiences of sexual harassment it is less surprising to see one third of the female population stating they had and 93.4% of men respondents to this question stating that they had not. However, it does seem striking that both women and men have to a similar extent experienced bullying of some sort. It shows that the factor of competitiveness in the career trajectory of all academics may not merely be overcome by merit.

	Women	Men
Ever experienced sexual harassment	35.1%	6.6%
Ever experienced bullying	47.3%	31.1%

Table 21 Experience of sexual harassment & bullying

7 Discussion and Conclusion

The aim of this paper was to see in what ways female professors differ from their male peers in regard to family origin, mobility before promotion, career trajectory, additional positions apart from their chair, family patterns and child-care responsibilities, opinions on factors that are seen to enhance careers, and supporting junior colleagues. Further, we have looked at how far professors rated their situation and position as women in academia and what kind of explicit experiences of gender discrimination and other forms of barriers they had encountered. The statistical analysis of the postal survey confirmed that the under-representation of women in high positions in academia may be influenced by factors such as:

- Restricted mobility of women to certain short time-windows at the beginning and top level of their career.
- Stronger tendency of women academics to be with a partner who is also in a high academic position possibly implying that the women will adapt their mobility to those of their partners.
- Higher level of involvement with family and child-care as well as domestic work.
- More work involving the supervision of students or organisation of degree programs impacting on the time left for research.
- Stronger tendency to appear in public and disseminate research results there.
- Experiencing subtle barriers within the department and the higher education institution.

However, the finding also suggest that women who have succeeded in academia have taken these hurdles and are able to feel satisfied with their job and their achievements as well as not hesitating to choose the same career again. All this is stated, despite the fact that they earn less than their male peers, to a large extent regard their partners to have higher positions, feel overloaded with work and family responsibilities, sacrifice personal time, and feel they have to work harder in order to receive the same recognition of their work than their male colleagues, just to name a few.

All this shows that typically for social science research the issues at stake are multi-faceted and are found at micro and macro levels of social settings. Obviously, this also implies that there is no one all-encompassing solution to the difficulties women experience at various levels within an academic career. As Vázquez-Cupeiro (2002) argues, women may be able to get into higher education, but it remains difficult for them to move on and up through to a platform above the glass ceiling.

Though positive action measures were largely discarded as an appropriate method by survey respondents (male and female), other programs to support women in an academic career were welcomed. But what makes the ‘rare birds’ (Weale, 2003) fly? Further research on existing or planned (pilot-) projects, policies and informal strategies are necessary to establish more concrete ways of helping academic women. Research on such developments would lead on to an atmosphere in higher education institutions that will at long last clear up the gendered fog of academia, enabling a more visible path for women to reach the top.

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Appendix 1

Letter sent out with postal survey

Dear Professor,

European Research Training Network: Women in European Universities

We are asking for your assistance with a research project on gender equality in higher education which is being conducted in seven European countries. Part of this project is a questionnaire survey of university professors in selected disciplines. Surrey Social and Market Research (SSMR), at the University of Surrey, is assisting with this major project.

We would appreciate it if you could help us with the U.K. element of the study by completing the attached questionnaire and returning it in the pre-paid envelope. The questionnaire has been designed by a team of social science doctoral students from seven European Universities who are members of a European Union-funded Research Training Network . (See details overleaf or contact the website: www.women.eu.de.)

A sample of women professors has been identified in the United Kingdom from public sources, e.g. University websites. This is how your name has been obtained for the survey. SSMR will hold no record of your name once the questionnaire has been distributed. The Network will be supplied with coded data which does not include any means of identifying respondents' names.

This mailing to you also includes an additional copy of the questionnaire. In order to obtain data from a comparable sample of male professors, we would be grateful if you could pass this questionnaire and additional envelope to a male professorial colleague working in your **discipline** in your institution. If you have more than one such colleague, please choose the one closest in age to you.

We are aware of the pressures on academics' time but hope that you will consider this to be a worthwhile research project. The findings of the study will be disseminated within academia and to those concerned with higher education policymaking in the participating countries and the European Commission. If you have any queries about the study, please do not hesitate to contact Rosemarie Simmons at SSMR on 01483 259459, or R.Simmons@surrey.ac.uk.

Yours sincerely

Rosemarie Simmons
MD, SSMR

Appendix 2

Reminder and thank-you letter to postal survey respondents

Dear Professor,

European Research Training Network: Women in European Universities

We recently sent you a letter and questionnaire asking for your assistance with a research project on gender equality in higher education which is being conducted in seven European countries. Surrey Social and Market Research (SSMR), at the University of Surrey, is assisting with this project.

In order to ensure anonymity, we did not include any identification reference on the forms. We are therefore sending blanket reminders to everyone who was sent questionnaires. If you have completed and returned a form, thank you for your participation in the study. Your contribution is extremely valuable.

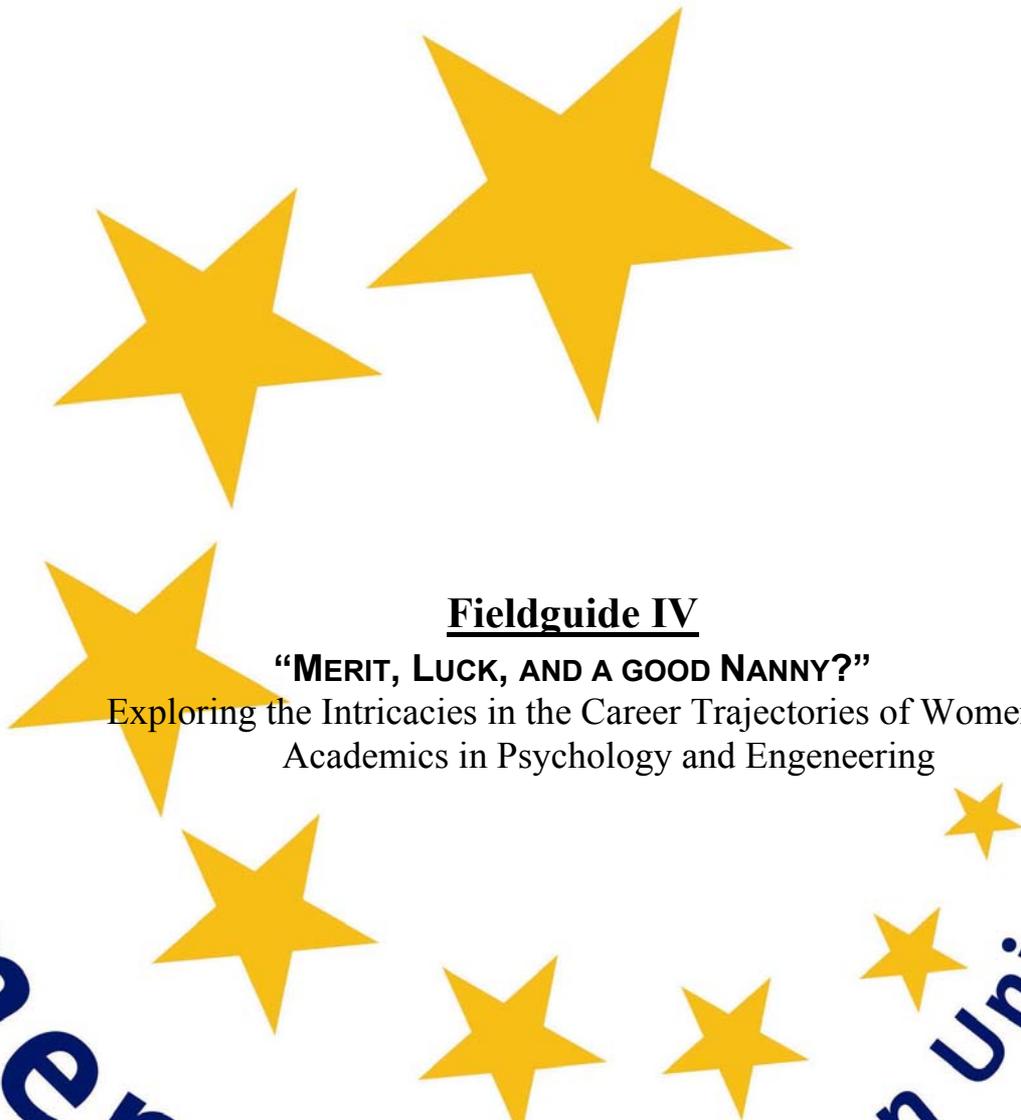
If you have not yet had the opportunity to return a form, we have extended the deadline date for the returns until 28th April. We would appreciate it if you could take the time to complete the questionnaire. If you have not already done so, encouraging a male counterpart to take part would also be helpful.

If you have any queries about the study, please do not hesitate to contact Rosemarie Simmons at SSMR on 01483 259459, or R.Simmons@surrey.ac.uk.

Thank you for your assistance with this project.

Yours sincerely

Rosemarie Simmons
MD, SSMR



Women in European Universities

Fieldguide IV

“MERIT, LUCK, AND A GOOD NANNY?”

Exploring the Intricacies in the Career Trajectories of Women Academics in Psychology and Engineering

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1 Abstract

This paper seeks to explore some of the reasons for the under-representation of women in academic post in the UK. Here the specific case of Engineering and Psychology are examined. The promotion of female undergraduate students in Psychology is high with female intake on some courses comprising up to 70%. However, this is not mirrored in the figure of women academics in Psychology departments. The contrasting model is Engineering where the female student population ranges between 10 and 20% and the figure of women academics is equally low. In order to identify the intricacies of the career trajectories of women in psychology and engineering, lecturers and professors in both subjects as well as their male peers in the same posts were interviewed for this qualitative research project. A total of seventeen interviews were conducted at five higher education institutions. From the data, it transpires that family patterns and responsibilities, the importance of a mentor, networking and other sources of support played a significant role in the career advancement of women in comparison to men. However, discipline specific factors on the one hand, and broader societal structures on the other also framed the individual experiences and opinions of the interviewed academics.

2 Introduction

The aim of the Research and Training Network “Women in European Universities” (WEU) is to assess which factors within the private, social and professional environment of female academics disadvantage or hinder them to strive towards the high ranking positions of research and teaching in the way their male colleagues do. Some insight into the situation of academic women’s status within the context of the UK higher education institutions has been illustrated following the analysis of available statistical data on academic career development within universities in Britain (Vázquez-Cupeiro, 2001). It is against this background that the report presents the results of the qualitative analysis carried out as the third and final stage of the European project.

The results from the quantitative study, looking at career trajectory, specifically pay, mobility, networking, and family patterns, indicated that it would be very interesting to follow up some of these areas in order to present a more complete analysis (Leontowitsch & Vázquez-Cupeiro, 2003). Indeed, during the data collection of the postal survey we received some lengthy e-mail comments by those who had received the questionnaire, who expressed their personal views on the subject in some more detail than was possible within the realm of the survey. One of the commentators described two factors he had observed in his female PhD students he supervised, and which he ultimately thought hindered women in reaching the post of full professor. The first factor implied that young women especially if they were with a partner a little older than themselves who had already established a career, were more likely to adapt their life and work to his in terms of mobility, thereby impacting on their own career chances. The second factor involved the ‘biological clock’ of women around thirty who at that age stood at the beginning of a career and/or before the choice of having a family. Superhuman energy was necessary in his opinion to manage both. In how far this reflects the opinions of the female lecturers and professors and their male peers will be illustrated in the presentation of the narrative accounts.

Given the social context of under-representation of women academics in higher education and these preliminary thoughts, this qualitative study set out to explore the opinions and experiences of those who have succeed in ‘getting a foot in the door’ by securing a lectureship, and those who have made their way up through the different positions of the academic ladder to full professor. As for the choice of disciplines, psychology and engineering represent two disciplines that differ considerably in the ratio of women academics that they each contain. Psychology can be found at the higher end of the scale with the discipline showing relatively high numbers of women in tenured positions, although still much lower than the proportion among students. whereas engineering remains at

the other end with a low level of women students and academics. The design of the research project is also influenced by the plan of the researchers comparing the situation in the UK with that of Spain. The number of female academics in tenured positions is significantly higher in Spain (and in other Southern European countries) than in the UK, Germany or Austria. Clearly a direct comparison of such empirical data as produced here is difficult. Within the possibilities of this report it will not be possible to elaborate on any of this cross-national comparison. However, a paper on the cross-national comparison of Spain and the UK is in planning.

2.1 Outline of Report

This report begins with an overview of existing literature examining previous studies on the career trajectory and under-representation of women in academia. Here it will be established that a qualitative approach to a comparison of two contrasting academic fields such as psychology and engineering constitutes a novel contribution to the understanding of academic career development. In the methodology section the reason behind this choice of method and subject combination are discussed and the process of sampling and interviewing are described. Following the methodology, is the presentation of the data. A brief introduction to the individual interviewees is given in order to establish an atmosphere where the reader can follow the accounts and quotations from the data as though they were case-studies. Though the latter was not the initial intention of the researchers, the relatively small scale of the study does enable such a way of reading. Continuing from there, the themes identified in the analysis of the data are described and illustrated one by one. Finally, the report ends on some of the ideas that came from the interviews on how the situation of under-representation of women in engineering generally, and female academics in psychology specifically can be changed.

3 Literature Review

3.1 Discrimination against women academics

There is an existing body of literature that has tried to analyse the reasons for the under-representation of women academics across many disciplines in higher education, ranging from contextual analysis of existing data (e.g. Vázquez-Cupeiro, 2002), narrative accounts of women on their way to the top (e.g. David & Woodward, 1998; Bagihole, 2001), cross-national comparisons of women's career trajectories (Brooks, 1997; Morley, 1999), to analysis of women's careers within the historical and social changes of higher education institutions (e.g. Brooks & Mackinnon, 2001). From this literature certain reoccurring arguments

transpire which address virtually every aspect of an academic's work, collaboration and communication within the department and outside of it, relationships to male colleagues, family duties, accessing support, mentoring and networks. However, as Brooks (1997) points out not all discriminatory practices are easy to pin-point:

“On of the reasons for this difficulty in identifying discrimination is that many of the ‘normal’ discourses and practices within which academic women are located are experienced as discriminatory by academic women. As indicated earlier, the ‘normalisation’ of a masculinist and patriarchal culture within the academy frequently makes discrimination difficult to identify as it is normal part of the academic culture.” (p. 125)

Not all the aspects of what Brooks has identified to constitute discrimination against women academics applies to the group we have interviewed for this study. Inevitably, this is the case for the male participants, as for the female participants, they had already achieved a secured position within the academic pyramid, thus having brought behind them (if so) the discriminatory practices toward staff on temporary contracts.

Despite equal opportunity guidelines and anti-discrimination legislation that have tried to decrease the formal structural obstacles (legal, political and social) that have traditionally kept women from reaching senior professional positions, full gender equality remains elusive. Hence, recent attention has therefore been given to more subtle informal barriers which are difficult to detect and eliminate (Bagihole & Goode, 2001).

3.2 Gendered Disciplines and Gendered Reconstruction

In the light of the comparison of engineering and psychology it is necessary to establish the discipline specific differences that impact on the career paths of women. For that to happen it is necessary to take a step back and look at the structure of UK higher education institutions. Without wanting to unravel and explain the British higher education system (this has been accomplished elsewhere: Vázquez-Cupeiro, 2001), it is vital to understand that the ongoing and significant changes in the structure and to some extent ‘personality’ of the higher education field have had increasing impact on the individual disciplines. During the 1980s, and even more so under Blairite Britain, higher education has been restructured in a way that its tradition concern with a liberal education for undergraduates has been partly replaced by the greater emphasis on national ‘wealth creation’ (Brooks, 2001). With the recent downturn in economic growth and a return to moderate speed in technological development, both government and business are turning to universities for research output and development (Hearn, 2001). The somewhat ‘tranquil’ life (at least for some years) universities

had been able to lead up until then, with the exception storm caused by budget cuts, implied a community spirit in which departments and higher up pan-departmental boards communicated and made decisions in a collegial and little competitive way. However, with the increased interest from outside and the governmental budget cuts, universities have found themselves in a position where they cannot withstand the external influences. More and more research follows a technological based agenda which involves the securing of large grants for funding. This does not come without a price:

“Hand in hand with corporate restructuring of universities comes the language of quality management and its effects on the individual subjectivities of university academics.” (Brooks, 2001, p. 5)

Such quality management has been institutionalised by the research assessment exercise (RAE) that give guidelines on the quantity and quality of research a department should produce in a given time-span. Hence:

“knowledge is not valued in terms of the creativity or worth of the knowledge expert but merely in terms of its economic value to the organization.” (ibid., p. 9).

For the position of academic women this may have had several consequences of which two are of specific interest to results of this study. If Brooks is right, firstly, the equal opportunities policies and sexual harassment policies that were implemented during the 1980s and 1990s took place in an already changing atmosphere away from collegiality. Decisions increasingly take the character of managerial moves in a top-down manner from the university boards to the departments and henceforth. This means that many of these policies remain theoretical, indeed policies and not practices.

“Universities may have policies for the whole university but these may not be reproduced at the level of practical conduct of the (male-dominated) university, the (male-dominated) faculty, the (male-dominated) department, the (male-dominated) research group or, of course, the individual academic especially although not only, the male academic.” (Hearn, 2001, p. 81)

In other words, Brooks and Hearn are arguing, the university landscape before these ‘quality’ changes was not one that embraced women, the opposite was (is) the case, but the atmosphere was collegial and more workable for the policies that were introduced to protect women and enhance their chances. Now, on top of the already gendered character of higher education institutions, the way changes are made, communicated and implemented has shifted to the disadvantage of women, despite the fact that 96% of universities claim to have such policies in place (ibid.).

Secondly, the restructuring of universities may bring calls for women's networks to accommodate and learn to adapt to these changes and to establish how they will impact on the 'tender' tools of equality goals adopted over the last decade (Brooks, 2001). The increase in research feeding the need of technological development has led to a situation where quality assessment of individual researchers and their department is no longer merely based on research and publication, but by securing large funding grants to enable such research. Winning research grants involves good networks and the time and energy to go about it, all three factors in which women have already been previously systematically, institutionally and socially disadvantaged.

It is likely that, engineering will have experienced these changes particularly and it will be acutely interesting to see how this impacts on the experiences of the interviewed women and men. However, with the increased strive of psychology toward 'hard-science' it can be assumed that the impact is similar. Areas such as social psychology may feel the changes differently.

3.3 Grounded social structures

In modern societies, women's employment is on the increase and, as a consequence, we might get the impression that the issue of gender inequality in the labour market is part of the past. However this is far from being true. In most EU countries, female presence at work is still less elevated than in other industrialised countries such as the USA. Further, women do not have the same opportunities as men and, while social and economic status are largely determined by professions and ranks, the labour market remains segregated and women's participation highly concentrated in a narrow range of occupations. In fact, women are clustered in the junior positions of professional hierarchical pyramids and elite positions are by and large a male "preserve". Thus, as female-dominated occupations continue to be those with lower standing in terms of career opportunities, income, and prestige (social recognition), the gendered segregation at work is clearly detrimental for women (Bösch & Vázquez-Cupeiro, 2003, p.1).

However, mainly due to the expansion of high-qualified employment in the public sector, some women have been able not only to enter but also to succeed in domains traditionally reserved for men. As we can see in Table 1, some women have set foot in decision-making positions within elite professions. But this feminine elite does not only constitute a minority but its proportion also varies greatly across and within countries and elite professions (Bösch & Vázquez-Cupeiro, 2003).

	% Women in National Governments	% Women Academics
Netherlands	36.0	15
Ireland	21.9	12
Denmark	42.9	21
United Kingdom	32.9	24
Italy	10.3	28
Spain	28.3	33
France	29.4	29
Portugal	9.8	-

Source: European Database, Women in Decision-Making, & Statistics in Focus – Eurostat, 2001

Table 4 women in elite professions

Moreover, it is interesting to note that academic women not only seem to fair worse than other women in elite professions but also remain a overall minority, despite the increase of women’s representation in European academia during last decades at a much faster rate in comparison to their male peers. However, as Vázquez-Cupeiro (2003) argues, women academics remain a minority in the senior positions of higher education institutions and specifically so in traditional (prestigious) disciplines. In the understanding that the recruitment of both students and academic staff at universities follows as meritocratic system, which on its own is gender neutral, women remain under-represented at the higher levels of the academic pyramid. As such women seem to ‘get into’ higher education but they struggle to ‘move on’ within the system. The status and situation of academic women has therefore been referred to as ‘the other academics’ (Acker, 1994), and ‘the other elite’ (Vázquez-Cupeiro, 2003).

4. Methodology

This study seeks to examine academic's accounts of their career trajectory in UK higher education institutions. The complex structure of the research project involves interviews with both female and male academics in psychology and engineering who are either lecturers or full professors. The scope of the investigation hopes to identify those factors from first accounts that enhance or hinder the advancement of women in academia.

4.1 Qualitative Approach

The necessity of an inductive approach derives from the understanding that regardless of how detailed and theme-specific a quantitative approach (e.g. a postal survey¹¹) is, the very personal social experiences that may have a distinct impact on the phenomenon explored are at risk of being overlooked. Indeed, several responses were received from the previous quantitative study, where some of the questions had provoked lengthy descriptions of how some of the issues were observed.¹² Against the background of the previous study comprising a postal survey that was sent out to all UK female professors in 14 disciplines as well as to a male 'control group', this phase of the project aims to identify the personal experiences of female academics on different points of the academic career ladder. Therefore, it was decided that a qualitative approach enabled insights into the experiences of female academics that incorporated those levels of social meaning, interpretation, experience and understanding (Denzin & Lincoln, 1994) that could not be found in the previous statistical analysis.

Semi-structured in-depth interviews were chosen as a method to gain data from a highly diverse group of academics, enabling the participants on the one hand to elaborate freely on their experiences and observations, and on the other provide a structural framework for the analysis. In-depth interviewing on a one-to-one basis involves face-to-face contact, the asking of questions and the receiving of answers. It is characterised by social interaction on a micro level, which enables the researcher to access the subjective world of the person interviewed. By using this method the researcher is able to address questions about the individual's experiences and, by listening and later analysing, to recognise the important theme of a person's story.

¹¹ This in itself carries problems such as the length of the survey and with that e.g. the willingness of the participants to fill in the questionnaire.

¹² See "Above the Glass Ceiling?" (2003) Field Guide III available at www.women-eu.de

4.2 The Sample – Recruitment

The participants of the research project can be divided into two groups, one consisting of lecturers and professors in psychology, the other of lecturers and professors in engineering. Originally, a total of thirty-two interviews was sought with female and male academics so total comparison with the already existing sample in Spain can be made in due course. The intention was to interview four female and four male professors in psychology, to repeat this for engineering and have an identical set for lecturers in either discipline. Participants' eligibility was defined by the following factors: (a) staff member of a department in either psychology or engineering with a RAE rating of 5*¹³ and (b) academic position either as lecturer or full professor. Both female and male academics were interviewed. For reason of geographical accessibility universities in London and the South West of London were chosen. Again, the sample in Spain had been selected at universities in Madrid that had the highest reputation for their departments of engineering and psychology.

The sample was put together by finding the relevant information about the eligible academics on the internet. The web-sites of the higher education institutions matching the above requirements were consulted and scanned for suitable participants. This involved going through each staff page in psychology and engineering and finding the information required to identify the persons eligible. Where more than the required four academics of one group were available every third eligible person was sampled. This enabled a sampling process that recruited e.g. female lecturers in psychology from different universities. A first batch of letters was sent out to 32 academics comprising a distribution of position, gender and discipline as described above and was followed up by individual reminder e-mails to those who had not replied a week later. However, the sampling process proved to be less successful than anticipated. Inevitably, some of the academics who replied to the letter or reminder e-mail explained that they could not participate as they were abroad, on sabbatical, or had other forms of time constraints. A majority of the sample did not reply at all.

Considering the significantly small proportion of female academics in engineering, especially in the position of full professor, the sample size was identical with the total population of female professors in engineering at 5* departments in London. A second sample was constructed already taking into consideration the interviews that had been conducted, so that some categories needed less further recruitment than others. However, this was obviously not

¹³ The RAE is a the Research Assessment Exercise conducted every five years to establish the quality of research at the individual departments of all universities. Governmental funding is strongly influenced by the outcome of the RAE. A score of 5* is the highest rewarded.

possible for the female professors in engineering, for whom only two interviews would be possible.

In the second sampling round the response rate and the amount of interviews held decreased further. It was thus necessary to sample another two sets, again using the same method of specific sampling, the outcomes are given in the table below.

	sample-size	method	replies	interviews
1 st round	32	letter & e-mail	11	8
2 nd round	32	letter & e-mail	10	5
3 rd round	21	e-mail	4	1
4 th round	13	e-mail	4	3
approach	98		29	17

Table 5 overview of samples, response-rate and conducted interviews

At the end of the fourth sample a total of seventeen interviews had been conducted and the process of further sampling had to be ended. The reason behind this decision was the time of year in which the research project was undertaken. The academic year in Britain is in the majority of universities is arranged so that late spring/early summer is an examination period. The first sample was approached at a time when it could be assumed that most lecturers and professors would have finished marking and attending of examination boards, though the precise time-scale for both vary from institution to institution. Many of those taking part in the study acknowledged that it was a good time of year to approach academics. However, it is a very narrow time-window before vacation and research commitments increase. By the time the fourth group was sampled many academics were increasingly less available in their department.

Therefore for this purpose of this report, we had to settle for what had been achieved over a time-scale of two months, resulting in a total of nine academics in psychology, six female and three male, and eight in engineering, five female, three male were interviewed. This resulted in a gender ration of eleven to six. A break-down of numbers is given in the table below.

	female	male
Psychology (9)	3 professors	1 professor
	3 lecturers	2 lecturers
Engineering (8)	2 professors	2 professors
	3 lecturers	1 lecturer

Table 6 break-down of figures of final sample

4.3 Interviewing

The interviews lasted for approximately 40 minutes and were held at the offices of the academics. At the beginning of the interviews the participants were informed again about the nature of the study and the interview. Following, they were asked for permission to have the interview tape-recorded, to which all participants agreed. They were also assured of confidentiality, such that their identity would not be obtainable from any of the final reports and that, if they wished, they could receive the tape recording once it had been transcribed. Participants were also informed that they could withdraw from the interview at any time. Finally, the interviewee was asked to sign two forms of consent and copyright assignments including all the above information of which they kept one copy.

A topic guide was used throughout all interviews (see appendix 3) enabling the interviewers to ask about specific areas such as: background to professional and academic career, respondent's current experiences within the higher education institution and department, views on academic careers, reasons for academic women's under-representation, and views on equality guidelines and positive action programs.

The interview structure varied slightly for lecturers as some of the questions related to issues of becoming full professor and the career path up to that position. Such questions were changed and adapted to the circumstances of lecturers.

4.4 Interview Dynamics

Also of methodological interest are the dynamics in interviews that occur in the communication of interviewer and interviewee. All correspondence was via e-mail with the academics and the interviews were conducted by the authors of this article, two doctoral students, both female aged mid-to late twenties. Following the work of Tang (2002), we were curious how the pattern of interaction would present it self. Tang had undertaken in-depth interviews with female academics both in the UK and China as a post-doc and had identified factors that considerably influenced the atmosphere of the interview. She argues that in-depth interviewing, where it is to be successful, requires a quick development of rapport so that both parties can be at ease and ‘rich data’ can be won. As we are both researchers who are not British it was interesting to see whether the findings of Tang applied to our situation:

**“THE INTERVIEWEE AS WELL AS THE INTERVIEWER’S PERCEPTION OF SOCIAL, CULTURAL AND PERSONAL DIFFERENCES HAVE AN IMPORTANT IMPACT ON THE POWER DYNAMICS IN THE INTERVIEW.”
(2002, P. 719)**

As far as nationality was concerned those academics who were not British themselves seemed to put at ease and a rapport, despite some linguistic hurdles, could be established quickly, indeed, toward the end of the interview several conversations took a very personal note. Also, the fact that we are both young researchers encouraged a friendly atmosphere in which especially the female academics spoke very openly about their experiences and were curious to hear what our plans and expectations of our professional future were. Generally, there was a willingness to minimise interruptions by closing the door, including putting up a notice not to be disturbed, and silencing the telephone tone. Nevertheless, disruptions were encountered in which the tape-recorder was switched off. They ranged from students knocking at the door who were briefly consulted with, to one or two telephone call interruptions during a 40 minute interview. In two cases the interviewee were considerably delayed, but in both cases secretaries or other members of staff were informed and passed the information on to the researcher. Each time problems with public transport or traffic were given as a reason, and both seemed plausible. Situations described by Tang, where she was kept waiting or was treated as a student were not encountered in this study. On the other hand, as all participants were academics, regardless of their discipline they took the opportunity of commenting on the questions and making suggestions of how they should be put. By doing so, the interviewee took the role of the teacher and it can be assumed that they allowed themselves to do so as we are both young researchers, indeed still of student

status. Thus we concluded that cultural and professional background play a significant role in the interviewing process which in this study enabled an overall positive atmosphere.

4.5 Analysis

All interviews were fully transcribed verbatim. Given the relatively small size of the sample, the data was analysed manually by using a system of colour codes and, later, a matrix-system in which codes, themes, and references to the transcripts, could be aligned. The analysis of the transcriptions was made with the aim of establishing a comparative profile of experiences, views and attitudes related to the research topic. Although gender is the central variable in the analysis, we also had an interest in matching commonalities and differences of disciplines.. The interview questionnaire comprised several thematic areas that provided a quasi-analytic frame. For the purpose of this paper, we will only focus on the following themes that emerged from the data during analysis: how do female academics differ from their male peers in relation to mobility, networking and support, role of mentors, and family responsibilities.

5 Principal Findings

As described in the methodology section, the total of interviews held turned out to be considerably smaller than originally planned. This has forced us to be cautious about the final statements we can make. However, it is possible to draw from the data some very interesting, if tentative, findings. Brooks' argued that discrimination against women, or factors hindering them, are difficult to define, as they are intrinsic to the field of higher education (1997). So too is the nature of the present data. The section on 'perceptions of women in academia' (Section 5.4) tries to draw together the themes and explanations that have been included in previous points, as well as discussing specific issues raised in the interviews. It shows how difficult it is for us as researchers to separate the dominant themes, as they are interconnected, particularly so in regard to the gendered opportunity context of higher education institutions. The reader may therefore notice that some themes reoccur at several sections within the paper.

5.1 Background to academic career development

Both engineering and psychology are non-school subjects, or at least they were when our interviewees were at school. So it is not surprising that that a majority of the interviewees explained that their choice of university discipline was, carried by a vague notion of the subject rather than detailed knowledge about it. However, what was also apparent was a strong background in science, with the desire on the part of many of those going into engineering, to find, for example,

the practical side of physics, and for those going into psychology, the combination of science with a ‘human factor’.

The academics in engineering interviewed here were a group of eight of whom all but two had begun employment in industry rather than continuing research at a university directly after their PhD. The experience of working in industry was, on the one hand, judged to have been very positive and helpful. On the other, the majority left either because of the structure of the organisations they worked for, or because of the nature of the work. For one lecturer who had worked in the aviation industry, its decline forced him to pursue a different career. In another instance, a female lecturer wished to combine her location of work with that of her husband. She therefore left industry, and, by being awarded a prestigious research fellowship started in academia. The issue of adapting mobility to that of a partner’s will be considered more closely in 5.4.

Maybe one of the most frequently mentioned aspects of academia, namely flexibility and autonomy, drew engineers out of industry and into academia.

“(…)the research community and industry or technical community are the hierarchy, others the lowest of the low, so the top of the top are finance director, the marketing director and sales director, once you get to the engineers they are very much on somebody’s resource allocation sheet. I wanted to be able to set my own priorities, and I could see that I could contribute much more than I could to this very random system.” (female professor, engineering)

It must be taken into account that being able to set one’s own research agenda is something that is expected by those beginning an academic career as lecturers, but that these activities can be hindered in the first years by heavy loads of teaching, administration and student supervision. Hence, for success, such a motive must be combined with a degree of the ambition to reach the top level of the academic ladder. This ambition was for instance not expressed by a female lecturer who had had no prior industrial experience, and instead had worked as a researcher. However, her opinion is also influenced by the family responsibilities she has, to which more will be said in 5.3 .

As all of the academics of this sample who had worked in industry were eventually drawn away from industry, their experiences there brought them to the opinion that one factor for the under-representation of women at university level in engineering could be down to the alternative careers available in industry. Two possible factors were mentioned here. One was described by a male professor as a lack of applicants for in senior positions in industry, so that women could rise to a high level. Another was described by a female professor as a change in attitude in industry, such that women are now (in some areas) specifically sought after. Such comments imply that some women who are

looking for a career in engineering also take into account aspects such as financial rewards and speed of career, which are both said to be more available in industry than in academia.

The path from first degree to first tenured position for academics in psychology follows a slightly different line. The first striking difference is that only one in nine participants had worked outside of academia before embarking on an academic career. Now a lecturer, she had spent three years in a large company in addition to doing a part-time Master's degree. Increasing boredom and love for her subject led her away from the open market into university. However, she too acknowledged that the open market offers psychologists more jobs, with much better pay arrangements, which may draw young women away from academia, although she herself was happy to give up the financial benefits for more flexibility, creativity and love for research. The love for researching in psychology (or academic research generally) emerges as a central theme in the decision for choosing higher education as a working environment. This involved, in the majority of cases, either starting work as a post doctoral fellow or in temporary teaching positions at several institutions. However, within a few years, and in some cases immediately, positions as lecturers were gained. These successful paths, nevertheless, are characterised by the enjoyment of research, being able to address interesting questions, being caught up in someone else's enthusiasm, as well as success in receiving grants, e.g. for PhD or obtaining a post doctoral fellowship, and recognition of work (e.g. publications). Given these circumstances it can be assumed that the experiences as students in this specific discipline had led to the formation of a career image that was appealing and seemed worth pursuing. Again, as mentioned before, one of the often-cited attractive factors in an academic job was flexibility. This seemed to encourage those women who knew they wanted a family and to continue in research.

“When I was an undergraduate I did some research in my third year and thought: I love this. Then decided to go on and do a PhD and really drifted in to academia, because I always loved research, it happened by chance, but there were advantages to it. I knew I wanted children and at that time, going back a few decades, university life was quite suited being a woman who wanted a career and children, probably more so then, than it is now.” (female professor, psychology)

Two academics interviewed had come into their respective psychology departments via a different angle. One female lecturer, formally a nurse, had done her first degree as a mature student and, again, having enjoyed the research work on the course, and being attracted by the atmosphere of higher education institutions, she decided to continue with a PhD and teaching posts after that. However, she felt that her specialist area gave her a rather isolated position in an

her department. A similar island position was described by a male lecturer, who had come from a natural science background..

Looking at some of the commonalties of the academics in engineering and psychology it is noticeable that no family tradition of studying either of the subject emerged. To some extent several academics from the psychology sample considered themselves in their decision for this subject as a ‘first generation’.

“(...) at that time psychology was virtually unusual, in fact I was the first person from my school to do it, they thought I was nuts, (...)” (male professor, psychology)

In engineering, the situation is slightly different, one reason being that the discipline is much older, another that it is not unusual to start by studying subjects such as physics or chemistry before turning to engineering. Indeed, two female professors explained that their interest and love for science was influenced by their fathers who encouraged them to study the subject. In one case the practical side of physics was sought. In the other the change to engineering came about much later during her career, when her funding became unobtainable in her original discipline.. This is of interest as it is a striking example of the impact of the restructuring of universities and the dependability of career development on research funding, points which will be discussed further below. . Further, specific issues connected to either disciplines will come up during the following four sections.

5.2 Factors enhancing academic career development

Here we examine the opinions on what is seen to play a role in the career advancement of academics, and what kind of advice is given to young academics who have the ambition to pursue academic careers..

It is interesting to notice that in both disciplines the advice given to young colleagues has a striking red thread consisting of: research, publications, securing research grants, and networking. More at the tail end of the thread are teaching and administration. Clearly this advice is heavily influenced by the requirements of the RAE exercises which have transformed the UK’s higher education field in recent years, as discussed in the literature review (Brooks, 1997; Hearn, 2001). Though the RAE does not officially appear in the guidelines for the promotion panels, , which typically state that high quality in two out of the three areas of academic work (research, teaching and administration) are necessary to be considered for promotion, the emerging pattern in promotion decisions is clearly tilted towards research and securing grants, i.e. the requirements of the RAE. A male lecturer who had considered the standard published policies as a guidance to his application for promotion, had experienced his application being turned down for the apparent lack of excellence in research.

“I asked to be considered for a senior lecturer. You don’t qualify, you don’t do enough research. (...) It did seem to go against the standard published policy, that you could get promotion to a senior lecturer if you showed excellence in two out of three areas, one of which is admin., the other was teaching and the third research, that seems now not to be true.” (male lecturer)

Other lecturers interviewed, in both psychology or engineering, explained that they were well aware of the requirement for promotion and the discrepancies between formal guidelines and de facto standard practices. However, many of the lecturers enjoyed being good teachers and had every intention of continuing to channel energy in that direction, while, nevertheless, realising that for a promotion they would have to channel more energy into research. On the other side of the academic scale, one professor’s answers to the question: “What advice would be give to a female lecturer who wants to become full professor?” took the already mentioned factors a step further:

“You have got to be more than a good all rounder, you have got to be good at everything and excellent at a good few.” (male professor, engineering)

He also mentioned that experience in industry is essential for life experience, and getting to be known. Advice from the female side in engineering looked very similar:

“You have to put in extra work, pay extra attention to the detail, to give that little bit extra that the others do not, for example you cannot say: today I am not working because it is a bank holiday or it is Sunday, I have done enough. If there is a deadline to meet you have to consider even the minutest paper or presentation, what you do has to be of the highest quality.” (female professor, engineering)

Such advice it transpires from other interviews is more difficult to put into practice for women who have a family and are the main carers for their children, regardless of whether they are working full or part time.

The responses from the psychology sample showed a stronger tendency of advising the person to get other people to support them. Several participants stressed the importance of getting a mentor and establishing strong networks and other forms of support systems, all of which are explored in more detail below. Many of the women lecturers and professors also suggested that women should be more assertive in bringing their achievement forward. Also, it was suggested that women should be ‘ruthless’ in the decision between taking on more teaching or securing a research grant, that references should be sought from people who are names in the field, and that women should not hesitate to present them with their c.v. and ask them for support, as relying on reputation was not

enough. The latter point was strongly echoed by a female professor in engineering. The question on advice was initially addressed to the concern of a young female colleague. However, the question was followed up by asking whether the same advice would be given to a man which in a majority of cases was answered with 'yes'. However, two female academics stated clearly that they would not give the same advice to a man:

"No, because I think they can do it, I would tell them to be more realistic about what they have done. Sometimes people here make themselves bigger than they actually are and what they have achieved." (female lecturer, psychology)

The other went as far to say, albeit in a joking manner:

"No! They should all be locked up!" (female professor, psychology)

Drawing a comparison between the advice given by psychologists in contrast to academic engineers, it transpires that engineers takes a more functional approach in which the young colleague is advised to fulfil all the necessary criteria in an excellent manner as well as being assured of support from the head of department. Though the difficulties women with families might encounter were acknowledged, little concrete advice was mentioned in this context. In contrast, the advice from psychology showed a strong tendency to consider some of the intricate issues that hindered women in presenting their qualities for promotion. Hence, the strong remarks quoted above. These underline the view that women are not assertive enough, show too much modesty and therefore undermine their chances. A male lecturer explained that universities, and specifically the old universities, were prone to masculine style of self-presentation, to which a women would have to adapt in order to be noticed and given credit for her work.

Networking and other forms of support were mentioned as factors enhancing academic career development. From the engineering interviews, a strong indication was given that connections to industry are essential not only for securing funding but also for the placement of students. For both disciplines, publishing and going to conferences were regarded as ways of establishing networks and building up a reputation. Other factors enabling networking were mobility by changing institutions. In the opinion of a female lecturer in psychology, it was imperative to change from the university where the PhD was obtained, in order to be seen as a full member of staff and not a student. Personal stances toward collegial support varied considerably from the position where a female professor in engineering suggested that doing someone a favour meant that one could ask one in return, to that of a male lecturer in psychology who regarded the issue as a matter of manners and decency that should ultimately be

enjoyed. Between these two positions, networking and support were regarded as helpful aspects in every-day work as well as career advancement. Again, assertiveness was seen as a requirement in gaining access to networks of support. Being approached by a publisher to become a joint editor of a new academic journal can for instance be one way of opening doors to networks as a female professor in psychology described.

“Now that gave a horrific amount of power and influence because I readily discovered very famous people who I wouldn’t have thought about speaking to were actually perfectly delighted to be invited to act as part of the editorial board for this new journal so it meant suddenly I had a much, much better network of people I could approach. Without thinking of the implications of promotion I suddenly thought, my goodness, these people are in my field anyway who are now on the editorial board of this journal could be asked to act as referees for promotion, so that was important.”
(female professor, psychology)

However, women with families acknowledged that, despite the usefulness of networks and collegial socialising, they were often not in a position where they could benefit from or contribute to it. Two major factors given were a) lack of time, and b) mobility constraints, both due to child-care commitments. On an university external scale this means that going to conferences can be impossible for several years, as long as the children are small, and in two cases of professors, one in psychology and one in engineering it was made even more difficult by the fact that they were single mothers. Although, the professor in engineering, once her son had reached secondary school age, , resorted to the strategy of attending conferences that were during school holidays where her son could accompany her. On a more departmental level, all women with children explained that their opportunities of participating in departmental socialising, be this the pub after work or evening get-togethers, was close to impossible. Indeed, one female lecturer in engineering explained that due to the fact that their department had no coffee room, other members resorted to the pub after work. She could not join in this regularly, and on evenings where it could have been possible, she had felt she was no longer in a position to ask others out as she had been absent from this group for so long. So even if a friendly relationship with their colleagues was maintained, this did not prevent feelings of isolation.

On the topic of women’s networks, not much was said. Women in engineering showed a great willingness to support other female colleagues and give them advice.

“One thing that I have found actually that has been interesting is that every now and again, other women will slide up to me, PhD

students or women in other departments, and they will say, I'm expecting a baby, what is it like? What happens in terms of when you come back to work, and how do you cope with the child care and that kind of thing? That has been interesting and a very nice experience for me, to talk it through with other people and share the kind of things that I found easiest and what isn't, and ways of dealing with it. So, yeah, that happens a lot." (female lecturer, engineering)

As for psychology, female professors described how they helped individually or gave talks but not to a level or extent that they regarded themselves as being part of a formal network. A female lecturer in psychology described how a colleague had organised a group of female academics that met once a year which was very enlightening to her.

On the more negative side of networking, issues such as the 'old-boy' network were mentioned. However, a majority of the interviewees, regardless of subject and gender, felt that this had lost much of its impact in UK academic life. This opinion among women in engineering could be because they are so used to being in a male dominated environment, where they often sit as the only women on board and committee meetings, that it may be very difficult to distinguish a specific 'old-boy' aspect. In psychology where the number of women in academic positions is much higher, the gendered boundaries of these networks were more visible to some participants.

"I can remember years back, sexism, which is much less evident now, at conferences our guys would just endlessly chat you up and treat you as something not serious as an academic, just a female sex object and that stops informal networks because you shy away from the sort of thing, and women feel uncomfortable unless they know other women who are going to be there just because of that sort of behaviour, which is probably less prominent now." (female professor, psychology)

Despite experiencing the consequences of 'old-boy' networks in the past, there was no evidence given that this was still experienced. Two male lecturers in psychology agreed with this development and felt that men were less shamefully promoting male colleagues into positions, however, they both could imagine that 'Oxbridge' may well represent a bastion of such behaviour. It was striking for both of us, as researchers, to experience the very strong reaction to a (hypothetical) question asking whether the objective criteria of merit was the only factor in a successful promotion. The question specifically struck a nerve with the engineering sample, where respondents strongly argued the case of merit, whereas in psychology the influence of networks was clearly seen, though not welcomed. One of the female psychology professors explained that she had

for many years of her career believed that merit was the only factor that counted in academic success, but by observing the promotions of male colleagues she had learnt that that was not necessarily the case.

Finally, the role of mentors should receive some consideration as it was mentioned repeatedly in the advice given to young academics. A female professor in psychology explained that mentoring enables individual help instead of global advice and therefore has a larger impact on the career advancement as it can specifically look at the personality of the woman. Having mentored several women herself, she looks back on her own career where no such help was available:

“(...) there has certainly never been a female senior person who has helped me along, I think that is a general thing for people in my age group. That women who made it didn't go out of their way to help other women, where as me, I am terrible, I hardly ever employ a male I always employ women and getting them on you know.” (female professor, psychology)

This resistance of senior women to help younger women has been described as a 'queen-bee' status, though, it seems as if it might have diminished in significance.. Nine from the total sample had experienced some kind of mentor influence at some stage in their career. In some cases this was continuous support of the PhD supervisor or other more senior colleagues. However, none spoke of an official mentor relationship. Six of those who spoke of a mentor were women, three were men. This bias, however, must be seen with caution as the number of male participants was fewer. Indeed, mentoring was understood as such a positive factor that it also came up in the discussion of equal opportunity policies and positive action, therefore it will be referred to section 5.5 again.

5.3 The impact of family patterns

Family responsibilities were seen by the majority of participants as a considerable factor in slowing down a career in academia, particularly for women. Despite this recognition, the opinions on how family impacted, to what extent, and how this might be resolved, varied between men and women.

On a demographic note, thirteen of the interviewees had one or more children, and all women with child-care responsibilities agreed with the view that it was difficult to co-ordinate work at the university with family responsibilities. In contrast, men professors with families did not report experiencing any such difficulties. This was not the case for two male lecturers, of whom, who had two small children and whose wife worked three days a week, described how during the first year of either child his work capacity had reduced to 80 per cent. Some

of the impacts of child-care on work have already been explained, e.g. losing the freedom of going to conferences, or of joining colleagues after work. However women also experienced significant obstacles to being able to produce the same amount of work than male colleagues, be this because they were less able to work evenings and weekends, took maternity leave, or worked part-time. Here a lecturer in engineering who has several children describes a normal working week:

“I have four different types of work days. I work at home some days, if my husband is working from home I leave home at six and get into work at seven, then I work until seven or eight at night then go home. Some days I drop my kids at school, then I got to work, then got home to pick them up, and some days when my Nanny is looking after the kids I leave home at eight and get home at six, but a few days a week I have to go home early or leave late to take someone to the doctors or whatever.” (female lecturer, engineering)

A female professor in psychology brought to our attention the fact that women not only spend more time looking after children apart from working but also are more likely to care for elderly relatives or close friends in need of care/help. Care, as another female lecturer in engineering commented, requires a certain more emotional mind-set. She found the switch from work in the engineering department to home and her children was considerable. Interestingly enough, she suggested that women in psychology might experience such a switch less, indeed, enabling them to keep thoughts running on work whilst they were at home.

Among the senior women, it transpired that they had gone into academia with the perception of it as a work environment that offers a lot of flexibility, and therefore enables a combination of work life and family. However, all of them acknowledged that these circumstances had changed in recent years, so that this combination was becoming increasingly more difficult. However, their female junior academic colleagues all continued to agree with the idea that academia offered the most flexibility, and hence provided a workable basis for combining career and family. Interestingly, a male professor in engineering argued that academia would be easier for women with families to manage if it were nine to five. Staying up late to prepare lectures and grant proposals required too much flexibility from a woman, he suggested, especially where the woman does not have a supportive spouse. Indeed, several female professors acknowledged that their partners did not contribute to child-care or domestic work to any extent, although they expressed the hope that this might have changed for younger generations. This was not necessarily shown to be the case as far as female lecturers in this sample were concerned. However, the claims of several younger

male lecturers, indicates that their contribution to child-care is considerably higher than that of male professors. A female lecturer added that women who decided to have a family needed to look well beyond the first few years. In her opinion, children attending school may on the one hand be occupied for several hours a day. On the other hand, they needed more attention given to after school, e.g. with help on homework. As much as she appreciated the hard work of the Nanny looking after both of her children, she also recognised that the Nanny would not be able to give the same amount and quality of help with school work as she would as an academic mother.

In regard to under-representation of women in academia the issue of family commitments emerged as a significant factor from most of the interviews. In engineering, there was a stronger tendency to pin-point the problem as one being of mothers and not women as a whole and this was done by men and women alike. The following quotation illustrates this:

“The harsh reality is, it is women that produce babies, if they get married and choose to go that route – and having a baby is one hell of a knock in a professional career.” (male professor, engineering)

To some extent this matches with the opinions on factors that enhance academic career development, where perceptions in engineering were more functional than those in psychology. Indeed it was suggested, although ironically, in engineering that only test-tube babies would release women from the double burden. This suggests limited willingness on the male side to adapt to the situation of women with children or to acknowledge the time constraints such women experience.

In contrast both women and men lecturers and female professors in psychology suggested that an increased acceptance for both mothers and fathers to leave work early, to take time off to collect children, or to look after a sick child would create a supportive environment with more equality where the combination of work and family could run more smoothly, and ultimately would make it easier for women to rise up the academic ladder.

Generally, those who had no children largely sympathised with the constraints of family life. However one interviewee took a different slant:

“(...) I want this point made load and clear, I think there is a misconception, the classic position is, there are not enough women in academia because they drop out, they find the obligations of the career and family life incompatible. This has been said time and time again, I have a different view myself, (...) I think if I were married, I would have spent much less time going on dates and seeing men, I would have been a professor five years ago, and I think there is a misconception, that there is a myth that

people who are single, can achieve much more, I mean, yes, they can be more single minded, then if they had children to look after, but I think it is a very personality dependant matter as well (...)."

(female professor)

In summary, women expressed the view that there were considerable difficulties in combining work and family. However, considering the fact that four out of five female professors interviewed managed to combine a full career with child-care, and four out of six female lecturers had been able to begin an academic career with children, it seems although the women maybe battling on two fronts, they are succeeding.

5.4 Perceptions of women in academia

The interplay of the ways in which women present themselves, and the ways in which they are seen by men and other women, within the context of the gendered environment of higher education are the subject matter in this section. We will begin by looking at the perceptions that women have of women in academia. Some of the themes that play a role here have already been described in 5.2 'Factors that enhance career development', as they often related to the idea that women are less assertive than men. There was a broad agreement among both women and men interviewees that a feminine presentation of self, work, achievement and success did not receive the same amount of recognition and appraisal as a masculine presentation. There are at least two ways of explaining this. One is that there is indeed an intrinsic difference in how women approach research and how they interpret results, as was argued by some feminists in the 1970s. However, this possibility was not mentioned in any of the interviews. The other is that women, regardless of their work style and approach, present their results with too little grandeur and noise. Women in the interviews, especially in psychology, applied this idea to their own behaviour, and reflected on their own working and presenting style critically. Hence their advice to junior academics was to be more assertive, and not to leave any achievement out in e.g. an application for promotion. One interesting comment came from a female professor in psychology, who stated, that women were bad at the 'bullshit' factor. By that term she meant the audacity of men to stand up in conferences and elsewhere and ask mediocre questions, or to make bold statements, and get away with it. A female lecturer also in psychology suggested that society was more tolerant with men and that the same of behaviour in a women would not be acceptable as it is not regarded feminine enough (Morley, 2003)

Having looked at women's perceptions of women, we can now move on to male opinions on women in academia. Though the number of male professors in this study was small, just three in total, their views are striking. Both professors in

engineering showed very positive, quite admiring opinions toward the female colleagues they knew of, regardless of whether they were lecturers or professors.

“I am in awe of her ability in that respect and that has clearly been a factor in her success. I don’t know what that proves, it certainly proves that men don’t have the exclusive ability.”

And in regard to another female colleague:

“(…) she has two children and I’m not sure if she is a lecturer or a reader at the moment, but I watch what she does with amazement, she is juggling a family, two young children, and doing a very good job here.” (male professor, engineering)

With respect to the first woman he was referring to, he was underlining her ability to work with people, which he rated very highly. In the second example he clearly admired the way family and excellent work were being managed. The male professor in psychology, in contrast, did not express any admiration for female colleagues. Instead, he argued that women were not under-represented in psychology or in academia generally. This he explained could be seen by the number of women applying for posts and the number of women getting posts. In his opinion, the appointment process was by no means biased towards men. He could see how this might be the reverse case for other sectors of work but not for universities. In his view, the question was rather: why do fewer women apply? Here he thought the answer to be complex but driven by the fact that women have children and spend more time with the family which can lead to career breaks and then difficulties in finding the way back. In respect to the question whether he thought women were more likely to look for a post rather than a career he answered:

“Well, that would be a sweeping generalisation wouldn’t it. I wouldn’t think so, the only way I can answer that is in terms of people I have known, and on the basis I wouldn’t think so, no. I have known many ambitious women and the most ambitious person I know in this department is a woman, so I have no reason to think that.” (male professor, psychology)

In comparison to the statements made in engineering it can be suggested, that in psychology, men are more accustomed to having equally capable female colleagues. As the numbers of women in engineering are still proportionately small, perhaps some men view this with a kind eye, whereas, in psychology it may be that men are more aware of women being equally competitive with them leading them to slightly less mild perceptions.

Unsurprisingly, the actual experiences women reported in relation to their male colleagues do not totally corresponded with the mainly friendly opinions just presented. One issue was child-care responsibilities which imply that women take time off e.g. maternity leave or choose to work part time. A female lecturer

in engineering had to endure rather unfriendly and unsupportive remarks from male colleagues.

“You have to be very career orientated and know what you want. There are interesting things, when I said I was going on maternity leave, you would get oh, well that has put your promotion back six years, or you just think oh. Someone actually said, well that is why we shouldn’t employ women.” (female lecturer, engineering)

Other women remarked that they had continued working whilst on maternity leave and that that was not recognised by men in their department. In addition, several women who were also mothers lived with a constant anxiety that their line-managers were thinking that they now only had their child on their mind, which led the women on to work even harder (even though there was not de facto evidence that the manager was indeed thinking so). Or, the women were anxious that the time they were taking off work implied extra burdens for their colleagues.

“I hope that nobody had to do any real extra work, I tried to do it, just shift it around, so if I had a baby in January I wouldn’t be back till the end of February so all the lectures that would have come in I would have moved into other part of the academic year.” (female professor, psychology)

Moving away from the issue of family responsibilities there were also several other factors which women academics felt significantly undermined them. One was that they were not receiving the same amount of pay as their male peers. This has recently been rewarded with substantial media coverage. However another factor that plays into this factor is that professorial salaries are partly negotiated. On the other hand, all other scales are not and women are disadvantaged there, too. A lecturer in psychology who had approached her head of department on the subject had a received an answer along the line: why do you need a pay-rise you don’t have children. Another factor of unequal treatment was mentioned in regard to administrative staff, in both psychology and engineering, two women expressed their disappointment when they learnt that they were not receiving the same support than their male peers were. Interestingly, both reported that the situation changed when they were appointed to professor.

5.5 Equal opportunities and positive action

Toward the end of the interview the participants were asked which measures they thought would increase the number of women in academic posts and indeed those appointed to a chair. Following this, their opinions on positive action were also sought. The responses to both these questions showed that a vast majority were in favour of measures enhancing the number of female academics. However, the possibility of introducing positive action was received with much mixed feelings, as well as total rejection by some interviewees. In numbers, three in both engineering and psychology showed a positive attitude toward positive action, whereas three in engineering and four in psychology rejected the idea. Equally two in engineering and psychology were undecided though had a preference for other measures to help women. The latter was expressed regardless of whether interviewees spoke out for or against positive action.

For those who agreed with them, the introduction of positive action measures should be accompanied by procedures that underlined the merit of the women appointed. In this sense, positive action was regarded as something that should only happen when the applicants are equally well qualified. Both men who were pro this method explained the importance of having more women in senior academic posts as role models for students, which they hoped would encourage more women to take up engineering as a first degree. Nevertheless, positive action was not regarded as a means to all ends, as the female professor in psychology who had exclusively employed women explained. She was indeed aware of the swelling resentment in men toward these rising numbers of women. The view was also expressed that positive action could only be beneficial to women in a congenial atmosphere, and that such a utopia should also support equality concerns related to ethnicity and religious orientation.

On the side of those who opposed positive action the dangers of its use were seen as too great. Specifically, women did not want to feel as though they had achieved success in academia through tokenism. A female lecturer in engineering explained that she would rather see four women appointed in one year, if their applications merited that, than a system appointing one woman every year. The men in this group believed positive action was a form of discrimination that would not enhance an atmosphere of equality in academic departments. Two of these three men expressed their belief that gender was not a factor in the appointment process that was, in their view, neither biased towards men nor indeed a barrier for women.

As for those who claimed to be undecided on positive action, the theme emerging from their comments was that methods generally encouraging a more egalitarian atmosphere between women and men would make a stronger contribution.

“I don’t know, I became the first and only female professor of engineering in this faculty (...) and I looked around and I was very lonely. I go to the meetings, and that is pretty awful, there is a bit of a feeling, oh well she’s a little girl never mind her. I would prefer this kind of encouragement of female academics to do the right thing, which I am now trying to do in order to be promoted. One of my colleagues has just been promoted to a chair, I helped her a lot with her application, so I feel very happy about that, so I would prefer to see more encouragement than positive action.”
(female professor, engineering)

Here again, mentoring and access to networks of support are regarded as an essential prerequisite in the support of women on an individual level. A female professor’s opinion in psychology was that gender should be obliterated before arriving at the appointment- or promotion panel, this she felt would be the fairest measure.

Though the numbers of those for and against positive action were equally distributed across subjects, in the individual interviews, the under-representation of women in engineering was usually attributed to the small numbers of women going into engineering in the first place. The reason for this was seen to be the image engineering had in the UK as a field of manual labour involving spanners, grease and men in hard hats. This image it was felt emerged from the fact that the term engineering was used widely in British English for less prestigious occupations, e.g. lift-engineer or washing-machine engineer. In contrast or so it was claimed, in many mainland European countries, e.g. Spain, the terminology used is ‘ingeniería’ which originates from ingenuity, in other words ideas, and not ‘engine’ as the British term apparently implies.

Among psychologists, men had the opinion that women were not under-represented in academic posts, and as mentioned previously by one professor, specifically not so in regard to the number of women who applied for posts. However, women in psychology argued that the women, despite the higher numbers in contrast to other disciplines remained under-represented, as these figures did not reflect the high proportion of female under- and post graduates.

6 *'Hard, Brave, and Charming'* - Conclusion and Outlook

As the title of this paper suggests, the intricacies of a successful academic career for a woman are seen as requiring a good deal of merit, luck, and, for those with children, the support from a good Nanny, i.e. someone to share the child-care responsibilities with. However, one woman had vehemently spoken out against the argument that the factor of women being mothers had led to the underrepresentation of women in senior positions in academia. We do not believe that her statement intended to underestimate the problems faced by female academics who are also mothers. Rather we understand her point to be that the problem of childcare is not a sufficient explanation for women's underrepresentation. She suggested that women who decide to pursue an academic career need to display simultaneously allegedly masculine characteristics (being 'hard' and 'brave'), and stereotypical feminine characteristics, being 'charming'. Leaning on Bourdieu's idea of 'habitus', i.e. the role developed by professionals on the ground of their profession within its social context (including social status etc.), it may be the case that, in many areas, the 'habitus' is defined by male attributes. For example, Atkinson and Delamont (1990) argue that women doctors appear to have equal status in the profession because of the masculine 'habitus' that they have to adopt. The suggestion of the female professor that women academics need to be hard and brave follows this idea. Clearly in her case, this has led to a higher level of acceptance at least among her male colleagues. Weaving in the stereotypical feminine characteristic of 'charming' is seen to enable two things. On the micro-level of academia, or even just within the department, charm may help men to accept the presence of senior women. On the macro-level of societal order, behaving with charm shows that academic women have not become 'men-women', but instead continue to possess traits that are socially recognised to be feminine, as well as being regarded as desirable for women.

If this proves to be the case, women in academia who do not want to 'adjust' their personality to the 'right' balance of masculine and feminine traits are likely to find themselves in a 'catch-22' situation. On the one hand, a tendency to appearing masculine will be rejected by male colleagues specifically if they follow a socially 'traditional' view of women. Also, these women may equally be rejected by fellow women, especially where a masculine role leads them to do little for other female colleagues. On the other hand, a bias toward femininity will prevent a woman from succeeding in entering the masculine defined habitus of academia.

Though this black and white portrait may seem a little crude it does highlight the issue of intrinsic and subtle factors that work against women that are less likely

to meet the eye than general structural obstacles that have been addressed with equal opportunity guidelines and anti-discrimination legislation. This leads us back to the argument of Brooks and Mackinnon (2001). They suggest that there is increasing competitiveness within the higher education sector, not just between universities, but also between departments and individual academics. This is seen to prevent the implementation of equal opportunities as well as causing inequalities on a micro-level which are creating further informal barriers. The notion of high levels of competition also emerged from a significant number of our interviews, in which both women and men stated that their own experiences did not match those of current junior colleagues in terms of competition.

Our study, despite its limitations, as the results do not necessarily apply to all academics in the UK, has shown a complex mosaic of gendered career paths and gender relations within the higher education sector. We believe that further investigations on the issue of gender inequalities will have to continue to look at the subtle, less visible barriers within the career trajectories of female academics in comparison to their male peers.

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Appendix 1

Introductory letter

Dear (...)

We are doctoral students participating in a European Research and Training Network funded by the European Commission (Directorate General Science, Research and Development Framework of the fifth Framework Programme). Partners in seven European countries are undertaking a joint research project on “Women in European Universities”, investigating career trajectories in academia, with particular reference to gender differences. A leaflet about the project is enclosed and further details about our research can be obtained from the project’s web-site www.women-eu.de.

It is possible that you may have already received a copy of a postal questionnaire we sent to a sample of professors in the UK. If so, we would like to thank you if you were able to complete and return it. The next phase of our project involves qualitative interviews with a sample of professors and lecturers in Psychology and Engineering. We would greatly appreciate it if you could help us with this part of the study in the UK by agreeing to be interviewed (for approximately 40 minutes). We have obtained your name from published sources and any information that you gave us would be anonymised and not used in ways that would allow identification of specific individuals.

We are hoping to conduct the interviews in the UK between the 26th May and the 30th June. If you are willing to participate please could you e-mail us at m.h.leontowitsch@rhul.ac.uk, with possible dates. If you are willing to participate, but cannot do so during this period, other dates may be possible.

We are aware of the pressures on your time but your participation would be of great value to the project. The findings of the study will be disseminated within academia and to those concerned with policy-making in higher education, across the participating countries, and the European Commission, as well as assisting us in our doctoral studies.

Yours sincerely,

Miranda Leontowitsch and Susana Vazquez-Cupeiro
(EU RTN doctoral students at Royal Holloway, University of London)

Appendix 2

EU Research and Training Network - Women in European Universities Form of Consent

Description of the Study:

The Research and Training Network “Women in European Universities” funded by the European Commission under the 5th Framework Programme, is a joint project of several European countries. Münster University (Germany) is the project’s centre for management and co-ordination of the other partner universities in Austria, France, Poland, Spain, Sweden, and the United Kingdom.

The aim of the WiEU Network is to establish the nature of the academic careers of women professors as well as to identify the reasons for the under-representation of female academics in professorial positions in European Universities. The empirical part of this research project comprises of three parts: the first is a contextual and statistical analysis of already available data, the second is a quantitative survey (in which you may or may not have already participated), and the third is qualitative in-depth interviews. All three stages of the research project have been conducted for each participating country separately.

The results from all national projects will be published in a final report, preliminary results are presented at the final conference on the WiEU Research and Training Network “*Europeanisation of Higher Education and Gender*” that will take place on the 26th-27th June 2003 in Brussels. Further details about the research can be obtained from the project’s web-site: www.women-eu.de.

Terms of participation:

Taking part in the research will involve being interviewed in confidence by either Susana Vázquez-Cupeiro or Miranda Leontowitsch about your views on the topic described above. Your name will not be attached to any documents resulting from this discussion and you will not be identifiable from any final reports. It would be very helpful if you agreed to have the interview tape-recorded so it can be fully transcribed. Once the tape has been transcribed it can either be sent to you, otherwise it will be destroyed to ensure data-protection.

If you are interested in the results of the study we would be glad to send you a report on the outcome of the project.

You may withdraw from the interview at any time.

Researcher's declaration:

I have explained the project and the terms of participation as outlined above.

Signed _____ Date

Participant's consent:

I give my consent to be interviewed for the research project described above.
The nature, purpose and terms have been fully explained to me.

Signed _____ Date

Appendix 3

Topic Guide

Background: Professional & Academic career

- University education
- Beginning university career
- Career so far
- Mobility

Experiences in the university/department

- Work patterns
- Work characteristics
- Working within the department and university
- Career ambitions
- Mentors
- promotions

Pathways to the Professorial Position: Meritocracy vs. Informal Support Systems

- Formal and informal networks
- Objective criteria of merit
- Crucial aspects in the development of a career
- Specific choices and compromises during career

Reasons for Academic Women Under-Representation

- Under-representation of women at level of full professor
- Old-boy networks
- Post versus career
- Process of promotions

Equality guidelines & Positive Action

- Equal opportunities guidelines
- Positive action

Summary

- Advice to junior colleague
- Concluding comment

TRAINING PAPERS

- *Research Phase 1: Contextual Analysis* -

Author	Title	Serial no.
Jessica Bösch	The Integration of Women in Austria's Universities	TP 00/01
Susana Vázquez-Cupeiro	The System of Higher Education in the UK	TP 01/01
Anett Schenk	The System of Higher Education in Sweden	TP 01/02
Stéphane Portet	Higher Education System : Poland's Main Facts	TP 01/03
Lisa McGurk	The French Higher Education System	TP 01/04
Agnieszka Majcher	Women in German Higher Education	TP 01/05
Christian Poulsen	Austria's System of Higher Education	TP 01/06
Jessica Bösch	Women in Spanish Universities	TP 01/07

- *Research Phase 2: Statistical Analysis* -

Author	Title	Serial no.
Susana Vázquez-Cupeiro	Are Women the creeping "Proletariats" of British Academia? – A Statistical Portrait	TP 02/01
Anett Schenk	Women in Swedish Higher Education – A Statistical Overview	TP 02/02
Stéphane Portet	Women in Polish Academia – A Statistical Overview	TP 02/03
Agnieszka Majcher	Women's inroads into German Academia	TP 02/04
Christian Poulsen	Statistical Profile of Women in the Austrian Higher Education System	TP 02/05
Jessica Bösch	Enough Women in Spanish Academia?	TP 02/06
Emanuelle Latour	A Statistical Analysis of Gender Inequality in French Academia	TP 02/07

- Research Phase 3: Survey -
- Research Phase 4: Case Studies -

Author	Title	Serial no.
Susana Vázquez-Cupeiro and Juan Martín Fernández	Career Trajectories and “Patriachal Support Systems” in Spanish Academia – A Quantitative Approach	TP 03/01
Susana Vázquez-Cupeiro	and A Qualitative Review of the University in Spain – Meritocracy, Endogamy and the Gendered Opportunity Contexts	
Anett Schenk and Holger Krimmer	Academic Careers in German Higher Education	TP 03/02
Anett Schenk	Female Professors in Sweden and Germany	TP 03/03
Agnieszka Majcher	Gender and Academic Careers in Cross-national Perspective: Preliminary Results from a WEU Survey in Poland and Germany and Deepest Secret: Talking gender Discrimination with Polish Professors	TP 03/04
Daniel Bjerstedt	Women’s catch 22: Reaching the Top in an Academic Career	TP 03/05
Christian Poulsen	Questionnaire on Work Conditions for Full Professors in Europe: The Swedish Case and	TP 03/06
Christian Poulsen and Juan Martín Fernández	Professors talk on Prestige: The Case of Sweden and Spain	
Emmanuelle Latour and Stéphane Portet	Gender and Career paths in French Universities: an E-mail Survey and Building Networks in French Academia	TP 03/07
Beata Zawadzka	From social role to self-identity. A Cross-national study on PH.D.- students’ representation of the “Academe” and “Sexual Harassment”	TP 03/08
Lydia Buchholz	Professorship and Gender at Austrian Universities – An Analysis of Gender-specific Differences among Female and Male Professors and Work Situation and Career Perspectives of the Junior Faculty in Austria	TP 03/09
Tanja Kreetz	Female Researchers in Public Non-University Research Institutions in Germany	TP 03/10

and
Work situations and Career Perspectives of
Female Researchers in Austria

Jessica Bösch	Is Academia still an attractive Career Opportunity for both Women and Men? The new employment law in Austria from the new generation of Academics' Perspective	TP 03/11
Dagmar Ortner	Female Immigrants in Austrian Higher Education	TP 03/12
Miranda Leontowitsch and Susana Vázquez-Cupeiro	“Above the Glass Ceiling?” Preliminary Report of Postal Survey of University Professors in the UK and “Merit, Luck, and a good Nanny?” Exploring the Intricacies in the Career Trajectories of Women Academics in Psychology and Engineering	TP 03/13