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GenderChange in Academia

Re-Mapping the Fields of Work,
Knowledge, and Politics
from a Gender Perspective

ARBEIT GRENZEN POLITIK HANDLUNG METHODEN GEWALT SPRACHE WISSEN
SCHAFT DISKURS SCHICHT MOBILITÄT SYSTEM INDIVIDUUM KONTROLLE
ZEIT ELITE KOMMUNIKATION WIRTSCHAFT GERECHTIGKEIT STADT WERTE
RISIKO ERZIEHUNG GESELLSCHAFT RELIGION UMWELT SOZIALISATION
RATIONALITÄT VERANTWORTUNG MACHT PROZESS LEBENSSTIL DELIN
QUENZ KUNST UNGLEICHHEIT ORGANISATION NORMEN REGULIERUNG
IDENTITÄT HERRSCHAFT VERGLEICH SOZIALSTRUKTUR BIOGRAFIE KRITIK
WISSEN MASSEN MEDIEN EXKLUSION GENERATION THEORIE HIERARCHIE
GESUNDHEIT NETZWERK LEBENS LAUF KONSUM FREIHEIT BETEILIGUNG
GEMEINSCHAFT INFORMATION WANDEL DIFFERENZ WOHLFAHRTSSTAAT
ETHNIE BERUF RITUAL KÖRPER MODERNISIERUNG GESCHLECHT DEMOKRIE
TIE EVOLUTION INTEGRATION KAPITAL REALITÄT KRIEG BILDUNG ALLTAG
KULTUR VERTRAUEN LIEBE WERBUNG GLOBALISIERUNG BEOBSCHTUNG
RECHT EXTREMISMUS STATISTIK INTERAKTION KRIMINALITÄT ZUKUNFT
ALTER ERKENNTNIS MORAL RAUM KLASSE STEUERUNG GELD ZIVILISATION
EMPIRIE AUFKLÄRUNG ARMUT ENTSCHEIDUNG TECHNIK MIGRATION ÖFFENT



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Editors' Foreword

The fundamental changes currently taking place in the national and international science landscapes can no longer be overlooked. Within those changes, reforms do not go 'as planned' but, as is always the case with processes of rationalisation, have a series of unintended effects. At the same time it becomes increasingly clear who in this process are the winners and who are the losers, although this is still subject to fluctuation and change. This can be illustrated by two examples from current events:

Where the range of taught courses is concerned, as part of the Bologna Process the new structuring of student study paths and their organisation is aimed at unifying the European area of science to ensure a study that is equally permissive and efficient. However, it is to be deplored that the mobility of students has become more restricted because of an increasing specialisation in the available study paths. Also, bachelor degrees do not meet with the anticipated high response from the labour market in all countries, so that the master's degree is becoming more or less a 'must', while at the same time the number of study places on master's courses is limited. Instead of the intended reduction in the duration of study time in comparison to the previous German 'Magister' and 'Diplom', rather a prolongation in the duration of studies has been recorded. The introduction of tuition fees was intended to strengthen the 'market power' of the students, who now become customers, and at the same time improve the range of taught courses through material benefits and competition between universities. However, the tuition fees place the students under increased pressure to finance themselves, which they can hardly achieve due to the high temporal burden and limitations due to study and exam demands of the BA and MA degrees. In the universities the tuition fees admittedly relieve the tension in education in the short term but they carry no weight as a contribution to the improvement of education on a long-term basis.

Using the instruments of New Public Management, the vision of an entrepreneurial university will be implemented OECD-wide. However, the detailed configurations take on different, country-specific shapes. In the course of the introduction of New Public Management instruments, the previous state-bureaucratic management and organisation of science becomes complemented or completely replaced through market and economic principles. They are aimed at

increasing the transparency and efficiency of performance in the organisation and research of scientific establishments. This should be achieved through the separation of the functions of administration, management and research, the introduction of numerical indicators in the measurement of scientific performance and adequate evaluations or profile-forming of the universities. All these and further measures and goals have far-reaching consequences. Initiatives of excellence are heating up the competition between universities and research institutions to the disadvantage of single disciplines and chiefly smaller universities. The evaluation systems, which are designed to increase the transparency of scientific output, exert considerable influence on the production of scientific knowledge and jeopardise the freedom and autonomy of research. Finally, the reform measures are accompanied by the construction of a new bureaucratic apparatus. The diverse evaluation and accreditation committees, which devour a vast share of the time budgets of the scientific staff that was formerly available for research and teaching, is a prominent example.

It is not only that, for some time, scientific studies and professional organisations have been emphasising that the paths of reform pursued so far end up in cul-de-sacs, but now fierce student protests are also beginning to stir. All these and other critical voices point out that the entrepreneurial approach departs from the ideals and traditions of Humboldt. For instance, the unity of research and teaching is thereby abandoned in favour of the division of the two areas with the negative consequences described. Through their orientation towards economic and market-based criteria, the autonomy and freedom of science is replaced by inappropriate rationalities. In this way, the reforms touch the core of scientific work and its character and results become ultimately questionable. For all of these reasons and more, reforms of the reforms are demanded and meanwhile have already been announced.

Gender-related questions – such as the effect of an orientation of the restructuring of universities along the notions of an entrepreneurial university on the working conditions of women and men, on the knowledge production related to gender, on the institutionalisation of gender studies, and on the implementation of policies of equality and diversity management – have until now played almost no part in these debates. This is all the more alarming because at the same time a central dimension of the reorganisation of universities becomes a forgotten one: its further democratisation in the sense of gender justice.

The gender-related dimension of the reform process is, on the one hand, noteworthy in itself. The policies of equality represent the continuation of a process that started a hundred years ago with the entry of women into universities. This, partly in connection with other education reforms, has shaken its elitist character. On the other hand, in combination with the rebuilding of universities

towards businesses, policies of equality gain new significance. Where the inclusion of women and gender studies works to the advantage of universities that are in competition for external funding, the 'brightest heads' etc., gender becomes a resource for the market-efficient organisation of science, and gender policy an instrument for its provision. In consequence, the alignment and structure of gender studies does not remain unaffected. The promotion of women, which was primarily concerned with questions of societal participation, will be overwritten with concepts and instruments of gender mainstreaming and diversity management or pushed aside, because these latter concepts are more easily, or allow themselves to be, brought into the service of market efficiency and organisational concerns.

This volume aims to contribute to ending the neglect of the subject of 'Gender Change in Academia' and from the beginning it takes international development into account. Internationally renowned scholars were invited to a conference of the same name, which took place in February 2009 at the Georg-August-University of Göttingen, to remap the subject of university in these terms. Papers that arose out of this conference, and others created for the present book, ask: What effects do the current restructuring of the science system have on work and gender conditions at universities? What impact does the institutionalisation of gender studies as well as scientific and especially theoretical knowledge production have on the category gender, and what consequences for the formation of conversion processes of the organisation of universities are recognisable? Under the heading 'Opening the Field', relevant perspectives will be introduced. Answers will then be offered in three areas: With the focus on 'Organisation, Work and Careers', changes in work and career conditions will be analysed. In the section 'Knowledge Production about Gender' it will be shown how the contents of gender studies, its institutional anchorage and its curricular configuration are influenced by the changing conditions of organisational frameworks. The analysis of 'Gender Politics and Diversity Management' shows how gender knowledge and gender politics become noticeable. Across all fields, it eventually becomes clear that 'Gender Change in Academia' is implemented internationally at different times and inconsistently. With this remeasurement of the subject of university, experiences that are different, at times even opposed, are balanced and compared.

The conference was organised by the local equal opportunities office within the frame of the future concepts of the Georg-August-University of Göttingen and conceived and organised by the editors of the present book. On one hand, the ensuing new remeasurement of the subject of university is the endpoint of research studies which were conducted within the framework of the Lower Saxony Maria-Goeppert-Mayer-Program and in which Ilse Costas as representative of

the Institution of Sociology, Edit Kirsch-Auwärter as equal opportunities officer and Brigitte Aulenbacher and Birgit Riegraf as guest professors, all participated. However, on the other hand, it leads into a new research project: 'The Entrepreneurial University and Gender Change: Organisation – Work – Knowledge'. For this subject, on the initiative of Göttingen, a German-Austrian-Swiss research group was founded. The leaders of this project are: Brigitte Aulenbacher (Linz), Regine Bendl (Wien), Monica Budowski (Fribourg), Ilse Costas (Göttingen), Eva Flicker (Wien), Sabine Hark (Berlin), Johanna Hofbauer (Wien), Ulle Jäger (Basel), Heike Kahlert (Rostock), Brigitte Liebig (Olten), Ursula Müller (Bielefeld), Birgit Riegraf (Paderborn), Birgit Sauer (Wien), Angelika Wetterer (Graz). After the present broad, internationally orientated look at the field, the concern of the next step is to look at developments in the German-speaking regions in greater depth and to confront particular cases with chosen developments in the wider European area.

While working on the present book, we received support from various sources. For financial support we thank the Ministry of Science and Art of Lower Saxony and the Georg-August-University, Göttingen. Ursula Weppler-Brahm supported the conference and book with her organisational, translating and editorial work. Mara Kastein, Julia Reichenpfader and Lena Weber organized the conference. Gitta Brüscke and Elizabeth Sourbut translated parts of the book. Through her involvement in the final editorial work Julia Gruhlich helped to ensure the completion of the book on schedule. Sylke Ernst provided selective organisational support. We profited from discussions with Karin Zimmermann about the contents. Many thanks to all of them.

“Gender Change in Academia“: Gender in Universities in Lower Saxony

Lutz Stratmann

I consider it as an outstanding signal that the University of Göttingen choose to host the international conference “Gender Change in Academia”. The University of Göttingen is one of the oldest universities in Germany and has a wide experience of more than 300 years in managing changes in academia. Therefore I am confident that regarding the topic of gender this is the very place to discuss new ideas and develop sustainable strategies.

But also in Lower Saxony as a whole there is a quite developed set of structures that support the advancement of gender equality – be it the representation of women in academia, the development of gender studies or the integration of gender aspects in research. Let me just accentuate some aspects: Regarding the proportion of female persons on the different steps of the qualification ladder, Lower Saxony holds – together with Berlin – the top position in the equality benchmarking in Germany, issued 2007 by the Centre of Excellence Women in Science in Bonn. This is the fruit of our endeavour since 1990 to establish consequent politics and goals. For example: we installed equality officers at each university, in particular giving them the right to appeal in appointment procedures. This was one important factor in rising the appointment rate of female professors which amounts now to 22 % (2006), and a proportion of 20 % female professors (in the whole of Germany it is 15 %). Since 2001, we are supporting centres for gender research and/or gender studies, in Braunschweig, Hildesheim, Oldenburg, as well as – for some years – the gender studies program in Göttingen. Together with the universities we negotiated the sharing of the financial burden until 2010.

Also since 2001, the Maria Goeppert Mayer Program for international gender research offers guest professorships, normally for one term, to attract outstanding international researchers or talented post docs. Besides integrating the standards of international women’s and gender studies and research in Lower Saxony the guest professors helped to develop the integration of gender aspects in the bachelor/master structures. Furthermore, we installed the successful Dorothea Erxleben Program which offered – since 1994 – positions for postdocs for further qualification for a maximum of 6 years.

To emphasize the features of future gender politics I would like to refer to some points set up in the 2008 report of the European Commission: “Mapping the Maze – Getting more women to the top in research”: “ Equality is part of quality in science. Therefore, inequality must be addressed by taking measures to systematically introduce the gender perspective in human resource development and in future research. This includes training the decision makers...” In October 2007, I established the “Dialog Initiative Equality and Quality Management”. As I deem the constant dialog between men and women as very important, I put special emphasis on the participation of the – still mostly male – heads of universities besides the integration of the equality officers. Gender equality is also a job of leadership. The Dialog Initiative took up the momentum of the call from the Alliance of German Science Organisations “Offensive for equal opportunities in science” in November 2006.

The dialog initiative has started a benchmarking process between universities in Lower Saxony with regard to appointment procedures for professors according to gender quality standards. Future focus will be on the integration of gender aspects in teaching and in research. Of course, the recommendations of the German Council of Science and Humanities regarding gender equality form 2007 will be integrated in this discussion process as well as the “research oriented equality standards” which were issued by the German Research Foundation (DFG) in July 2008.

All these declarations published by the different science organisations clearly demonstrate the commitment of those who bear responsibility. Therefore I am confident that – concerning the international competition – we can successfully maintain the quality of science by emphasising the issue of gender equality. The lack of representation of men in conferences like this shows that there is still work to be done – to convince more of the male part of the professorship that they can gain something by developing the science community towards an equality oriented future.

Engendering the University through Policy and Practice: Barriers to Promotion to Full Professor for Women in the Science, Engineering, and Math Disciplines¹

Dana M. Britton

In research and policy addressing gender inequalities among university faculty, most attention has thus far been paid to the tenure process – to the task of getting women from the assistant professor ranks to the associate professor ranks. There is little question that programs like the National Science Foundation’s ADVANCE initiatives (in the United States) and more general affirmative action policies have had some beneficial effects. Women in all academic disciplines are now more likely to achieve tenure than ever before.

Less attention has been paid to the transition between associate and full professor, however. Promotion to full professor signifies, at least in the U.S., full standing in the academic community, and it is from the ranks of full professors that administrators are drawn. Unlike the promotion to associate professor, which is a mandatory process – six years or out – the promotion to full professor is a voluntary one. No faculty member is required to seek promotion to full professor. Though it is now becoming more common for faculty to be promoted to full within six years of achieving tenure, some still retire at the rank of associate professor.

Some data will help to shed light on this problem. These are data on the top fifty programs in a number of disciplines for the percentage of women faculty at each level in the United States:

1 Research funded by National Science Foundation ADVANCE Partnerships for Adaptation, Implementation, and Dissemination (PAID) Award: PROMOTE – Improving the promotion to full processes at western public universities," Principal investigators Kimberly A. Sullivan, Ann Austin, Beth A. Montelone, Dana Britton, Tracy M. Sterling. NSF Award #: HRD-0820273. The opinions presented here are solely those of the author. Presented at the Conference on Gender Change in Academia: Re-mapping the fields of work, knowledge, and politics from a gender perspective. International Conference at the Georg-August-Universität Göttingen, 13th February to 15th February 2009.

Table 1. Percent women in each discipline, “top 50” programs

Discipline	% Women Ph.D.'s	% Women Assistant Profs.	% Women Associate Profs.	% Women Full Profs.	Gap between % Ph.D.'s and % Assistant Professors	Gap between % Ph.D.'s and % Full Professors
Mechanical Engineering	10.4	15.7	8.9	3.2	-5.3	7.2
Electrical Engineering	11.5	10.9	9.8	3.8	0.6	7.7
Physics	13.3	11.2	9.4	5.2	2.1	8.1
Astronomy	20.6	20.2	15.7	9.8	0.4	10.8
Computer Science	20.5	10.8	14.4	8.3	9.7	12.2
Civil Engineering	18.7	22.3	11.5	3.5	-3.6	15.2
Chemical Engineering	22.3	21.4	19.2	4.4	0.9	17.9
Economics	29.3	19	16.3	7.2	10.3	22.1
Math	27.2	19.6	13.2	4.6	7.6	22.6
Political Science	36.6	36.5	28.6	13.9	0.1	22.7
Chemistry	31.3	21.5	20.5	7.6	9.8	23.7
Biological Sciences	44.7	30.4	24.7	14.7	14.3	30.0
Sociology	58.9	52.3	42.7	24.3	6.6	34.6
Psychology	66.1	45.4	40.1	26.7	20.7	39.4

Source: Nelson (2005).

This table captures the increasing barriers at each level of the academic ladder. The final two columns demonstrate that, relative to the percentage of women Ph.D.s, for every discipline listed women are more underrepresented at the level of full professor than at the level of associate professor. For example, in economics, there is a gap of 10 percentage points between the proportion of women who receive PhDs and the proportion of women faculty at the associate professor level. The gap is more than double that size (22 percentage points) at the full professor level. There are some striking pieces of data in the table – for two fields in engineering, mechanical and civil, women are actually overrepresented as assistant professors relative to their proportion as PhD’s; yet they remain underrepresented as full professors. The three fields with the largest gaps at the full

professor level are in the table are Biology, Psychology and Sociology. These latter two fields now have a majority of women PhDs; Biology is quickly approaching parity. It is notable that all of these are fields that one thinks of as being welcoming to women, or at least more welcoming than the physical sciences and engineering.

Why should women find the promotion to full more difficult? Some argue that this is merely a pipeline issue – as more women enter the pipeline and achieve tenure, more will ultimately progress to full. But there are reasons to be less than sanguine about this. We know from studies of the pipeline (for a review, see Committee on Maximizing the Potential of Women in Academic Science and Engineering, National Academy of Sciences, National Academy of Engineering, and Institute of Medicine. 2006) that women are simply more likely to leak out at every stage than men. But there is also reason to expect – given what we know of gendered organizations – that structure, in the form of policy and practice, and interactions and networks within departments themselves – matters.

The key to understanding the difference may lie in several factors. The first is organizational demography. In most universities promotion committees are made up of faculty already at a particular rank. Functionally speaking, the promotion committees assessing candidates for full professor differ from those assessing candidates for associate professor. There are simply more women in the latter case – promotion committees for candidates for full are smaller and far more likely to be dominated by white men. These men are also likely to be older and to have had wives who were responsible for the family. Though I do not test this hypothesis in this project, my strong suspicion is that this matters quite a lot. Demographically speaking, a boy's club is certainly operating at this level.

The second factor may lie in policy and practice in terms of the actual documents themselves. It has been a matter of some debate in the literature on gendered organizations whether bureaucracy, per se, reproduces gendered inequalities or represents a masculinizing force in organizations. Certainly this was an early assumption – embodied, for example, in Kathy Ferguson's 1984 book, *The Feminist Case Against Bureaucracy*. In my own 2000 article in *Gender & Society* (Britton 2000) I take on this claim, arguing that in fact the balance of the literature indicates that more bureaucracy is better than less. This has been shown in a number of contexts and in a very large body of literature – Reskin and McBrier (2000) show this in banking, for example, Cook and Waters (1998) have demonstrated this in a study of engineering and law. Cecilia Ridgeway (2009) has recently argued against a blanket assessment of more bureaucracy as better than less for women, and this is an issue to which I return in my conclusion.

Regardless, there is little question that while the standards for promotion to assistant professor are often quite vague, the standards for promotion to full profes-

sor are usually non-existent. The documents themselves may play a crucial role in blocking women's advancement to the highest levels of the academic hierarchy.

Of course the documents themselves are not so important as the documents in use. Particularly at the full professor level, informal expectations play a considerable role in creating the motivation for seeking promotion by individual faculty, as well as the standards for evaluation of candidates. Additionally, factors that have been shown to affect promotion – like collaboration, and networks, and division of faculty time, and work/family balance issues, may have a disproportionate negative impact on women (for a review, see: Committee on Maximizing the Potential of Women in Academic Science and Engineering, National Academy of Sciences, National Academy of Engineering, and Institute of Medicine. 2006: *Beyond Bias and Barriers*). The project on which I report here is centrally focused on understanding these last two sets of factors in creating barriers to promotion to full professor for faculty in the science, math and engineering disciplines.

Methodology

The research in this paper has been funded by the National Science Foundation and will ultimately involve interviews with 80 science, engineering, and math faculty at seven U.S. universities [ADVANCE Partnerships for Adaptation, Implementation, and Dissemination (PAID) Award: PROMOTE – Improving the promotion to full processes at western public universities, Principal investigators Kimberly A. Sullivan, Ann Austin, Beth A. Montelone, Dana Britton, Tracy M. Sterling. NSF Award #: HRD-0820273]. The sampling frame has been constructed to capture the factors affecting the progress of science, engineering, and math (SEM) faculty who found this transition easy and those who found it more difficult:

	A	B
	Associate	Full
1	In rank for 3 to 6 years post tenure	Promoted within 6 years or fewer
2	In rank for 7+ years post tenure	Promoted after 7 years or more

N = 10 men and 10 women SEM faculty per cell, total = 80

I have conducted the first few interviews in this project and I will present some very preliminary data here. As part of this project, I have also collected and analyzed tenure documents from SEM departments in my own institution. I have a dozen documents at this point and I will discuss some of the results of the analy-

sis of these data here as well. Analysis of both kinds of texts has been conducted using standard qualitative techniques, reading the transcripts and documents and coding for emergent themes.

Tenure Documents – Gendering In Policy

First I turn to the documents central to this project, those governing tenure and promotion. One of the most common themes in the documents is a pattern of omission and obfuscation. Either there are no statements at all about what is required to achieve promotion, and sometimes tenure, or there are statements that have been made deliberately unclear. This is one of the clearest examples (I have blinded the names of the departments at their request):

For promotion to full professor:

Distinguished reputation in [discipline], such that he or she would be invited to join our faculty at the rank of Full Professor (Department A).

The more usual pattern is one of making requirements deliberately unclear:

No exact quotas or guidelines can exist and a combination of objective and subjective elements will enter into a final decision in the evaluation process. Decisions on acceptable performance levels must contain the individual judgments of the faculty and the administrators involved in the decision (Department B).

The upshot is that while there must be a consensus, no objective factors can be specified. They are entirely based on “judgments” and unspecified (and partly subjective) “elements.” The implications for individual faculty are clear – they have little guidance in what it takes to be promoted and little recourse if they are denied.

The second theme is that where requirements do appear in the documents they are purposely vague, particularly when it comes to specifying the policies governing promotion to full professor. To the extent that there is any clarity in the documents at all, it appears that level of achieving tenure. Some documents (a few) quantify this, and there is no question that they spend far more time on what is required to achieve tenure than what is required to achieve promotion to full professor. Conversely the documents spend very little time explaining what the expectations are for full professors:

Promotion to Professor is based on attainment of sustained excellence in the assigned responsibilities of the faculty member and recognition of excellence by all appropriate constituencies (Department C).

Here there is no discussion at all in the document about standards, just about consensus. Still other documents reflect this lack of clarity as well.

Expectations for promotion from associate professor to professor are considerably higher [than those for tenure], including leadership in scholarly research and/or instructional activities, and strong professional recognition at the national and international levels (Department D).

Appointment as Professor is based on the candidate's national and/or international recognition for a distinguished career. Such criteria must be fulfilled to high orders of expectations (Department E).

Here one can see the very common emphasis on "national and international reputation" as a criteria for promotion to full professor. No document specifies what this is very clearly, and, as my interviews with faculty reveal, it is very much a criterion established in use rather than in policy.

Interview Data – Faculty Experiences

The documents themselves only tell part of the story, however. The more important questions, those about the documents in use, and about informal practices and norms, can be answered only by looking at the experiences of faculty themselves. There is where the interview part of the project comes in. I have only begun these interviews. I will focus here on the experiences of two women in the sciences, both full professors, both promoted within the usual six year time span. Both are in science disciplines broadly related to biology. Both are married to men, and both are mothers. One, whom I will call Susan, has a four year old daughter, born when the year she became a full professor. The other, whom I call Maggie, has a fourteen year old daughter, born when she was an assistant professor.

Both women were in favor of processes creating more transparency in the documents, and both had been tenured and promoted at a time in which documents were either extremely vague or non existent. In fact in one woman's case the department head simply reviewed materials and decided who would be promoted. There was no faculty participation at all. So even given the vagueness in the documents, these women saw them as an improvement. Hence the documents themselves, as written, were not a primary topic of interest in these interviews.

As I asked both to think about the low numbers of women in their fields, both were very clear that this was a pipeline issue, one simply of getting enough women over time into their fields. For example, Susan explicitly rejects explanations of discrimination:

Once the women get into the system, in tenure track positions, I'm not inclined to argue in [my field] that they're stalled so much by professional limitations, by department limitations. *Meaning?* Meaning they're just not one of the guys, so they're not going to be promoted, or. It's come a long way. I wonder if it's to some degree a time thing. Like we just have to now get people in the assistant professor positions, which we're doing, and then get them through the ranks. Which is going to take decades (Susan, full professor).

Maggie's take on this was similar:

So if you have 50/50 male and female grad students, you certainly don't have that mix in terms of faculty. Well, I think what has happened, when I was in graduate school there weren't many women in [my field]. So I think the population is slowly increasing. Equine [science] is all women – that's often female-dominated. You know, girls and their horses. *So what's your sense of why, when you look at the proportion of women as PhD's, and as assistant professors....?* The numbers are increasing. *So you think it's a pipeline issue?* Right, it's in the pipeline. (Maggie, full professor).

Perhaps not surprisingly, these women shared the commonly held view that time would solve the problems facing women in their disciplines. As I demonstrate below, however, upon reflection their life circumstances complicated this view considerably.

Even given the vagueness in their own documents, the women shared the usual sense of a full professor as someone with a national and international reputation:

So what does it take to be promoted to full? Sustained productivity, but there's another dimension to it. And actually, this came from the department head who hired me. He said something that stuck with me: he said that being tenured is an indication that the faculty believe that you have promise, being promoted to Full professor is an indication that you have achieved that promise. And so, what is promise? I think it's a national and international reputation. (Susan, full professor)

Like many things in social science, the questions with which I went ultimately were not central for these women. They saw the documents themselves as improved, but not crucial. And they held to the notion of full professor as a recognition of success in a national and international sense.

As the interview progressed, I asked them to think themselves about their own careers and their successes in achieving full professor. It was at this point that the issue of work/family balance became absolutely central. Some context is necessary, perhaps, for you to understand their responses. At my university literally the only policy available to women (or men) is a stop the tenure clock pol-

icy. Faculty may take an extra year to achieve tenure, and this extension is more or less automatic. The policy is not widely used, and has been available only in the past ten years or so. There is no mandated maternity or parental leave, and no formal policy that allows women to modify their instructional duties for child or dependent care. Administrators and the ADVANCE program are working on the latter now, but the overall situation in terms of policy is extremely bleak. Many US universities are better than mine, but none have really reached the level of many European governments and universities.

The two women I interviewed were differently situated in terms of their access to resources to help them balance work and family. One, Maggie, had a spouse with a PhD in a science discipline who was never offered a full time teaching position by the university. He is employed only half time in a staff position. The stop the tenure clock policy was not available to her when she had her child was born (this happened when she was an assistant professor), and she was on her own in terms of negotiating day care. These things had clearly taken a toll on her, though she had been “objectively” successful in achieving the rank of full professor. She describes her situation in this way:

When I came here I was the third female faculty member ever in the department. Third in that group, and the first to ever have a child while a faculty member. And that was interesting. *How did that work for you?* Let’s just say that I am a strong promoter of maternity leave policies for female faculty. *Because you didn’t have access to anything, right? Did they even modify duties for you?* No. Nothing. I went right through. I worked until the day or two before she was born. Because being a new faculty member here, I had only been here two years when she was born and I had tried to save as much vacation as I could to be able to have time, and I took four weeks of vacation after she was born. And then she went into child care. That was hard. (Maggie, full professor)

This is a woman who has in fact been active in the ADVANCE program, and a strong supporter of work/family balance policies. This has not been a focus of ADVANCE at my particular institution, however, where the emphasis has been much more on straightforward career building activities.

Susan – who arrived on campus only three years later than Maggie – has in fact benefitted from three separate, and in some ways serendipitously acquired, institutional resources. She was able to negotiate a spousal hire when she came to our institution (there is no policy, and no money, for such things at KSU), she found one of the 16 total slots for a child in her age group in university subsidized daycare, and she also received an ADVANCE grant that allowed someone to teach her labs during the first year her child was born (though this is not why she submitted the grant). She sees all of these things as crucial to her career:

Well, I think it is harder for women when you factor in the family stuff. That's real. From a person who's lived it. Like how do you maintain your research productivity, keep your graduate students on task and all of that when you're dealing with, you know, a one month old? [Laughs]. That's really hard. For female faculty who choose to do the family thing, I don't think, without those instances [of institutional resources], my career would have stumbled. And I can definitely see that when there's children stuff happening at the assistant professor level, or when you're associate and there's that focus for a while, it really slows progress on the research for sure (Susan, full professor).

In fact if this woman had not gotten access to these resources, she is clear that she would have had to work half time, and her research would have been stalled. Taken together, the experiences of these two women offer very different stories. Both have "made it" in the sense of becoming full professors. But Maggie has clearly done this very much on her own. Susan has had access, limited and serendipitous though it is, to university policies that have allowed her to negotiate the system by making fewer compromises. One woman is an example of what happens when no policies are available, the other of how even patchwork and informal policies can matter in fostering success.

Both of these women, however, see their future progress – into administration, for example – as being blocked by what they frame as their "choice" to put a priority on family. For the first woman, the situation appears particularly bleak:

Quite frankly, I've seen opportunities for getting more administrative skills, and I have just let them go by the wayside, and that was my choice because of my daughter. I was on two boards of directors for [professional organizations], I was on the committee for the National Academy of [Discipline]. So, I mean I was doing a lot of good things. And then I had a daughter who said, "Mom, you're gone all the time. Can you stay home more?" And I said "OK, I'll stay home more" (crying, now pushing back from desk). *Well where do you see yourself, then, ten years down the road, as she's grown?* Probably picking some of that up again as I can. And I, you know, I really enjoyed doing that stuff (eyes are teary all through this). But, there's times I think administration would be good, but then from a personal side, when I look at the hours involved, evenings and weekends, Monica comes first. So, maybe once she's out of college. But then again, OK it's like you put more on this track, and you voluntarily took yourself out of it. Are you ever going to get the opportunity to go back? (Maggie, full professor)

It is interesting, but not surprising, that this woman, as the others I have interviewed, see this very much as a personal choice, something she "voluntarily" did, even though she does have a sense that men do not have to make the same choices.

This sense of blocked forward progress returns to the question from which I began. Even in terms of the fuzzy standard they impose – that of a national or international reputation, the stories of these women reveal the barriers to promotion for many women faculty fairly clearly.

I'd love to [go to more meetings and conferences.] I'd love to. But until Monica's out of high school, I can't. There's one that I was going to go to last April, and in another one last year Pennsylvania. Canceled, I couldn't go. You know, I couldn't do the research you're doing. Because of the travel. I've just been declining things left and right (Maggie, full professor, Agriculture).

To the extent that building a reputation remains the key component of a promotion to the full professor level, women will face barriers that have to do with their efforts to prioritize work and family – and the lack of policies that support these efforts. And even beyond this level, the women I have interviewed see administration as a goal far away on the horizon, if it is possible at all. This suggests that even if women break through to the level of full professor further glass ceilings remain.

Conclusion – Preliminary Findings and Implications

My analysis of tenure and promotion documents suggests that the criteria for promotion to full professor remain quite vague and are focused largely on the dimension of “national and international” reputation. To the extent that these criteria are unclear, and to the extent that women face barriers imposed by their disproportionate responsibilities for balancing work and family, it will be more difficult for women to achieve this level, and beyond that, to be represented in great numbers in the administrative ranks.

Would more transparency in the documents be beneficial? It is difficult to say. The women I've interviewed so far (and even more so in cases I do not present here) do see greater transparency and rationality in the process as an important goal, one that would allow them to measure themselves against standards that are clear and consistent. Transparency could help militate against interpretations of standards like “national and international reputation” in ways that benefit men, based on their abilities to travel and engage in a variety of service activities. Of course for the women I interviewed, tenure and promotion policies are the least of their problems. While they have been successful, the fact that the university sees family as a private matter means that women who receive any assistance at all, like Maggie, see themselves as lucky rather than as entitled.

What are the implications of this analysis for a theory of gendered organizations? From a theoretical standpoint, I began from a question raised by Acker's (1990) work on gendered organizations – the question of how policies and practices in organizations work to disadvantage women, and whether transparency of policies helps to mitigate this effect. In simple terms, I posed the question of whether more bureaucracy is better than less. In a recent paper, Cecilia Ridgeway (2009) argues that the answer to this question depends on the context. To the extent that what she calls a “gender frame” is particularly salient in an organizational context, transparent and bureaucratic policies will help to lessen its effects. She writes:

The gender framing perspective suggests that whether formal personnel procedures do more good than bad depends not only on the extent to which bias is built into the procedures but also on how powerfully disadvantaging the gender frame would be for women if actors were not constrained by formal procedures. Thus, there is no simple answer to the “are formal rules best” question. But a consideration of the joint effects of the gender frame and the organizational frame allows us to specify how the answer to this question varies systematically with the nature of the context (2009:153).

My argument in this paper is that in a context in which women faculty are powerfully constrained by what they see as their “choices” to put work and family first, and in which the university organizational context does nothing to support combining work and family, a gender frame in which women are mothers and wives first and faculty second is likely to be particularly salient. Given this, a lack of clear and transparent policies around promotion – policies that literally quantify requirements in ways that allow women, and their male colleagues, to measure themselves clearly, women are likely to suffer and be less able to access the upper ranks in the academy.

But if we take Ridgeway seriously, I think what we also might postulate is that policies that make a gender frame less salient – e.g., by allowing women (and men) to balance work and family – might make transparency in standards less important. Some studies are in fact showing that women can thrive in flexible organizational structures in fields that are less highly gender typed – as the relatively recent work on women's success in biotech firms by Whittington and Smith-Doerr (2008) and others has shown.

So while these data are preliminary, I think this study holds some promise for helping us to understand the barriers women face in accessing the upper ranks in the academy. As I have written recently (Britton and Logan 2008), almost two decades on from Acker's original formulation (1990), research has established the utility of a perspective that sees organizational structures as gen-

dered. What remains is the task of understanding how context makes gender more and less salient, and ultimately, fostering the goal of creating less oppressively gendered organizations.

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Hyper-Modernisation and Archaism: Women in Higher Education Internationally

Louise Morley

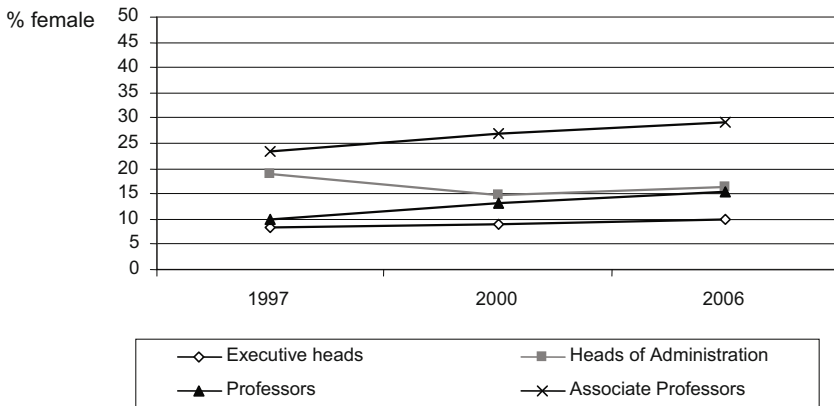
Is the Present the Future That We Imagined in the Past?

The academy today is characterised by the hyper-modernisation of global, entrepreneurial, commercialised universities underpinned by the archaism of poor quality employment environments, elitist participation and widespread gender inequalities. Counter hegemonic advocates did not predict the scale of neo-liberal driven change. Traditionalists did not foresee the industrialisation of higher education. Change has not always been driven by academic imaginaries. One change is the visibility of women as students, or consumers of higher education, set against their partial visibility as leaders and knowledge producers. The recognition/misrecognition confuses and confounds gender debates. Women have been allowed in, embassy style but benchmarked in relation to male norms, entering a matrix of declared and hidden rules (Lynch 2009). Women are simultaneously constructed as winners and losers. Winners because female students are gaining access, but losers because of lack of entitlement to leadership and prestigious disciplines. In this chapter, I will discuss these topics in a global context.

Gender and melancholy are often connected (Butler 2002), with loss, hurt and grief underpinning studies of gender and power. Writing on gender equality involves referring to something that does not yet exist. Questions about the desired morphology of the university are eclipsed by pressing present concerns. Melancholia can be productive! Multiple texts have been produced on the obduracy of gender inequalities *e.g.* the recognition of how gender is formed/reformed in the spatial and temporal context of higher education (Moss 2006). Studies exist on gender (in)sensitive pedagogy (Sandler *et al* 1996; Welch 2006); sexual harassment (Townsend/Geist 2000); gendered subject choices (Lapping 2005); micropolitics (Morley 1999); access (Kwesiga 2002). Representation and exclusion are theorised in relation to promotion and professional development (Knights/Richards 2003; Morley *et al.* 2006); women in seniority (Blackmore/Sachs 2001; Husu 2000), and in high-status disciplines (Bebbington 2002), and prestigious institutions (Dyhouse 2003). Women's relation to knowledge and how gender structures relations of production/reproduction and is linked to

knowledge construction and dissemination have been explored (Mama 1996; Stanley 1997; Spivak 1999). Studies reveal how strategic interventions for change such as equality policies (Bagillhole 2002; Deem *et al.* 2005), and gender mainstreaming are poorly conceptualised, understood and implemented (Charlesworth 2005; Morley 2007a). Studies invariably raise questions about how to challenge the irrational mayhem of gender inequalities.

Figure 1: Whispers of Change? Women's participation in the leadership¹ of Commonwealth universities between 1997 and 2006.



Datasource: Singh, 2008:45

Without wishing to advocate an economy of sameness for women in different national locations, many gender inequalities are globalised (Morley *et al.* 2005). There is consistently low representation of women in senior positions in countries in divergent cultural and geopolitical contexts (Brooks 1997; Morley *et al.* 2006; Singh 2002, 2008). Since 1998, the Association of Commonwealth Universities (ACU) has produced five yearly analytical reports of data (Lund 1998; Singh 2002; Singh 2008). Its most recent publication (Singh 2008) reports that in 23 of the 35 countries in the Commonwealth from which the ACU receives data, *all* universities are led by men (Singh 2008:12). As Figure 1 shows, women's participation in leadership in Commonwealth universities has remained stable for

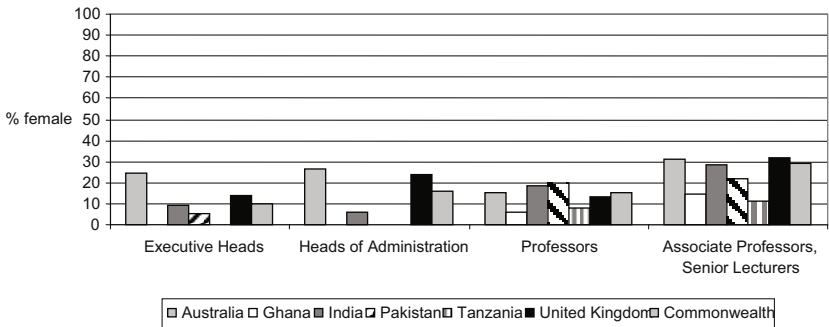
¹ Executive Heads defined as Vice Chancellors, Presidents, Rectors. Heads of Administration defined as Registrars, Secretaries. Professors defined as full professors only. Associate Professors defined as Associate Professors, Readers, Principal Lecturers and Senior Lecturers.

a decade and only one in ten Vice Chancellors or Presidents of Commonwealth universities has been female (Singh 2008:12).

Women are faring slightly better in academic positions (Singh 2008), and participation as Professors and Associate Professors has increased slightly since 1997, as Figure 1 shows. Women comprise 15.3 percent of Professors and 29.1 percent of Associate Professors, Readers and Senior Lecturers across the Commonwealth.

Amongst Commonwealth countries, women’s participation in management and academic leadership is higher than average in high-income countries including Australia, Canada and the United Kingdom. Few women are Heads of Administration in South Asian or African Countries (Singh 2008).

Figure 2: Women’s participation in management and academic leadership in selected Commonwealth countries, 2006



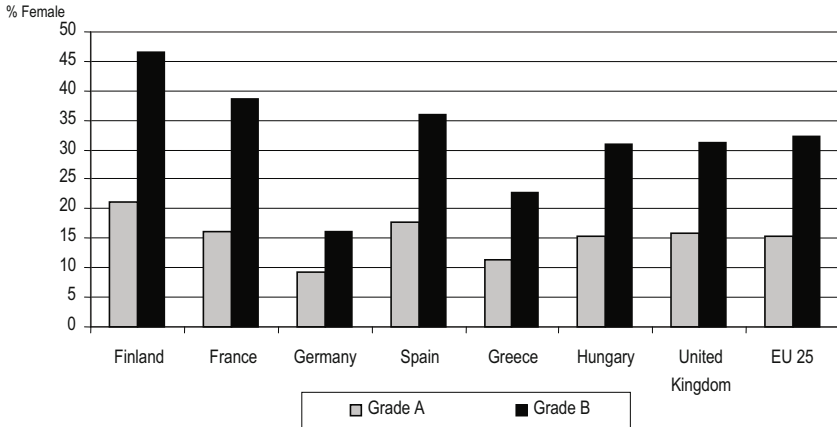
Datasource: Singh, 2008: (11-33).

It might appear that patterns of gendered leadership map on to economic contexts, and that women’s under-representation in senior positions correlates, or is caused by poverty and under-development. So, it is worth shifting the focus to another geo-political area.

The European Union maps gender equity progress of scientists and researchers through the *She Figures* series launched in 2003 (European Commission 2006). *She Figures 2006* provided gender disaggregated data for the 25 member states of the European Union and seven countries associated with the 6th Framework Programme, namely Bulgaria, Switzerland, Iceland, Israel, Norway, Romania and Turkey. The European Commission revealed that 15 percent of

those at the highest academic grade (Grade A²) in the European Union were women (European Commission, 2006).

Figure 3: Proportion of female academic staff by grade³ in the European Union 2004



Data source: European Commission 2006: 57.

Sen's construct of 'missing women' suggests that women disappear when power, resources and influence increase (Martin 2008; Sen 2003).

Modernising Women's Participation

One success is the increased numbers of women undergraduate students. Considering that women in the UK were excluded until the late nineteenth century (Dyhouse 1995), this represents quantitative progress. In the UK in 1995 there were two and a half times more women in the system than in 1970–1 (Abbott/Wallace 1997). Globally, the Gender Parity Index (GPI) for higher education was 1.08 in 2007 suggesting that participation rates are slightly higher for women than for men (UNESCO, 2009: 15). The increases have been unevenly distributed across

2 Grade A corresponds to full professor of the highest grade/post at which research is normally conducted (European Commission 2006: 50).

3 Grade B: Researchers not as senior as top position but more senior than newly qualified PhD holder e.g. Associate Professor, Senior Lecturer, Senior Researcher.

national and disciplinary boundaries. Women's participation rates are higher than those of men in North America and Europe, but lower in East Asia, the Pacific, South and West Asia and Sub-Saharan Africa. Globally, women students are concentrated in non-science subjects (OECD 2007). In many countries, two-thirds to three-quarters of graduates in the fields of Health, Welfare and Education are women (UNESCO 2006). Gender appropriate discipline choice exists in high and low-income countries, with worldwide concern about the underrepresentation of women in the Science, Technology, Engineering and Mathematics (STEM) subjects.

How do facts about women's increased participation or exclusion influence how women experience the academy? I have conducted studies on the micropolitics of academic life and frequently find that the gendered relays of power that cause the most distress and discomfort are everyday transactions and relations (Morley 1999; 2006). Blending quantitative 'facts' with interview data helps to reveal the scale and lived complexities that structure women's participation. Focusing on everyday micro-level incidents provides information about macro-focused challenges for gender equality. The personal is political, or to use more contemporary vocabulary, the self can become an object of reflexive knowledge (Beck/Beck-Gernsheim 2002; Hey/Leathwood 2009). The following sections relate these concerns to a global feminist polity.

The Feminisation Debate: Fear of the 'Other'

An equity paradox has arisen. Instead of celebrating the fact that some women have succeeded in entering the academy, a moral panic over feminisation has emerged (HEPI, 2009). Happily, some western feminist scholars are challenging popularist beliefs that women are taking over the academy and that their newly-found professional and economic independence is responsible for societal destabilisation and a crisis in masculinity (Evans 2008; Leathwood/Read, 2008; Quinn 2003). The feminisation debate is partial and exclusionary. First, it excludes consideration of leadership in higher education and relates to female undergraduates in some programmes in some geopolitical regions. This approach positions women as turbo-charged consumers, but not as knowledge producers and gatekeepers. Second, it is debateable if quantitative change has allowed more discursive space for gender? In the UK, increasing numbers of women students have been accompanied by the demise of women's and gender studies in the curriculum. Third, it fails to deconstruct the unified category of 'woman' or intersect gender with other structures of inequality including social class. Fourth, it reduces gender to quantitative change and confuses sex and gender. Fifth, it

reinforces the gender dichotomy and constructs equalities in terms of a seesaw *i.e.* one groups is down when the other comes up in the world. This contributes to reconstructing the dominant group as victims, and essentialises gender differences. One of the most dangerous aspects of feminisation hysteria is that it silences advocacy for women's equality.

Issues of silence, voice and participation have been traditional concerns of feminist theorists (Gatenby/Humphries, 1999). Some post-colonialist theorists also call for a sociology of absences (Santos 1999). Speaking as a woman can mean speaking as a gendered self that is at odds with the gender-neutral representations and assumptions of academia (Evans 2008). Voice also involves including gender equality in policy, pedagogy and planning. In the UK, gender is a disqualified discourse in higher education policy. Quantitative change suggests to policymakers that gender is no longer an issue (Morley 2007b). The former Secretary of State for Higher Education, John Denham, identified priorities for the next fifteen years which all relate to innovation and wealth creation. Gender equality was not mentioned once (Denham 2008).

A criticism of scholarship on academic women is that it focuses on experiences and voices of socio-economically privileged white women in high-income countries (Twombly 1999). Theorising links between differently located practices produces a sense of the patterns and scale of gender challenges. I would like to draw, first, upon research findings from my current study on Widening Participation in Higher Education in Ghana and Tanzania: Developing an Equity Scorecard (Morley/Lugg 2009; www.sussex.ac.uk/education/wideningparticipation), and secondly, from findings from the Gender Equity in Commonwealth Higher Education study (Morley *et al.* 2006).

Equity Scorecards: Intersecting Structures of Disadvantage

When difference is marked in higher education, it is invariably in relation to access (DfES 2003). In international policy, there is a liberal feminist approach, with gender as a noun, rather than a verb or adjective (Makuchi Nfah-Abbenyi 2008; Weiner 1994). The endpoint is to count more women into education and into male-dominated disciplines, rather to remove the gendered code from the domain, or to challenge gender regimes and processes. Access is an essential first stage – especially in low-income countries. Unterhalter (2007) indicates two-thirds of the one billion people having little or no schooling globally are women and girls. Gender needs to go beyond access and access interventions need to intersect gender with other structures of inequality. There are multiple markers of identity that inter-relate.

In addition to conducting 200 life history interviews with students and 200 semi-structured interviews with academic staff and policymakers, my current research project is constructing Equity Scorecards from statistical data to examine advantage and disadvantage simultaneously. These are measuring intersections between social variables *e.g.* gender, socio-economic status (based on deprived schools' indicators), and age, in relation to educational processes: access, retention and achievement in two public and two private universities, and four programmes of study in each university. The Equity Scorecard interrogates changing configurations of inequality along multiple dimensions, including disciplinary and institutional location (Bensimon 2004; Bensimon/Polkinghorne 2003; McCall 2005: 1772). By including disaggregated data on programmes of study and structures of inequality, Equity Scorecards help evaluate the effectiveness of existing policy interventions to promote inclusion in the case study institutions. Gender gains can frequently mask more persistent inequalities that relate to poverty and age-related norms in participation rates (Morley *et al.* 2006; Morley/Leach/Lugg 2009). The following Equity Scorecards demonstrate intersections between 3 structures of inequality and 4 programmes in 4 different universities- 2 public and 2 private.

Public Universities

In spite of measures in both public universities to enrol more women and students from lower socio economic backgrounds, participation rates of poorer women are low. Even in programmes with relatively high female participation such as the LLB. Law, in Tanzania (Table 2), poor women are under-represented, or non-existent. It appears that some programmes *e.g.* the B.Sc. Engineering in Tanzania (which has an Affirmative Action entry programme for women) have recruited older women. However, these women are not from lower socio-economic backgrounds. Both public universities are highly selective in academic entry qualifications. The success of gender equality and access programmes means that some university programmes are now filling up with 'doctors' daughters rather than doctors' sons' (Williams, quoted in Eagleton 2008). The next Scorecards examine participation in less selective private universities.

Table 1: Access to Level 200 on Four Programmes at a Public University in Ghana According to Age, Gender and Socio Economic Status (SES).

% of Students on the Programme						
Women	Low SES	Age 30 or over	Mature and Low SES	Women and low SES	Women 30 or over	Poor Mature Women
29.92	1.66	5.82	0.00	1.11	0.28	0.00
47.06	2.94	6.30	0.00	1.68	3.36	0.00
36.36	8.08	65.66	8.08	2.02	21.21	2.02
30.77	0.00	0.00	0.00	0.00	0.00	0.00

Table 2: Access to Level 200 on Four Programmes at a Public University in Tanzania According to Age, Gender and Socio Economic Status (SES)

% of Students on the Programme						
Women	Low SES	Age 30 or over	Mature and Low SES	Women and low SES	Women 30 or over	Poor Mature Women
32.41	8.59	1.13	0.16	0.32	0.0	0.0
56.18	13.48	0.0	0.0	5.06	0.0	0.0
25.05	11.65	1.36	0.0	1.36	1.17	0.0
11.20	28.00	4.80	1.6	0.80	0.0	0.0

Private Universities

Tables 3 and 4 reveal that in universities with high female enrolment, the percentage of women varies across programmes. Both private universities have succeeded in recruiting students from different structures of inequality, with women, poor and older students represented in programmes such as the B.Sc. Human Resources Management in Ghana (Table 3), and in all four programmes in Tanzania (Table 4). When the structures of inequality are intersected poor, older women are absent from all 4 programmes in Ghana (Table 3), and are only present, in very low numbers in the LLB. Law and the B.Ed. Maths in Tanzania (Table 4).

Table 3: Access to Level 200 on Four Programmes at a Private University in Ghana According to Age, Gender and Socio Economic Status (SES)

% of Students on the Programme						
Women	Low SES	Age 30 or over	Mature and Low SES	Women and low SES	Women 30 or over	Poor Mature Women
41.38	0.0	0.0	0.0	0.0	0.0	0.0
72.96	1.79	14.29	0.0	10.97	1.28	0.0
5.56	0.0	27.78	0.0	0.0	0.0	0.0
42.18	2.04	0.0	0.0	0.0	1.36	0.0

Table 4: Access to Level 200 on Four Programmes at a Private University in Tanzania According to Age, Gender and Socio Economic Status (SES)

% of Students on the Programme						
Women	Low SES	Age 30 or over	Mature and Low SES	Women and low SES	Women 30 or over	Poor Mature Women
25.93	7.41	25.93	2.47	1.23	8.64	0.0
47.89	14.18	15.71	3.45	1.92	3.83	0.38
39.81	7.77	5.83	0.97	1.94	0.97	0.0
17.86	10.71	63.57	7.86	0.71	10.00	0.71

In Ghana, women comprise 35 percent of the university population (NCTE 2006 a&b) but 41 percent of students in private higher education (NCTE 2006b). In Tanzania, 33 percent of the overall undergraduate population is female, with women comprising 38 percent of private higher education students (MHEST 2006). If participation rates for women are higher in lower status private higher education, this poses questions about whether socially disadvantaged groups are getting diverted into peripheral higher education, thus reinforcing sector stratification and social differentiation. Widening participation can be a process of diversion or re-routing of members of socially disadvantaged groups into lower-status institutions in order to reserve the higher-status universities for the elite (David 2007).

Equity Scorecard data suggest that access of women, poor and older students is not to the sector as a whole. Participation is incommensurate with the hyper-modernised, globalised higher education sector, following archaic patterns of inclusion and exclusion.

(Gendered) Voices from Academia

My study on Gender Equity in Commonwealth Higher Education explored gender equity in five countries (Morley *et al.* 2006). It aimed to illuminate statistics and explore women's everyday experiences of universities in Nigeria, South Africa, Sri Lanka, Tanzania and Uganda. 209 interviews were held with students, academic staff and managers. Classroom and boardroom interactions were observed and statistics and policies analysed. While transnational feminism is problematic in terms of the diversity of women's oppressions (Mills/Ssewakiryanga 2002), observations from women in low-income countries sounded remarkably similar to women's voices in the west.

In the study, a sense of a hidden curriculum emerged (Margolis 2001). Overt and hidden curricula are not mutually exclusive but form a complex mechanism of production and reproduction (Apple 1980). The hidden curriculum is irrational and contradictory. One aspect relates to the conjunction between gender and academic ability and authority. Negative attitudes to women's academic abilities do not correlate with their actual achievements. Studies have reported how discrimination against women can involve not taking them seriously and doubting their ability and motivation (Rudman/Glick 2001; Seymour/Hewitt 1997). Difference is expressed in terms of deficit and located within particular bodies rather than in the 'invisible values and assumptions structuring curriculum and pedagogy' (Abu El-Haj 2003:411).

Femaleness is repeatedly perceived as irreconcilable with intellectual authority (Shah 2001). In many cultures, the higher educated woman is in antagonistic relationship to other discursive practices. There was widespread reporting of hostility from male students and staff, as a South African student illustrates:

I have also noticed how we've had maybe two or three female lecturers and how the guys in our class just do not listen to them, they do not respect them. And I mean these women are really good, they are brilliant, they know their stuff they worked hard they have their PhDs, but guys laugh at them, ridicule them.

In an observation evocative of Spender's early UK (1982), and Brooks' early USA work (1982) the Sri Lankan team relate how their classroom observations revealed gender differentiated pedagogical attention:

Towards the end of the lecture when the lecturer was relating real-life examples to the theory he had been teaching, he mentioned a project the female student was involved in and briefly asked her a question related to it but he did not give her any time to answer, smiled and moved on to the next question very swiftly.

The Sri Lankan team also note how male students were invited to comment and question more than females. Male students became more confident, assertive and relaxed than their female counterparts. Gendered interaction was noticed by students. A Sri Lankan student describes discriminatory behaviour from some male lecturers:

There are some who try to put the women down by asking a question and then laughing at us when we can't answer it, or ask something just to put us down.

These examples pose questions about the meaning of women's participation.

Women's academic self-worth was presented as fragile, unstable and impeded by internalised oppression *i.e.* their interior worlds or psychic narratives that constantly played recordings of inferiority. A Ugandan student states:

The problem most girls have is lack of confidence.

A Sri Lankan policy-maker attributed the low level of women in management to women:

Managerial posts are not held by women in large numbers. In universities, if you take generally speaking how many heads of departments are females...no not even 20 per cent are held by the females... That is because they don't come forward. That is the reason.

The problem with affective explanations is they suggest that women lack the personal attributes to succeed. Problems that are largely collective and social are individuated. It represents the privatisation of the public. Power relations that create structures and barriers and undermine women's confidence are overlooked.

The gendering of academic ability has emerged in my current study in Ghana and Tanzania (Morley *et al* 2009). A Tanzanian female student describes how she believes she has to be academically rescued by men:

You know that for example this question is tough and only boys can tackle it ... and a girl cannot, and we have to look for a boy, who we think can tackle it.

Success criteria for gender equality often relate to women's increased participation in male-dominated areas. It is if by working and studying with men, there will be disidentification with inferior women's worlds and positive contagion of male values and behaviours. Success is constructed as crossing gendered thresholds to become more like a man, rather than removing the gendered code from domains.

Hegemonic codes of femininity and masculinity influence subject choice (Lapping 2005), with women constructed as poor choosers. Women's academic identities are often constructed in terms of absence, as a Tanzanian Dean of a Science Faculty discusses:

When it comes to gender, I think it's the girls who are not well represented particularly in some disciplines. Sciences is less than fifteen percent. ..When it comes to Physics, Mathematics, Geology there is huge imbalance between the girls and boys...In Mathematics it could be up to... you know between eighty and twenty percent. Even in Geology you know twenty percent girls, eighty percent boys.

Men's under-representation in female-dominated disciplines is rarely mentioned.

Conclusion

Today, women are participating, in increasing numbers in a range of national locations. Yet, women's academic identities are often forged in otherness, as strangers in opposition to (privileged) men's belonging and entitlement. Gender is encoded in a range of formal and informal signs, practices and networks. Quantitative targets for access are undermined by the construction of femaleness as second class citizenship. Gender debates are contradictory. Women are positioned as holding back as a consequence of low confidence and self-esteem, while simultaneously threatening to take over or feminise (and hence devalue) the sacred space of academe.

Feminist scholars and researchers will continue to critique, theorise, audit and grieve power and privilege in higher education. Knowledge continues to be seen as the engine of development. There are areas of under-development in the knowledge society. Micro-level statistical examination of gender in Ghana and Tanzania reveals that when gender is intersected with poverty and age, poor women are absent. The hyper-modernisation technologically driven liquified globalisation of higher education is underpinned by the archaism of unequal employment and participation practices. We need to build on the momentum of women's increased participation and re-imagine a different future.

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Gender and gatekeeping of excellence in research funding: European perspectives

Liisa Husu & Suzanne de Cheveigné

1 Introduction

Women continue to be a minority among European researchers. Access to funding is one of the keys to success in academic careers, both for women and for men, providing essential support for research and publications. Indeed, the role of competitive funding is increasing in many European national settings and success in the competition for research funding is now often used as a measure of scientific excellence at both individual and institutional level. Those who decide on allocation of research funding play thus an important gatekeeping role shaping the research system.

In this article, we explore gatekeeping of research funding in Europe from a gender perspective. The article is drawing on the recent EC expert group report *The Gender Challenge in Research Funding – Assessing the European National Scenes* (EC 2009). The expert group was set up by the European Commission to analyse from a gender perspective research funding landscapes in 33 European countries. The focus of the expert group included national grant awarding procedures and accessibility of gendered data on success rates, amounts awarded and peers taking part in the decision-making and evaluation processes, distinguishing according to disciplinary fields. It centred on the funding of academic and basic research, on key public funding organisations in each country, and on competitive project funding and individual grants. Private funding organisations and charities, and bulk funding for institutions were not included. The authors of this article served as the expert group chair (Suzanne de Cheveigné) and Rapporteur (Liisa Husu)¹. The report is based on extensive national reports compiled by the expert group members².

1 The members of the expert group were Louise Ackers (UK), Jana Blahova (Slovakia), Maija Bundule (Latvia), Thomas Hinz (Germany), Maria Jesus Izquierdo (Spain), Carl Jacobsson (Sweden), Petr Pavlik (Czech Republic), Rosella Palomba (Italy), Maaïke J. Romijn (Netherlands), Christian Suter (Switzerland), and short term members Hans Kristjan Gudmundsson (Iceland), Renata Siemienska (Poland), Clementina Timus (Romania) and Nikolina Stretenova (Bulgaria).

2 Short country profiles are included in the report. The more extensive country reports can be found on the EC Women and Science website.

The issue of gender and excellence has been debated on the European science policy agenda since the early 2000s, and several previous EU expert groups and workshops have discussed the question, resulting in the Gender and Excellence in the Making report (EC 2004), and the WIRDEM report (EC 2008b) on women in research decision-making. The Gender Challenge in Research Funding report drew on and continued these efforts but with a specific focus on research funding. The issue of gender and research funding has also been addressed to some extent in earlier landmark EU reports, such as the ETAN report (EC 2000) and National Policies report by Teresa Rees and the Helsinki group (EC 2002) and some statistical data on funding decision-makers and recipients have been included in She Figures (EC 2006), the ENWISE report (EC 2003) and the Benchmarking report (EC 2008a).

However, the question of gender and research funding has attracted substantial attention only fairly recently and is still much less often addressed in the literature than gendered structures and career dynamics. Like the question of the promotion of women scientists, it is linked to that of evaluation in science in general and “evaluation of evaluation” is very often met with reticence or perceived as an implicit criticism of peer review and of peer reviewers. The expert group observed that in many European countries gender issues in research funding have not yet emerged to the science policy agenda, although it found several examples of pro-active stakeholders and innovative good practices.

2 The European setting: diversity in research landscapes and gender settings

Europe shows great diversity both in national research landscapes and in gender settings. This diversity is important to keep in mind when exploring and comparing gender dynamics in research funding across Europe. In addition to differences in mere size, European countries show large variations in many respects: the overall size of the research sector; relative research intensity measured by R&D investment or proportion of researchers in the total labour force; the relative size of the government budget appropriations on R&D; the relative size of different research sectors; the degree of centralization and governance of the funding systems; organisation and funding of research careers (e.g. tenure); and the role and proportion of competitive research funding in research careers (EC 2007). The existence of a federal structure plays an important role in research governance in some European countries, such as Belgium, Germany and Spain.

The size of the R&D sector of a country affects the dynamics of the national scientific community in various ways. Larger R&D systems offer more research

job openings, and more opportunities for mobility (at least theoretically), and the pool of potential national evaluators and reviewers is large. Germany, France and UK have the largest research settings in Europe, employing the largest numbers of researchers, and are spending 60% of the total EU-27 R&D expenditure. Relative research intensity varies from 0.4% of the GDP in Cyprus to 3.8% in Sweden and 4.7% in Israel. Only a few countries have already reached the Barcelona target of 3% of R&D investment of the GDP, while the EU-average has been stable at 1.85% since 2000 (Eurostat 2008).

Academic and basic research in Europe is to a great extent funded by the state and subject to national decision-making and monitoring. In many countries, part of the academic research funding is allocated as institutional bulk funding to universities or science academies but external, competitive funding plays an increasingly important role. Many old EU member states, such as the UK and the Netherlands, have a long established national research council system to allocate competitive research funding for academic and basic research. In many new member states, academies of science have traditionally been the major national elite research organisations employing large numbers of researchers on tenured positions, and research funding until recently has been non-competitive. Several countries, such as Bulgaria, Croatia, France and Hungary are currently in various stages of reforming or streamlining their research funding systems, and the trend is towards increasing competitive funding. In a few countries, such as Italy and Greece, the relevant ministries directly allocate public competitive research funding without intermediate national organisations. Many countries combine several funding systems. The ongoing reforms of funding systems would offer a golden opportunity to take gender issues on board as a part of quality improvement. However, this seems rarely to be the case.

Women are underrepresented among the researchers in the EU-27 and associated and applicant countries. Latvia is the only EU-27 country in which female researchers are in majority in all sectors: higher education, business sector and governmental sector research, and only in six other member states: Bulgaria, Estonia, Lithuania, Portugal, Slovak Republic and Romania, does the share of female researchers exceed 40% (Eurostat 2008). Common to all countries is the fact that women continue to be under-represented in the highest academic ranks and in decision-making positions in scientific organisations, even if this under-representation varies somewhat by country, as has been demonstrated by the EU Women and Science reports during the past decade (EC 2000; EC 2003; EC 2006; EC 2008a and b).

Despite the specificity of the research sector, its gender dynamics are also affected by the wider socio-cultural gender context of each country. The overall gender settings across Europe vary from country to country and it is essential to

take this into account when trying to understand the diversity across Europe. European countries vary in terms of how they have adopted and implemented gender equality policies in the society at large. The basic gender equality policy framework has been strongly supported by the action of the European Commission and has been strengthened with the EU equality laws. Most of the European countries have passed an Act on Gender Equality or Equal Opportunities; all have some kind of gender equality agency within the national government. Several countries have women and science units in their respective ministries (EC 2008a). In new member states this legislation and agencies are relatively newly established. Some old member states, as well as Iceland and Norway, are strongly committed to gender mainstreaming as a policy principle, but many among both the old and the new member states are not.

Because of these variations in the gender contexts, comparisons across countries are difficult. To attempt to clarify the picture, we have considered a number of ways of grouping and categorizing countries. Recently developed global gender indicators are particularly useful for the purpose. The Global Gender Gap Report 2008 by the World Economic Forum ranks 130 countries in the world, representing 92% of world population, on the basis of quantitative indicators linked to gender relations in economic activity, educational attainment, political empowerment and health and survival (World Economic Forum 2008). European countries are ranked high in this global gender gap index, with some exceptions. The 33 countries covered by the expert report included the four having smallest global gender gap (Norway, Finland, Sweden and Iceland), and four more within the ten best performances (Denmark, Ireland, Netherlands, Latvia). Germany, UK, Switzerland, France and Spain are also within the twenty best. The majority, 25 of the 33 countries covered by the expert report, have a global gender gap rank smaller than the global median but in the others the gender gap is larger. These countries with a larger gender gap than the global median include some old member states, some new and one associated country: Cyprus, the Czech Republic, Greece, Italy, Luxembourg, Malta, Romania, and Turkey.

Crossing this global gender gap data with data on the proportions of women in Higher education and research allowed us to outline a broad framework to facilitate the understanding of gender dynamics in research funding in different national contexts. In Table 1 the countries are grouped according to these indicators: the global gender gap rank of the country, a measure of overall gender equality in society and the proportion of women researchers in HE, a measure of the relative presence of women in research. Countries were divided among those with smaller than EU-27 median gender gap rank and those with larger than EU-27 median gender gap rank. The other division concerns the proportion of women among researchers in the HE sector in the EU: countries have been di-

vided among those with more than EU-25 average proportion of women in HE research and those with less than EU-25 average proportions, using She Figures (EC 2006) data for year 2003.

Four country groupings emerge which do not follow obvious political or geographical lines. Countries with a gender gap smaller than the EU median include some with more than average women in HE research (Nordic countries except Denmark, UK, Ireland, the Baltic states except Estonia, Spain, and Belgium), but also countries with less than average women in HE research, such as the old member states Austria, Denmark, Germany, France, Netherlands, and also Switzerland. Correspondingly, countries with larger than median gender gap in society include some with more than average proportions of women in HE research, such as several new member states from Central Eastern Europe (Bulgaria, Estonia, Hungary, Poland, Romania, Slovak Republic), but also Portugal, Greece and Turkey. Finally, the countries with both high gender gap and less than average proportions of women in HE research include the Czech Republic, Cyprus, Israel, Italy, Malta, and Slovenia.

Another grouping of European countries was provided by the results of the expert group's analysis of national and organisational policies related to gender in research funding. The results of this classification are clearly more closely linked to general societal gender contexts rather than to the proportion of women in research. On the one hand, a group of countries with long-term, more recent or very recent proactive approaches could be identified, and on the other, a large and heterogeneous group, which can be described as relatively inactive in this area. Among the most proactive countries with advanced policies and measures to promote gender equality in research funding, three subgroups were distinguished: (1) the Nordic countries, which can be characterized as global gender equality development leaders with long embedded traditions in gender equality promotion; (2) a group of newly active countries with high research activity but (comparatively) very poor representation of women in research: Austria, Germany, Netherlands, Switzerland and Flanders, and finally, (3) a group of countries consisting of the UK, Ireland and Spain. These last three countries differ from the first and second group in that more women are engaged in research than in the newly active ones but the countries have become active in gender equality promotion clearly much later than the Nordic ones. A common feature most of these proactive countries share is that the overall gender gap in society is relatively small from a global and a European perspective, measured by the Global Gender Gap index, and that the national governments have shown strong political will to promote gender equality in research.

Table 1 Overall gender gap in society and the share of women researchers in the higher education sector

		WOMEN RESEARCHERS IN THE HE SECTOR	
		More than EU average 35 %	Less than EU average 35 %
O V E R A L L G E N D E R G A P	Global gender gap rank 2008 smaller than the EU-27 median	SMALLER GENDER GAP, MORE WOMEN IN HE RESEARCH Norway Finland Sweden Iceland Ireland Latvia UK Spain Lithuania Belgium	SMALLER GENDER GAP, LESS WOMEN IN HE RESEARCH Denmark Netherlands Germany Switzerland France Austria
	Global gender gap rank 2008 larger than the EU-27 median	LARGER GENDER GAP, MORE WOMEN IN HE RESEARCH Bulgaria Estonia Portugal Poland Hungary Slovak Republic Luxembourg Romania Greece Turkey	LARGER GENDER GAP, LESS WOMEN IN HE RESEARCH Slovenia Israel Italy Czech Republic Cyprus Malta

Data sources: World Economic Forum: Global Gender Gap Report 2008, and EC: She Figures 2006. Countries in each group listed in global gender gap rank order; first mentioned country has smallest gender gap. Smaller gender gap = gender gap rank smaller than EU-27 median, larger gender gap = gender gap larger than EU-27 median. More women in HE research = more than EU-25 average in 2003, fewer women in HE research = less than EU-25 average in 2003. Comparative data on women in HE research in Croatia was not available.

The other group, quite large and heterogeneous, includes the remaining countries, both old and new EU member states as well as some associated countries. They can be characterized as relatively inactive when it comes to gender equality in research funding. These countries show little initiative in monitoring gender balance or promoting gender equality in research in general. Most of them have a relatively large societal gender gap. Some have among the highest proportions of women in HE research in Europe, some average and some less than average proportions. Although the national governments in these countries have shown little initiative, if any, to promote gender equality in research, some recent positive developments could be identified.

3 Gatekeepers and gatekeeping of research funding

A gatekeeper can simply be defined as a person who controls access to something or somebody. Robert K. Merton (1973) called gatekeeper the “fourth major role” of a scientist, in addition to that of researcher, teacher and administrator, and argued that gatekeepers affect contemporary science in every aspect. Women are particularly under-represented among academic gatekeepers and leading positions in science and science policy organisations. Gatekeepers of research funding in Europe consist to a large extent of middle-aged male academics, concluded the ETAN report (EC 2000) nearly ten years ago. Newer national data from *She Figures 2006* (EC 2006) on scientific boards, concerning year 2004, presented a composite figure for the proportion of female gatekeepers in each country. This data was aggregating disciplinary fields and included various organisations, not only those engaged in research funding. These figures could be used as a rough estimate of women’s overall representation in scientific boards. Women were seriously underrepresented in the scientific boards in most EU countries. Only in Finland, Sweden and Norway did women constitute more than 40% of the boards, and only in the UK, Bulgaria and Denmark above 30%.

Gatekeepers of research funding can be understood broadly: they include members of national science and technology councils, funding organisation directors and managers, funding organisation board members, research council and sub-council members, staff members of funding organisations, individuals involved in evaluation committees and panels, and reviewers.

Lack of gender balance among gatekeepers of research has profound consequences for many reasons. It may have an impact on the contents of decisions, on the image of the organisation, on gender awareness or lack thereof in the organisation but also on academic careers of women and men. Gatekeepers are in a key position to influence the definition, evaluation and development of scien-

tific excellence. Gatekeeping processes can control or influence the entry or access to an arena, allocation of resources and information flows, setting of standards, development of the field or the agenda, or the external imago of that arena. The double role of gatekeeping is noteworthy: gatekeeping can function as exclusion and control, on the one hand, but also facilitate and provide opportunities, on the other (Husu 2004).

Increasing the proportion of women among gatekeepers of research funding does not, according to the current empirical evidence, necessarily or automatically lead to higher success rates for women applicants. However, the positive impact of more equal representation among gatekeepers on women's participation in research may be more indirect: it demonstrates that women are full members of the system, it increases gender awareness inside the organisation, it offers women researchers more opportunities to learn how the funding and evaluation system works, seen from inside, and allows an overview on the level of current frontline research against which they can measure their own. It also provides opportunities to become integrated in important networks. A female professor from Finland, from a very male-dominated field describes the gains of being a research funding gatekeeper relatively early on in her career as follows:

"I was once a quota woman, as a member of the Research Council, and it was really a top experience. You got access to see it from the inside, the criteria of funding and overall, a lot about the evaluation of science, and the rules of the game, which you would have otherwise not seen at all. So this might have been a way I got a little into the networks which had until then been solely male. (...) Some of the fellow members of the Research Council really opened my mind, and I was taken completely seriously so there was no problem in that. There were some really fine people. (...) Through being a member of the Research Council I got access to see the mechanisms of research funding. There were also people who appreciated that there were women among decision-makers. I was a quota woman there, and after that there have been more women. I could bring my own networks to the expert pool, it was very important and I think this could be utilised much more...when we get the first women along then gradually in the next recruitments you can take also (more) women into account. If they are men they usually have male networks, the system does not renew, but if there are women among, even if only the amount of the quota, it helps. It is a good mechanism for a transition phase. I have only good experiences on that, it was a brilliant thing in my career, an extra bonus."

A female professor from a male-dominated discipline, Finland, served as a Research Council member. Interviewed for the FP6 PROMETEA project by Liisa Husu and Paula Koskinen, University of Helsinki.

4 Recruitment of gatekeepers

Legislation on gender balance or gender quota in public committees exists in a few countries, such as Finland (since 1995), Norway, Iceland (since 2008), affecting also the gender composition of boards of national research funding organisations. In these countries gender balance is approached among gatekeepers of research funding. In Belgium, the Flemish Ministry of Economy, Science and Innovation introduced in 2006 a quota of one third of one sex in officially established boards advising the government and individual ministers; funding organisations are also bound to this quota. The quota is monitored by the government but there are no sanctions. In some other countries, such as in Ireland, the government has set up a minimum target of 40% for women's representation in state boards. In some others, this initiative is made at the level of the funding organisation, such as in Switzerland. The Swiss Research Council has set a target value 25% for 2011 for proportion of women in its governing bodies. In Slovenia on the initiative of the Committee on women in science the Slovenian Agency for research accepted the target value of 30% for the proportion of the underrepresented sex in its expert bodies.

Recruitment of gatekeepers varies across European countries to some extent both in method and in transparency. The highest national level gatekeepers of research funding, the national science and technology committees or equivalent, are usually appointed by the national government and often chaired by the Prime Minister or other government minister. National research council or national research foundation board members or equivalents are recruited by various methods: they can be directly appointed by the government from the representatives put forward by relevant stakeholder organisations (universities, science academies, research institutes, business sector); appointed by the relevant ministry after consultations with the research community; members can be selected by the research community through elections; or a mix of these procedures can be applied.

The boards of funding organisations often serve as final decision-making bodies, and allocate the evaluation of applications to subcommittees, evaluation panels, and external peer reviewers. However, the role of the boards varies somewhat across Europe and the boundaries between decision-making and evaluation can sometimes be quite blurred. In some countries, the boards also participate in the evaluation process itself in some funding schemes or concerning some funding instruments, for example, by short-listing of candidates to be subsequently peer reviewed externally, whereas in others, the boards only make the final funding decisions on the basis of the recommendations of evaluation panels and/or external reviewers.

Data on the gender composition of the board members of national science policy committees and members of the boards and subdivisions of the funding

organisations was easiest to obtain. There was variation across countries on availability of and access to gender data on evaluators and reviewers. These data were only rarely publicly available and monitored by the funding organisations, and were in most cases obtained on request from the funding organisations.

Evaluators and reviewers are key gatekeepers because they conduct the peer reviews through which excellence in research funding is defined. How they are recruited, and what criteria are used in recruitment and selection is much less clear. In a few countries, like in Italy, the Ministry directly appoints the members of the evaluation committees. The research council members and research council staff play in many cases a key role in recruiting evaluators. In some countries, like Sweden and Finland, the funding organisations have set targets for equal representation of women among the evaluators, but these are not always met. In the UK, many research councils use extensive consultation among stakeholders when recruiting evaluators and take also into account gender balance. Evaluator pools or “colleges” are developed by some funding agencies; some agencies exchange evaluator information with each other, and a few agencies have obtained access to the European Commission evaluator pool. International evaluators are increasingly used.

To evaluate funding applications, peer review is applied practically everywhere in some form. How many different levels the scientific evaluation includes varies to some extent between the funding organisations. There are systems in which the same body reviews and ranks the applications, such as in the Ministry of Science and Research in Italy, whereas in others, such as in the Czech Republic Grant Agency and the Portuguese Research Council, the organisation of the evaluation is more complex and several levels of evaluators are used. Individual reviewers and/or panels are both used, and mixing national and international reviewers is common, especially in smaller countries. Usually the final funding decisions are made on the basis of written documentation only but in some countries and funding forms site visits, discussions and interviews with the applicants are additionally used.

As mentioned earlier, how the peers who conduct the reviews are recruited is not often clear. The discretionary matching of reviewers to proposals might be crucial, and it appears as some sort of a black box within many funding institutions. Peer reviewers may be appointed for a certain period or for a single funding call only. Some funding organisations are recruiting their peer reviewers systematically by calls, by broad consultations with stakeholders, by nomination procedures or elections, or by on-line application. In case of systematic recruitment, the decisions on them are usually made by the board of the organisation or its equivalent. In many cases the recruitment process is more opaque: administrators, evaluation coordinators or “rapporteurs”, appointed by the deci-

sion-making bodies, recruit the reviewers using their field knowledge, web resources and networks. The criteria for selecting peer reviewers are not often explicit either. Peers are not necessarily all professors, although in practice they often are – this tends to exclude women – and, at least in the UK, non-academic stakeholders may also participate in the evaluation.

5 Institutional gatekeepers

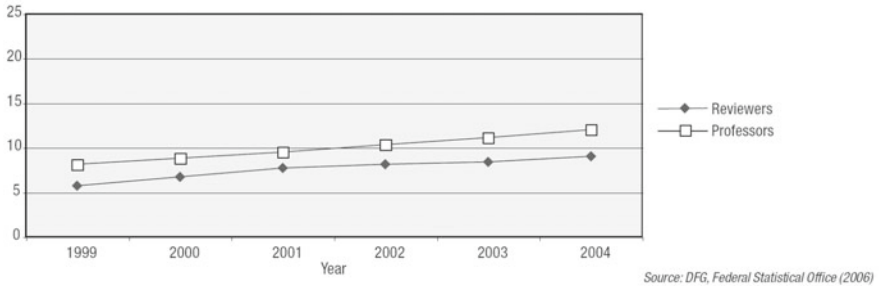
Institutional gatekeepers, the key national funding organisations, which were the main focus of the EU expert report, vary in their approach to gender equality issues. Several national research councils have adopted a very proactive role. These include the FWH in Austria, the Academy of Finland, the German DFG, the SFI in Ireland, the NWO in the Netherlands, the Norwegian Research Council, the Swedish Research Council, the Swiss SNSF, and the UK Research Councils. Many of these have established more or less permanent infrastructures to monitor and promote gender equality in research funding, launched gender equality action plans with targets for gender balanced representation, set up specific measures to promote women in research, and conducted or are planning in-depth studies and monitoring activities from gender perspective.

Specific actions or instruments to promote gender equality in research funding have been designed and implemented by the same national funding bodies in Austria, Germany, Ireland, Netherlands, the Nordic countries, and Switzerland. These actions include encouraging women to apply in the funding calls, targets for proportion of women funded, positive action in case of candidates with equal merits, career phase targeted measures to support women researchers, measures promoting work-life balance, and measures promoting institutional reforms addressing gender inequality.

6 German study on gender in the DFG peer review system

Very few studies have been conducted on the evaluators and the evaluation process in European research systems generally, or from gender perspective. A recent German study (Hinz, Findeisen & Auspurg 2008) looked at the involvement of women in the DFG peer review system. Between 1999 and 2001, almost 10,000 scientists wrote reviews for the DFG, between 2002 and 2004 this rose to almost 11,000 (DFG 2003, 2006). In the majority of cases, reviewers have the status of professors, although this is not always required. Figure 1 compares the trend in the proportion of women relative to the total number of DFG peer reviewers to the trend in the proportion of female professors at German universities.

Figure 1: The trend in the proportion of women among special reviewers in the German DFG Individual Grants Programme and among professors (1999-2004, in percent)



Source: DFG, Hinz/Findeisen/Auspurg (2008)

The proportion of women professors in Germany is low but has steadily increased over time. This trend is mirrored by the proportion of women among peer reviewers, although it does not reach the same level as that of university professors. Whereas the proportion of women among DFG peer reviewers had reached 9% by 2004, the figure for the reference group in the same year was 13.6%. Even judged on this basis, women are underrepresented amongst DFG peer reviewers. Probably, this difference is partly explained by the senior status of reviewers. Hinz et al. (2008) show that reviewers are on average five years older than applicants. Furthermore, female reviewers are on average five years younger than male reviewers.

On the second level, the members of the Review Boards are elected by peers. Every four years, people employed at German universities and research institutes and holding doctoral degree have the right to vote for representatives on Review Boards. Candidates are nominated by professional scientific organisations. Analyses of electoral votes show that the representation of female scientists is more dependent on their nomination by their associations than by voters' preferences. In scientific disciplines with female candidates, the female scientists do not have lower chances to be elected as members of the Review Boards. The last election took place in late 2007, and the former president of the DFG argued in favour of a quota for female candidates. In fact, the proportion of women as elected members of Review Board increased from 12% to nearly 17%.

An overview on the current representation of women on different scientific boards in Germany is given by table 2. It is published on the website of the DFG with a detailed description of tasks.

Table 2. Representation of female scientists on boards of the German DFG (2007)

	<i>Total</i>	<i>Total women</i>	<i>% women</i>
Executive committee	9	2	22.2
Senate	38	9	23.6
Senate's committee for special research units	36	6	16.6
Senate's committee for graduate schools	32	12	37.5
Review Boards	594	99	16.8
Reviews	21,037	2,300	10.9
Reviewers	9,488	1,135	12.0

Source: DFG

Table 2 indicates that with the exception of the review system the proportion of female scientists in boards is above their representation among full professors³.

7 Funding gatekeepers in Europe still predominantly male

The Gender Challenge report includes detailed data on gatekeepers in national competitive research funding by discipline when available. The space does not allow detailed presentation and discussion of this data within this article. To summarize, in most European countries women continue to be a minority of gatekeepers of research funding, regardless of their share among researchers. Nordic countries approach gender balance but in most European countries the research funding agenda continues to be shaped and evaluation of excellence performed predominantly by male gatekeepers. Several all-male boards, committees and subcommittees were identified across Europe. Many committees with one token woman were also identified. The broader social and political context plays an important role here. Common to countries where gender balance is approached among research funding gatekeepers appears to be that there is political will to promote gender equality. They also have a low overall gender gap in society, and in many of them the proportion of women in HE research is larger than the EU average. However, contrary to what might be expected, strong representation of women in research alone does not automatically translate into a more equal representation among the research funding gatekeepers, demon-

3 See http://www.dfg.de/dfg_im_profil/aufgaben/chancengleichheit/download/chancengleichheit_dfg.pdf, page 11.

strated by the low proportion of women among gatekeepers in the Baltic states, Poland, Portugal, and Slovak Republic.

From a disciplinary perspective, in general, the highest proportions of women were found among funding gatekeepers in humanities and social sciences, the health sciences and in the biological and agricultural sciences, fields where there are relatively many women engaged in research. Smallest proportions of women, a single token woman or in many cases no women, were found among members of technological and engineering research councils, and evaluation panels and reviewers in these fields. Given the small proportion of women in these fields the result could be expected. However, several examples of all male committees and panels were identified also in some fields where women have been traditionally more numerous. In Italy, the research projects of national interest (PRIN) are evaluated by all male panels in nine out of the fourteen disciplinary fields. These all male panels were assessing applications in the fields of philosophy and psychology, medicine, political sciences, economics, land sciences, physics, chemistry, mathematics and architecture. In Poland, Ministry of Science grant awarding boards in 2005-2008 were almost exclusively male; in the sections of exact sciences, engineering and technology but also medicine there were no female members. In the Czech Republic, women were missing from the Czech Grant Agency's Subcommittees on engineering, philosophy and plant production. The Slovak Republic Medical Council is all male.

8 Final remarks and recommendations

The gender challenge in research funding is multifaceted and needs to be addressed with a broad and innovative policy agenda. It concerns stakeholders belonging to many categories: researchers as applicants and recipients of funding; those who set the funding agenda, review and evaluate applications, or decide on funding; management and administration of the funding organisations; and policy makers deciding on R&D policy and funding priorities. The gender challenge concerns male dominance in defining excellence in research, decision-making in research, research priorities and attribution of funding, lack of gender monitoring and of general transparency of the evaluation process, low application rates of women, and difficulties in reconciling research and private life. From the perspective of political decision-makers and citizens, the gender challenge concerns the accountability of the use of public funding allocated for research.

Research funding systems and organisations of today are constantly monitored from many perspectives, both nationally and internationally, by a variety of indicators. However, these kinds of mainstream monitoring activities often appear to completely lack a gender perspective. For example, in many cases the

success rates in funding are regularly monitored and published but gender of applicants, awardees and evaluators is not followed up and success rates by gender not calculated, or this data is not published. In a large number of European countries gender is not taken into account and monitored when recruiting gatekeepers: funding committee members, evaluators and reviewers.

Only in a handful of countries is gender monitoring of major funding organisations regularly conducted and the monitoring results published: the national funding organisations in Germany, Netherlands, Sweden and Switzerland do this most comprehensively. Data availability by gender is the first cornerstone of gender monitoring.

A word of caution is in place when interpreting the expert report data. A report focusing on key public funding organisations may give a partial and perhaps excessively positive picture of the national situations. One can assume that major public funding organisations, as focused on in the report, may be more engaged in advanced activities than is generally the case nationally. However, the major funding organisations can serve as highly visible examples of good practice, which other funding organisations in their countries may seek to emulate.

To encourage the funding organisations and other stakeholders to take the gender challenge in research funding seriously in practice and take action, the expert group provided a number of recommendations, flagged up some good practices, and outlined future research themes. Practically all the dimensions of research funding examined in the report require better monitoring and more research to improve understanding of the gender dynamics in the funding field. Comparative international research, and studies using long data series would be especially important. When it comes to gatekeeping and gatekeepers, further research is needed, from a gender perspective, on gatekeeping policies and practices in research funding, including the recruitment process and criteria of gatekeepers, as well as the impact of gatekeeping positions on the gatekeepers' own careers and network building.

The recommendations to stakeholders concerning gatekeepers and gatekeeping range from establishing institutional monitoring structures to improving gender balance among gatekeepers, transparency in recruitment of evaluators and prevention of conflict of interest. The expert group recommended that:

1. Funding organisations should *establish a permanent structure* for monitoring gender equality in their activities. The structure should report to and be *supported* by the highest level in the funding organisation, and be given *adequate resources*.
2. Funding organisations should make *action plans* on how they promote gender equality in their funding activities. National funding organisations in

Austria, Finland, Germany, Norway, Switzerland, Sweden and the UK are examples of organisations actively engaged in equality planning.

- All decision-making bodies of funding organisations should have *gender balance*, with at least 40% of each gender.
- The proportion of women among evaluators and reviewers should be increased to attain at least 40% of each gender.
- To identify and recruit more female evaluators and reviewers, *databases* of women scientists, and requests for excellent scientists and stakeholder organisations to suggest female evaluators should be used.
- Evaluation procedures, criteria and results should be made *public*.
- Procedures and criteria for *recruiting* evaluators and reviewers should be made explicit and published. A good example of high transparency is the UK Engineering and Physical Sciences Research Council EPSRC.
- Effective procedures to *prevent conflict of interest, unethical behaviour and any form of discrimination* in decision-making or peer review should be established. In codes of conduct for all involved in funding decisions, gender perspectives should be integrated, as in the Vademecum of the Netherlands Research Council.

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The new entrepreneurship in science and changing gender arrangements – Approaches and perspectives

Brigitte Aulenbacher & Birgit Riegraf

1 Devaluation and feminisation of science in the entrepreneurial university? An introductory theoretical positioning

From the perspective of social constructivist approaches, there is a clear connection between the societal acknowledgement of a vocational profession and its gendering (for an overview, see Wetterer 2002), with professions that are mainly pursued by women located at the bottom of the societal scale of values. Conversely, the process of masculinisation is frequently accompanied by a valorisation of a profession in its societal and everyday significance (see e.g. Gildemeister/Wetterer 2007; Heintz et al. 1997; Kuhlmann 1999). Social theory generated within gender studies, in particular that from Regina Becker-Schmidt (1998), likewise ascertain such homologies. Thus societally authoritative sectors, where science traditionally belongs, lie for historical reasons in the hands of men. In comparison, women are represented to a large extent in sectors that are considered by society to be more subordinate. However, whether this coherence between gendering, segmentation and the process of establishing hierarchy is unavoidable, remains highly controversial in the gender studies debates.

Viewed through social-constructivist lenses, the history of the conversion of the university and the scientific landscape can be interpreted as a gender change in the traditionally male-dominated profession of science (see e.g. Noble 1992). From this perspective, the opening up of universities to women, nearly one hundred years ago, not only represents a milestone in the process of the democratisation of science. Rather, the flip side of the softening of the masculine elitist character of science is the curtailment of their societal esteem and authority. The intended abolition of the 1968 movement of universities with tenured professorships, the education reforms of the 1970s, the opening up of universities to broad levels of the population and thus to a greater extent also to women, sketch the next stage on the way to a gender change in the profession of science. The question is now: Will this process continue during the conversion of the so far broadly state-controlled universities towards ‘entrepreneurial universities’ (Clark 1998)? How is this recent stage of the reorganisation of science to be interpreted, given that it is entirely differently staged to the previous ones?

Diverging from the developments of the past, the present reforms are specifically not causally born from societal attempts to democratise university education. Rather, they aspire initially to a standardisation of the European science framework following the Treaty of Bologna. Courses of study and their structures are to be reorganised, indeed decentralised, but following consistent guidelines. At the same time an intensified economisation of research, education and university administration is part of the designated route. The intended comparability, increased efficiency, transparency and measurability of scientific research and the contents of courses of study can be interpreted as a new quality of rationalising science, during the course of which there also occurs a reorganisation of gender arrangements (see the critical interventions of representatives of the 1968 generation in Sambale/Eick/Walk 2008). The proposition, outlined at the beginning of this paper, of the homology between devaluation and feminisation, needs to be rechecked in the context of this multi-layered process.

This outline already implies that we theoretically take into account the fact that the homology described does not emerge consistently or inevitably. In fact we assume that the devaluation and feminisation of professions or sectors is not deterministic but the result of societal debates and negotiations. Even if such a homology would evolve, renewed and in new shape, in the case of science, this must not hide the fact that even so there were diverse, not always aligned but often contradictory, opposed and resistive forces at work. In this sense we assume that societal developments and hence also the development of university education and its gender arrangements are contingent but not arbitrary. However, despite what the term contingency in specific theory variants suggests, 'social constraints' (Becker-Schmidt 1998, in German: "sozialer Zwang"), in which women are allocated a less favourable starting position in the societal negotiations and debates in comparison with men, should not be neglected (see Aulenbacher/Riegraf 2009). How those inequalities are systematically assessed will be explained more precisely in the next step of our argument.

In contrast to studies which are inspired by systems theory, and which connect the term contingency with an understanding of organisations as formal and impersonal (for an overview, see Wilz 2002, 2004), we assume that universities are gendered organisations. For this reason the momentum of the social constraint that we previously described is mapped in terms of the sociology of organisations. Following theories of gendered organisations, organisations in modern societies are basically dichotomous formations. They were formed historically along the societal divide of public and private and are themselves part of the public sphere. The division between public and private was constituted in conjunction with the modern gender order (see also Acker 1990; Müller 1993; Rastetter 1994). In the realm of science, this conjunction becomes apparent in the centuries-long exclusion of women. This homo-sociality of science has in

turn not remained external in its character and its organisations (see Noble 1992). In these, principles (for instance rationality) and constructs (for instance work-force) are exercised, which at first sight seem universal, but upon closer scrutiny are revealed as androcentric (see Acker 1990; Rastetter 1994; Hearn 2009).

We thus understand the transformation of universities into entrepreneurial organisations to be a gender-based process, whereby organisations which are basically and unavoidably gendered will be remodelled. Whether, and in what ways, gendered attributions above that will become effective and which direction the transformation process will in fact take, is however contingent. It is conceivable that the previous gender arrangements will become either consolidated or broken up. It is also conceivable that completely new arrangements will develop. In addition to gender arrangements, these could be arrangements which are not, not solely or not primarily conceived as gender-related.

With the homology of devaluating and feminisation in the wider context of economisation and equality under close scrutiny, the question is: In what ways is the entrepreneurial university still a gendered university? This can be subdivided into three more questions: What demands does the new entrepreneurship in science make on scientific work? How will those demands be met by both female and male scholars? What effects on the entrepreneurial university are associated with their ways of handling those demands?

In the present paper, the ways in which those questions are pursued in our research will be discussed. First, the processes by which the entrepreneurial university is built and scientific work is reorganised will be examined (2). In the next section the new entrepreneurship in science will be looked at more closely (3). Subsequently, it will be shown why the scope of the research is extended to incorporate the work and life contexts of scholars beyond the university and what results this generates (4).

2 Economisation and equality: ambivalent tendencies on different levels of the entrepreneurial university

The discourse of the entrepreneurial university as a concept forms merely a part of the present restructuring processes of the landscape of science and university. In its initial version by Burton Clark (1998), the notion is aimed in particular at forms of organisation and regulation of science in the sense of new public management. In this context, that the relationship of university and state/government will be fundamentally reorganised, Birgit Riegraf (2007, 2008) has elaborated upon the implementation of the new public management in the public sector. Richard Sennett (1998) has applied such a perspective to the area of science. Both internal university processes and the connections between the organisations

of science will be reorganised to reach commercial efficiency. Market mechanisms and competition supersede the previous hierarchical, centrally and bureaucratically structured organisation and regulatory measures, and are accompanied by new standards for successful scientific work and by new forms of evaluation and control of findings. Universities gain more autonomy in designing their own constitution. Researchers perform increasingly managerial functions. Students become customers of the scientific enterprise. However, the simple notion of economisation does not adequately capture the complex image of the conversion of the scientific landscape.

Taken as a whole, talk about the entrepreneurial university does not cover the fact that alongside the economisation of science, societal democratic movements continue to exert an influence in the form of efforts for equality. Also, visions such as the university that follows a policy of doing gender justice, are located at the level of guiding principles that should be accomplished through concepts such as gender mainstreaming, which was established within the framework of European regulations (see Meuser/Neusüß 2004; Andresen/Koreuber/Lüdke 2009). In this respect, universities are under pressure because they are constrained to consider equality aspects when evaluating their organisations and make changes if necessary. In addition, the concept of managing diversity radiates from the commercial sector into societal areas such as science. The concern of managing diversity is to tap into the productive resources which are assumed to exist in the range of cultural and social backgrounds, various sexual and religious orientations or diverse experiences due to age, etc. of the members of the organisation (see Andresen/Koreuber/Lüdke 2009; Riegraf 2009). These politically motivated concepts of equality are at the same time thoroughly compatible with the new public management (see Kahlert 2005) and arise as a consequence of organisational logic (see Meuser 2004). Efforts at democratisation show up differently from the previous concepts, stemming from the women's movement, of the promotion of women, demonstrating a high ability to connect with the economic shift. Thus equality policies, which follow the managing of diversity and gender mainstreaming, accomplish the transition from administratively-efficient to market-efficient policies of organisation and control. Furthermore, such a policy of equality, and with it the increasing entry of women into science, can become a competitive advantage in the competition between universities if the violation of equality policy standards is penalised. The entrepreneurial university is therefore likewise, although in a new way, a feminised university, without having yet expressed anything about the structure of the gender arrangements in the newly formed organisation of science. The interactions of very different processes must be considered on their respective levels.

Models or visions, such as the entrepreneurial or the university that follows a policy of doing gender justice, channel discourses, according to Brigitte Aulenbacher (2003), since they put topics on the agenda, be it in glossy brochures or internet presences or in everyday conversations. In this way, they determine what is debateable in an organisation and who will be listened to. Models or visions belong to the modalities of an organisation, according to Sylvia M. Wilz (2002, 30-36 in reference to Anthony Giddens). Taking this approach, it is necessary to distinguish organisational structures, such as the internal vertical and horizontal division of labour within the university, including operational, collective and statutory regulations, administrative and self-administrative proceedings, employment contracts etc, whose framework organises and governs working conditions in research and education. They formally shape the working conditions in science in significant ways, whereby numerous informal forces are added (see Matthies 2005). Finally, there exists a third level of organisational proceedings, according to Sylvia M. Wilz (2002), namely the level of subjects. It is particularly interesting for us to see the manner in which scholars adopt, or do not adopt, the requirements demanded of them by the other two levels.

This view implies that working relationships, conditions and policies of equality of the entrepreneurial university vary between institutions, insofar as they are subjected to operational regulations. And at the same time it is to assume that the characteristic patterns of regions, counties and nations influence the organisation of science and the implementation of equality policies, insofar as they are also subject to external regulations and are moving in extended constellations of influence, such as politics and economics. Moreover, it is to proceed on the assumption that both the market-efficient reorganisation of the scientific enterprise and the policies of equality vary within the specific disciplines (see Vogel 2009). The reorganisation of the European landscape of science is therefore to be understood as a process of standardisation, which takes place unevenly within the specifics of nations, counties, regions, organisations and disciplines. Against this backdrop, we come back to our questions about the demands that the new entrepreneurship in science makes, to the adaptations of researchers and to their (re)actions to the entrepreneurial university.

3 The new entrepreneurship in science

In connection to relevant economic theories, Hildegard Matthies (2005, 155) defines entrepreneurship by three characteristics: 'risk of profit and loss, self-coordination and the willingness to innovate' {translated from German}. Originally developed for the characterisation of the commercial entrepreneur, they can

also be applied, according to the author, to career conditions in science, both now and in the past. However, the earlier entrepreneurs differ from their contemporary descendants.

The original and societal model of a successful researcher that still prevails depicts a savant who researches in solitude and freedom. He is devoid of every material ambition, committed solely to scientific discovery and, as feminist research findings show, which accords well with theories of gendered organisation, in an androcentric manner thought free from the requirements of self-care and the care of others (see Matthies/Oppen 2004, 287; Metz-Göckel 2009). In the tradition of this model, science is to be understood not as a profession but as a calling (see as early as Weber 1922). Despite numerous restrictions, the autonomous professorships in research and education are still based on this notion. On the other hand, the success of scientific work is measured by the acknowledgement of findings by the scientific community. In hope of the uncertain and, statistically speaking, also improbable achievement of scientific acknowledgement in the form of a professorship, junior scientists have to accept, over long periods of time, atypical working conditions which provide an insecure existence (see Matthies/Oppen 2004, 286-287).

Above all, these working conditions are reconstructed by Hildegard Matthies (2005, 159-173) as entrepreneurship. This traces back to the occupation of the private scholar in the 19th century and as a rule today is normality even across the various stages of university development for the non-professional teaching staff. These working conditions also present disparate opportunities for women and men because of the unequal load of non-scientific demands from outside the scientific world (Matthies/Simon 2004, 285-289). However, what will be implemented in Germany is not equally valid for other countries. The Austrian science system is an example of a system which provides a biographically comparatively early, secure existence for the continuation of scientific careers, which conform less to the image of the entrepreneur. Nevertheless, it can also be assumed in the Austrian case that the chances of gaining a reputation are unequally distributed, meaning a risk of lacking professional acknowledgement. According to the traditional model, professional acknowledgement is established merely through an exclusive orientation towards scientific knowledge-gathering and the full temporal, emotional and intellectual availability for science. This total availability, according to the motive of vocation, conveys the impression of 'science as way of life' (Mittelstraß 1982, in German "Wissenschaft als Lebensform").

During the forming of the entrepreneurial university, several developments are emerging now which lead us to expect significant changes in at least five areas of the demands on scientific work. First, we assume a (further) increase of atypical employment conditions, may it be the appearance of the increase of

temporary contracts and part-time work, or may it be in the form of new pseudo-self-employment. This leads to a (further and novel) casualisation of work and life conditions on the scientific level of the non-professional teaching staff. Secondly, we notice a societal devaluation of professorships, in terms of the material and intangible benefits, which probably makes science less attractive as a career choice. Thirdly, the professional self-image of the researcher will be touched insofar as the market-efficient reorganisation of research and education leads to an increasing number of management tasks. These can collide with scientific priorities or even marginalise them. This touches the core of professional ethics, namely the notion of work that is dedicated solely to scientific knowledge-production. Fourthly, especially when it was operated as entrepreneurship, science, both now and in the past, can be comprehended as ‘subjectivised’ and ‘boundary dissolving’ work (for definitions of these terms see Kleemann/Matuschek/Voß 2002; Kratzer/Sauer 2003, in German “subjektivierte” und “entgrenzte” Arbeit). In the entrepreneurial university, this is the case in yet a new way, when the motives that made ‘science as way of life’ (Mittelstraß 1982, see above) attractive or acceptable become noticeably obsolete. Fifth and finally, it also shows in the scientific business that demands on the configuration of work and other life arrangements have changed for the researchers themselves (see Metz-Göckel 2009; also Binner and Liebig in this volume).

All these aspects must be accounted for if the relationship between gendering, differentiation and the development of hierarchy in the entrepreneurial university is to be more precisely understood and analysed.

4 What qualifies as an indicator to measure the equality and inequality between men and women? Extensions of the perspective

If only the complex, often contradictory and non-simultaneous interplay of developments on and between the different levels of the entrepreneurial university are taken into account, tendencies of equality and prolonged inequality stand side by side. Also, there are potential gaps between modalities and structures. For instance, the model of the university that follows a policy of doing gender justice will potentially not be implemented in the scientific organisation. Or the subjects do not play along; what is implemented as a top-down model may not be readily adopted by each member of the organisation. The examples could be continued. The question of the extent to which a scientific organisation following the model of the entrepreneurial university touches on gender arrangements, cannot be sufficiently answered by looking only into the internal proceedings of the organisation. An extension of our enquiries into the non-university work and life condi-

tions of researchers is necessary. This broadening of perspective will be elaborated upon more fully in the next step and its expected benefits explained.

Beyond the notion and accomplishment of 'science as way of life' (Mittelstraß 1982, see above), researchers are involved in non-scientific relationships, in which they live in various ways (as single, in a flat-sharing community, as a couple, as parents etc.). Furthermore, apart from gainful employment they are also engaged in additional and societally necessary forms of work in everyday life and in biographically changing intensity, such as work for oneself, subsistence work, voluntary and socio-civil commitments. Housework, subsistence work and paid work, however, are contradictory to each other regarding their demands and their societal organisation; this has been especially pointed out by Regina Becker-Schmidt (1983, 2002, 2003, 2007). They are structurally incompatible, insofar as the demands from one area, for instance to be able to spend time caring for children, clash with the demands from another area, for instance efficient time management in paid work or domestic rationalisation processes aiming to support paid work. The arrangement of these structurally contradictory demands was historically expected primarily of women, who for their part reacted with an ambivalent occupation of the various work forms (see Becker-Schmidt 2003, 121-123). Voluntary and socio-civil commitments are thus extensions of those work forms, and as such affirm and maintain their societal approval or lack of approval. Also at this point gender-based patterns are discernible, whereby women still undertake the work without any reward, although it is no less labour-intensive, and men take on rather the influential and rewarding work (see Notz 2002, 2004).

None of these work forms are untouched by the example previously described for science, but also in other societal areas pursuing economisation processes. Thus at present public welfare is also being reorganised along lines that are market-efficient and this has an effect, be it on childcare, be it on the care of other family members, on the private care of life or on socio-civil commitments, for instance the availability for voluntary work, in all societal areas (see Aulenbacher/Riegraf 2009). Indications can be found that the contradictions between the demands of paid work and issues of private care in the broadest sense under the sign of the market-efficient rebuilding of society further sharpen the situation (see the respective contributions in Lohr/Nickel 2005). Paid forms of work and other work and life-qualities are thus decreasingly compatible, such that the forced rationalisation of the entire lifestyle is also not ultimately able to solve this fundamental problem.

Concerning the processing of demands from the various societal areas, and concerning the manner in which the forms of work in everyday life and biography that we have described, should be linked together, this research points to two

things: The work and life arrangements of women are more contradictory than those of men, according to Regina Becker-Schmidt (1983, 2003, 2007), who takes a perspective in social and subject theories, Helga Krüger (1995, 2001), who looks at biographies, and Karin Jurczyk and G. Günter Voß (1995), who focus on everyday life. The extent of the contradiction in the work and life arrangements of female researchers in comparison to male researchers is therefore a suitable indicator to reveal the equality and inequality of the genders. It indicates to what extent new inequalities evolve following the demands that are imposed on researchers in the course of the market-efficient rebuilding of science and their achievements in the context of their work and life conditions. Also, changes that develop primarily out of the work and life conditions beyond paid work can be systematically included, for example the empirical finding that the compatibility problem has meanwhile also reached men in the case of the 'new fathers' (in German: "neue Väter"), which is a break with tradition (see Scholz 2009; Liebig in this volume). Eventually this approach can be expanded to include the socio-constructivist perspective on 'doing gender while doing work' aspect (see on this the elaboration by Wetterer 2002). In what is for us the interesting context of economisation and equality, her view includes whether and how gender becomes a topic in the achievement of the demands that the new entrepreneurship in science poses, and whether and how the division of labour can be justified and legitimised in this way (see Aulenbacher 2005, 197-204).

This approach also leads further towards answering the question of in what ways the entrepreneurial university is a gendered university. The arrangements that have evolved from the entire conditions of work and extended life, including gender arrangements, are entering into the university proceedings when female and male scholars in research, education, administration and self-administration become active. They give the entrepreneurial university a shape in a manner that cannot be sufficiently mapped by looking only into the organisation.

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Gender, Managerialism and Academe: Challenges and Prospects

Jim Barry

Introduction

This paper is concerned with gender and academe in Britain, and considers the new public management (NPM) and its impact on the ways in which women and men academics negotiate their daily working lives. An assessment is timely as managerial techniques and ideas have been in favour in Britain's public sector from the late 1970s (Hood 1995), with this periodisation significant. It marked the opening of an era labelled Thatcherism that, like its Reaganite counterpart in North America, heralded the rise of a new discourse of neo-liberalism in world affairs (Harvey 2005). The linking of politics and economics, to energise a moribund right wing political conservatism in Britain with a dynamic Hayekian economics that favoured market competition and a politics of choice (MacPherson 1980), led to an emphasis on individualism and inequality and, according to some academic commentators (Leys 2001), a debilitation of public services.

That this should come after the 1960s decade of protest, which saw the development of social movements for change that questioned the status quo, may be considered as something of a backlash, coming as it did in a period of economic decline as Keynesianism lost ground to a discourse of austerity and a right wing politics in search of a cause to rally its disillusioned followers, a cause found in the writings of supporters of the Mont-Pelerin society, Hayek and Friedman (Harvey 2005). Faced with concerns about the efficiencies and accountabilities of the welfare state and public sector bureau-professionalism, the disciplines of private sector management appeared to provide ready-made solutions to political and managerial elites, in order to appease what were seen as overburdened tax-paying electorates.

Yet the ranks of the bureau-professionals, where the concerns were targeted, had been swelled by women, invariably in middle level positions but in larger numbers than hitherto. But if the 1960s and 1970s certainly saw a growth in the number of women in higher education, including supporters of women's movements for change, what happened when they entered the academy? It is this that the paper considers, some 40 years on, by focusing on the NPM and its links with neo-liberalism, acting as its organisational glue (Clarke 2004: 117) particu-

larly through the notion of performativity. In drawing on social movement theory and conceptualising the varying categories of feminism as elements of women's movements, consideration is given to individual and collective ways of adapting to, moderating and resisting the harsher aspects of the NPM regimes. Whilst drawing on secondary sources, the paper is informed by interviews with women and men academics in England, Sweden and the Netherlands.

Women and Higher Education in Context

The boom in higher education in Britain in the second half of the twentieth century saw an increase in the numerical representation of women in the academy. As Evans (1997: 49) explains, the recent growth of women in higher education around the world from the 1960s and 1970s offered a 'limited expansion of women's participation as academics ... [with] ... men essentially control[ling] the universities, in that they ... [were] ... the senior managers and the large majority of the professoriate'. Even so higher education has remained a popular career choice for women. As Halsey puts it,

The participation of women in higher education is patchy, passionate and peculiar because we are living through a period in which vigorous reforms are taking place with a view to establishing fair or equal chances in what remains, despite some slights and denials, one of the most attractive careers for women in paid employment in modern society (Halsey 1995: 216).

Yet the present context has been changing, as management and performance mentality pervades academic work, with the "old orthodoxy" of [Virginia Woolf's] church, local politics and the military ... largely ... replaced by a new orthodoxy of local politics, university administration and management. But it is still an orthodoxy and it is still male' (Evans 1997:53 and 54). This new 'masculine hierarchy' that has replaced the old orthodoxy has been identified as 'a less differentiated but more ideologically coherent class: that of the managers of the "new" market-led public institutions' (op cit: 55). But in what ways did the NPM develop?

Whilst there is acknowledgement that management was abroad in the public sector in the UK from the late 1970s (Hood 1995), the recommendations of the Jarratt Report of 1985 were an indicator that higher education had been specially targeted. The Report observed, for example, that a 'crucial issue [was] how a university achieves the maximum value for money consistent with its objectives', labelling Vice-Chancellors academic leaders as well as Chief Executives (Jarratt 1985: 12 and 36). In circumstances where a head of department could not be 'both a manager and an academic leader', Jarratt took the view that,

'... the head of department must possess the requisite managerial capabilities and that he [sic] should be encouraged to delegate some part of the responsibility for academic leadership to others' (Jarratt 1985: 28).

A binary is clearly in evidence in this quote, as academic leadership is contrasted with management at the head of department level. Furthermore, it is assumed that the managers will be men and that they will delegate. This group or cadre of male managers is, on this count, to be encouraged to constrain, if not control, the autonomy of academics, a clear endorsement of managers' right to manage. But what forms did this management take?

Hood has identified several elements of the NPM that have become apparent across public sectors generally. These are disaggregation, greater 'hands-on' management, emphasis on 'discipline and parsimony' in use of resources, increasing measurement of performance and use of 'pre-set output measures' (Hood, 1995: 95-97), as well as surveillance. This was not confined to Britain, and was a 'movement' that spread worldwide, even if to varying degrees, being prevalent in places such as New Zealand, Australia, the UK and Sweden, with countries such as Switzerland and Germany lagging behind (Hood 1995, and Pollit and Bouckaert 2000); and it offered a toolbox of techniques that could be used according to circumstance and choice (Schedler and Proeller 2002). The development of the NPM led Clarke and Newman (1997) to talk of a growing managerial colonisation in Britain, initially associated with the new right of Thatcher, and Reagan in North America, and with policies designed to role back the frontiers of the state and institute regimes of fiscal austerity. It fairly soon became clear that this was linked to the neo-liberal turn and the influence of the likes of Friedman and Hayek, along with their fellow travellers of the Mont-Pelerin society. As Harvey explains, neo-liberalism,

... is in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices ... There has everywhere been an emphatic turn towards neoliberalism in political-economic practices and thinking since the 1970s ... Neoliberalism has, in short, become hegemonic as a mode of discourse (Harvey 2005: 2-3).

Subsequent 'New Labour' governments have, it can be argued, overseen the entrenchment of neo-liberal tendencies along with managerialism, even if there are some differences in approach and emphasis. But the significance of neo-liberalism as a dominant discourse (Harvey 2005) is that it legitimises managerial change in the public sector. In this sense managerialism is not simply a set of

neutral management techniques or a toolbox, but the ‘organisational glue’ of neo-liberalism itself (Clarke (2004), the means to operationalise an ideologically-driven agenda of change that depoliticises the underlying purpose to embed the individualism, competition, risk, and resulting inequality that has characterised the liberal mindset. Management has thus been used as the means by which policy has been implemented throughout public sectors. Higher education has not been immune, one of the major questions being how to manage academics who are professionals.

Recent changes associated with the introduction of the NPM into public services have raised questions about the degree to which professional and managerial discourses interact. In taking responsible autonomy as indicative of managerial oversight and ultimate control, Dent (1993) has sensed a reconfiguration of professional autonomy. This has obtained for professionals in both health and academia (Dent and Barry 2004). Reasons for this go beyond the local specifics of individual professions or occupations in particular countries, however, and are related to wider social, political and economic shifts worldwide. In the present context, neo-liberal notions of uncertainty, risk and isolated individuals move centre stage (Beck and Beck Gernsheim 2002). At the organisational level, surveillance and audit are deployed and overseen by managers in order to ensure individual accountability, as faith or trust in professionals to profess is called into question. The boundaries between managers and professionals have accordingly become blurred such that,

‘... the professional has no escape from being managed nor, indeed, from managing others ... [t]he exclusivity, protection and autonomy which professions such as medicine, academia and law once enjoyed is now replaced by a culture of performativity: the belief in the veracity of apparently objective systems of accountability and measurement’ (Dent and Whitehead 2002: 1-2).

This does not mean that practising professionals will surrender professional identification easily, largely because the term connotes a ‘relationship to privileged meanings of masculinity ... and management’ (Whitehead 2003: 97). But on this count the new professionals seem destined to emerge into a world bounded by a performativity¹ that values the very things associated with management and its gendered meanings (Kerfoot 2002), reflecting a discourse of rationality, competition and objectivity proclaimed as evidence and deployed to control behaviour and bring academics to account.

1 The notion of performativity is also to be found in the work of Butler, linked with ‘belonging’, whereby gender is ‘performed ... enacted, and as constituted in inter-subjective dynamics’ that help to construct meaning (Kerfoot 2002: 84).

From a modernist perspective, of course, it might be thought that pressure on professionals in universities to conform and identify themselves with the new managerial regimes was a project unlikely to succeed since it is incompatible with notions of collegiality and professionalism, in which the core self of the academic is embedded, even if these are imaginaries (Gaonkar 2002). From other perspectives, however, there is criticism of imaginaries such as ‘collegiality’, with O’Leary and Mitchell (1990:59) pointing to the ‘invisible colleges’ or old boy networks of the seventeenth century, and Hearn (2001: 76, 75) referring to a ‘white middle-class male collegiality’ prevailing in universities from ‘the nineteenth century and earlier’. Even where the idea of collegiality finds favour, as in Ehn’s (2001) notion of collegial professionalism that describes respectful co-working and generosity, it is contrasted with academic professionalism seen as characterising ruthless individualism and instrumentality, the latter appearing more closely aligned with the masculinist rationalities of the NPM. Furthermore, where identity is conceptualised not as a core self but as multiple, perhaps fractured, or even fragmented (Bradley 1996), the prospects are even less clear, with the issue more to do with the shifting patterns of social, as well as organisational, life where some academics choose to follow a managerial path. Performative discourses may, in short, be attractive to those who would be managers.

It is argued in this paper that this focus on the processes of performance and enactment is extremely important in gender terms. Literature on management change invariably conceptualises change as occurring through stages or phases, which are seen as caught or frozen in time, presented as snapshots that are deemed to show change. But this static representation elides the messy and fraught character of change, which occurs *through* time, is *non-linear* and is essentially *unrepresentable* and *unpredictable* (Tsoukas and Chia 2002). Change and performance occur in real time and their meanings are constructed and re-constructed accordingly. The possibility for influencing, (re)negotiating and shaping direction are thus ever present for the participants.

But this is not all, since the notion of management itself has gendered connotations, as Clarke and Newman observed back in 1993,

‘Historically ... management has been archetypically masculine, associated with both behaviour and predispositions which resembles loosely packaged testosterone’ (Clarke and Newman 1993: 431).

Gender and the New Public Management

The idea that masculinist discourses have entered the academy with the NPM has been confirmed by a number of academic commentators, including Prichard and

Willmott (1997) who focused their attention on senior post-holders. Others, by contrast, have examined the experiences of those in lower and middle level organisational positions, pointing to harsh methods of implementing the reforms as objectionable to those involved; they have also highlighted ways in which women and men academics, as well as administrators, found ways of accommodating, resisting and negotiating order (Barry et al 2001), even if women were more disadvantaged (Berg et al 20003).

In considering how the new management approaches had impacted specifically on women working in academe, Thomas and Davies, from a 'Foucauldian feminist perspective', examined the ways in which the NPM reforms had 'influenced individual women academics' day-to-day experiences of the gendered academy in Britain (Thomas and Davies 2002: 372-373 and 276; see also Berg, Barry and Chandler 2003); they also analysed different responses. They found that the 'new performance cultures' had intensified work, favouring 'the young and ambitious, without families or domestic responsibilities'. They also found that new 'masculinist' discourses had accompanied the managerial reforms, reinforcing Acker's (1990: 389) notion of gendered organisational substructures. These included 'masculine discourses of competitiveness, instrumentality and individuality, which conflict[ed] with feminine discourses of empathy, supportiveness and nurturing' (op cit: 390). In addition, they reported some women academics accommodating and, contrary to Goode and Bagilhole's (1998) research, suffering 'anxiety and criticism' as a result. This was particularly the case for women in a traditional, rather than modern, university they studied where fewer women were to be found. Others drew on "'cultural scripts of femininity" ... to critically reflect on and critique the highly masculinist subject positions offered' (Thomas and Davies 2002: 391). Their conclusions thus pointed to the masculinist nature of the NPM and its intensification of performativity, as well as to the variable responses of women academics. The notion of resistance, from the post-structuralist perspective adopted by Thomas and Davies, focuses on micro-political processes, examining the practices of everyday life (de Certeau 1984). From this perspective it is possible to use the categories of the discourse itself against the status quo (Spivak 1988).

It is in this sense that a more recent strand of academic work has been drawing attention to the messy, negotiated and unfinished issues of contestation and struggle (Mouffe 1999), whilst conceptualising such processes as located within social, political and economic structures of disadvantage, sustained through time. In respect of gender, sources of resistance have been identified in women's movements operating in the public sector, and specifically in academe (Barry et al 2007a, Barry et al 2007b, Barry et al 2006, Leathwood and Read 2009: 177). Women's movements comprise various strands of feminism, including liberal, Marxist, radical, revolutionary, post-structuralist and postmodernist. These can

be conceptualised as a 'broad church', with necessarily broad aims, their internal debates and divisions indicative of their dynamism (de Lauretis 1990).

A number of authors, whilst not using theories of social movements, have used the categories of feminism. Deem and Ozga, for example, have focused their gaze on femocrats, women who describe themselves as feminist or are 'strongly committed to equal opportunities', and use organisations to further their aims (Deem and Ozga 2000: 153-154). In a similar vein, Meyerson and Scully have considered the impact that feminist orientations can have on academics, Their 'tempered radicals' struggle with the tensions inherent in holding beliefs and values at odds with those of their organisations. They indicate that 'this struggle may be invisible but it is by no means rare', and can lead to an isolated and lonely existence; they cite their own positions within a university business school 'in which we work reproduc[ing] certain inequalities systematically, if unintentionally' (Meyerson and Scully 1995: 586, 594-595). This focus on women, rather than women and men in gendered interaction, has helped to advance understanding of women's position within academe, even if it has focused on feminism as a unified category, elides the possibility that there may be at least some supportive men, and highlights the parts played by the individual rather than the collective. However, a way of widening the focus of attention to address these points is to evoke social movement theories and consider the activities of women's movements.

If managerialism, with its instrumental orientation and shifting alliances is the organisational glue of neo-liberalism, then collective values, orientations and affiliations are the glue of women's movements (Barry et al 2007a and b). The North American 'political process' approach to social movements stresses the importance of observable processes and examines the activities and aims of social movement organisations and the political entrepreneurs who lead them. Tilly (1995) is one of the main proponents of this approach, which considers repertoires of contention and cycles of protest. This way of conceptualising social movements such as the civil rights and women's movements has much currency in the United States, and has been deployed to chart the progress of women's movements from first and second wave to present day organisational membership (Taylor et al 2004). The European approach, by contrast, has more to do with subterranean networks and accordingly the invisible processes of those working within organisations who challenge the status quo at the symbolic level and render domination visible and, thereby, negotiable (Melucci 1997). This latter approach provides insights into the subtleties of change processes, and how those working with others of like mind may exercise agency. In short, it provides the theoretical resources with which to give meaning to Weber's distinction between the *instrumentalism* of managerialism, whose advocates shift allegiance according to self-interest and circumstance, and the *value-orientation* of women's movement sup-

porters whose concerns both within academe and outside in civil society link them together. Indeed, if anything, it shows the arbitrary nature of boundaries for organisations, which are conceptualised as if they were not part of the very civil society within which they, and their members, are located. It is certainly the case that women have and continue to network, more or less informally, to keep each other at the forefront of changes in academe, aware of forthcoming conferences and job opportunities. Networks such as EQ-UNI, the European Network on Gender Equality in Higher Education e-mail list run from Helsinki, and the UK based WHEN, the Women in Higher Education Network, are good examples, with these lists open to like-minded men academics. Leathwood and Read also refer to the London based 'Feminist Salon' run by women academics 'to talk informally about academic ideas away from the competitive arena of formal conferences and seminars' (Leathwood and Read 2009: 178).

Examples of overt collective opposition to the NPM involving confrontation are likely to be hard to find if academic commentators who have warned of the growth of the McUniversity (Parker and Jary 1995) and the managerial, masculinist and performative colonisation of university life are right, since this will affect acceptable modes of discourse. Indeed the growth of the new public management in a neo-liberal context of individualised risk and uncertainty includes, as we have seen, 'masculine discourses of competitiveness, instrumentality and individuality' that conflict 'with feminine discourses of empathy, supportiveness and nurturing' and benefit 'the young and ambitious, without families or domestic responsibilities' (Thomas and Davies 2002: 372-373 and 390). Yet, whilst room for manoeuvre appears constrained, an example did appear at one modern British university where women, aided by some supportive men, engaged their senior male managers in a struggle over issues of safety and security in car parks and corridors at night (Barry et al 2007a: 115). The managers failed to understand their concerns and prioritised other spending projects. The dispute went on for some time and was emotionally costly to the participants, but their solidarity worked for the women's group, which comprised academics, administrators, old and young, who were from different disciplines and ethnic groupings. From Melucci's perspective, this would count as a symbolic social movement victory for values and orientations over instrumentality, which saw the status quo challenged and ultimately renegotiated.

Concluding Thoughts

This paper has considered gender and academe in Britain, and explored ways in which the NPM has affected the working lives of women and men academics. It has been argued that whilst women entered higher education in the second half

of the twentieth century in greater numbers than hitherto, the academy was already an institution characterised by white, male, middle class collegiality and old boy networks. In the recent period, higher education has seen the growth of the NPM, which has acted as the organisational glue of neo-liberalism and been used to introduce an ideologically driven agenda of change, through the deployment of private sector managerial techniques and mindsets with the purpose of embedding individualism, competition, risk and hierarchy. In this, the NPM has drawn on masculinist discourses that have favoured instrumental rationalities. It has been argued that whilst resistance from femocrats and tempered radicals has been in evidence, their responses have been largely individualised.

In drawing on social movement theory, in order to conceptualise women's movements as embodying the dynamic and diverse elements and varying strands of feminism, it has been contended that resistance can take collective as well as individual forms. Seen from this perspective, possibilities can exist for challenging the precarious dominance of instrumental masculinities of self-interest, with values, orientations and affiliations.

If the NPM has promoted the growth of performative work regimes and the individualising impulse of neo-liberalism to implement regimes of work intensification and surveillance, their use to challenge the prevailing discourse remains open. In short, individuals may use the categories of performativity to recover a space for themselves, whilst networking can provide succour and support, even if collective opposition is constrained. In this respect, imaginaries such as collegiality, by virtue of their very abstraction, remain a potentially powerful symbolic resource for women's movements to call on in an academic context in ways that moderate the masculinist managerialism of the NPM.

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Science Between Organization and Profession: Opportunities for Neutralizing Gender? – Reflections on Research Assessment

Hildegard Matthies & Sandra Matthäus

1 Introduction

In this paper we will focus on the question of how conditions for gender ascriptions and the subsequent social relevance of gender in science are changing in light of research assessments as part of a general process of restructuring science. Specifically, we will aim our attention at what has been stated as the decreasing significance of the profession and, in this connection, the rising influence of the organizational logic of action – a development that has been tagged the “organizational turn” (e.g. Gläser/Lange 2007; Klatezki/Tacke 2005; Oevermann 2005; Schimank 2005, Musselin 2006).

Although viewed critically by many scientists, paradoxically, this shift could prove to be beneficial in terms of gender equality. Gender studies has provided evidence that performance assessments of scientists are given on a particularistic gendered basis mainly when merit and position are negotiated through informal procedures. In this way, the scientific shift toward increasingly bureaucratic organizational standards could lead to a lessened impact of “the background effects of the gender frame on behavior” (Ridgeway 2009: 145). Accordingly, the question posed here is whether this change in the scientific system is accompanied by an institutional modernization, in the sense that those principles that inhibit the effect of the gender frame tend to have a stronger impact, thus supporting the neutralization of the social relevance of gender.

We will explore this question by analyzing the example of the assessment of research institutions. On the one hand, the assessment procedures themselves can be viewed as an indicator of a structural shift in science, since the autonomy of scientific self-monitoring is increasingly restricted in favor of external actors controlling science on behalf of principals, i.e., government authorities. On the other hand, these assessment procedures are shaped by the expertise and the judgment of scientists. Thus, in examining the extent to which the institutional framework of science is changing, it is crucial to consider the norms that scientific peers refer to during these assessment procedures: Does their focus still lie

on typical norms and principles of the academic profession, or is there a bureaucratic organizational logic increasingly affecting the judgment formation?

In order to answer this question, we will first recapitulate the relevant characteristics of what has been established by previous analyses as the shift between “profession” and “organization” as different modes of co-ordination of action (2). With the help of crucial findings from gender studies, we will next demonstrate the extent to which different organizing principles and logics of action in science can affect gendering processes (3). Thereafter, we will present the results of our empirical analysis of the relevance of the “organizational turn” in research assessment (4), in order to then consider the effects of these results on the impact of the structural category gender (5).

2 Change in academia

Traditionally, science in Germany has been considered to be based on the requirements of the academic profession, meaning that its corporate bodies, i.e., universities or non-university research institutions, should be constituted in accordance with the functional requirements of the scientific community. Hence, they ideally embody a mere “organizational basis” (Meier/Schimank 2009) for the professional case-related work of scientists in research and teaching¹, which cannot be standardized and whose quality is tied to a set of specific cultural values. Such an “ethos of science” (Merton 1985 [1942]: 88) embodied through an intrinsic motivation is considered to guarantee that neither financial nor other personal interests dominate the behavior of scientists. Solely expert colleagues verify through peer review that the results of this professional work meet the standards of the scientific community. It is for this reason that professional organizations, like those in science, largely lack a system of bureaucratic rules and checks. Instead, the administration of this type of institution focuses on the essential administrative tasks and is fully attuned to the requirements of its professional members. Scientists, especially those holding a chair, are largely autonomous as they conduct professional activities within the formal organization to which they belong. In other words, due to their exclusive competence over the central tasks of the organization, their work cannot be controlled. Therefore, they occupy a central position within the organization, a position that is closely tied to their merit-based status within the scientific community. The principles of the academic profession – according to which scientists are generally equal since the

1 It is mainly Parsons/Platt (1973) and Oevermann (2005) who conceptualize research, besides teaching, as a professional activity, since, as in other activities characterized as professional, researchers intervene to solve their clients’ crises, which in this case is all of future society.

hierarchy is based on knowledge and expertise and not formally established – are therefore typically a decisive factor in the internal order of scientific institutions. Consequently, these institutions can be characterized by a high degree of decentralization and a weak hierarchy, since the top management is hardly able to form a coherent and organization-wide binding strategy due to its limited managerial authority (cf. Matthies et al. 2001; Schimank 2005; Klatetzki/Tacke 2005; Parsons/Platt 1973).

As a result of reforms in science policy, which mainly took effect in the 1990s in the course of New Public Management, influence of the academic profession has been diagnosed as losing significance in connection with the coordination of scientific activity. By contrast, organizational principles typical for corporations, such as efficiency and control, are said to have gained importance (cf. Schimank 2005; Gläser/Lange 2007; Braun 2005; Stock/Wernet 2005; Musselin 2006).

This “organizational turn” is indicated by the involvement of non-scientific external stakeholders in decision-making bodies, such as advisory boards, boards of trustees, and other councils, as well as by the permeation of the organizational logic into scientific decision processes. For instance, the recently introduced new salary law for professors in Germany constitutes scientific institutions as professors’ employers,² with negotiation power and the authority to voice performance demands toward them (cf. Musselin 2007: 180). Economic incentives tied to this process – typical for the compensation of lacking intrinsic motivation of non-professional organization members rather than for professionals – could undermine scientists’ professional vocation (cf. Klatetzki/Tacke 2005: 13; Schimank 2005: 145) since the focus is no longer on the person as a whole, but merely on their performance in a specific role (cf. Oevermann 2005: 30).

An additional impulse toward bureaucratic organizing principles in science is expected from measures that lead toward an increasingly output-oriented management, such as managing by objectives (cf. Stock 2006; Gläser 2003: 70f., Musselin 2006: 68). In this way, scientific institutions are expected to meet certain performance requirements and are forced to negotiate with governmental agencies providing basic funding. Furthermore, this output-orientation encourages organizational hierarchy based on formal positions and roles, since organization-wide strategies and programs for the attainment of objectives need to be put in place and their results monitored and controlled. Such assessments, among other things, are carried out through assessment procedures that refer to standardizable criteria. In this respect, some authors worry that those assessments run contrary to the academic profession and that a system of bureaucratic control that considera-

2 Hitherto in Germany the government operated as professors’ employers.

bly restricts the autonomy of the professional organization members might be established (cf. Stock 2006; Oevermann 2005: 46f.; Stichweh 1997: 99).

Thus, evaluations of scientific institutions can be considered both an expression as well as a driver of the shift from academic professional principles toward bureaucratic organizational principles of co-ordination within science. However, as Stock (2006: 75f.) points out in the case of target agreements, assessments in science are frequently based on peer reviews, which enable the profession's members to mold evaluation results at a pivotal point. Consequently, despite their given formal criteria, these assessment procedures do not per se stand for an organizational logic of action. Essential for this attribution is also how those scientists who work as assessment reviewers approach these procedures. Hence, peers' assessment practices decidedly determine whether assessments in science can be identified as part of an organizational logic of action. For this reason, we will analyze which orientations and attitudes scientists act upon as reviewers in these assessment procedures. Beforehand though, we will demonstrate which effects of the "organizational turn" on gendering processes in science can be assumed.

3 Organization, profession, and gender

From the perspective of gender equality policy, at least some of the developments related to the "organizational turn" could be desirable. This is especially true for those measures that are aimed at the formalization of performance requirements and assessments, as well as, possibly, related systematic human resource development at scientific institutions (cf. Roloff 2002; Matthies 2005). This is because science as a field of work – despite its claim to be universal and task-oriented – is especially susceptible to binary gender categorizations, since it has such a low degree of formalization of procedures and decision-making processes (for a summary see Matthies/Zimmermann 2009). This leaves much room for individual interpretations and decisions based on subliminal perceptions as well as tacit knowledge (Polanyi 1985), which makes it more likely that gendered categorizations in interpersonal interactions gain material relevance and typically lead to the disadvantage of women.

Gender studies have demonstrated that this type of categorization is mostly connected to stereotypical assumptions about the particular gender in question and that the category "feminine" is usually "associated with character traits and modes of behavior which are assumed to run counter to professional requirements" (Heintz/Merz/Schumacher 2007: 264). In addition, certain professions are associated with gendered attributions and thus are considered "feminine" or

“masculine.” Even the universal model of a good scientist, commonly deemed to be gender neutral (cf. Mittelstraß 2006; Oevermann 2005), with its attributes of inner vocation, endurance, discipline, commitment, and frustration tolerance is intertwined with androcentric images (Matthies 2001; Beaufays/Krais 2005). Whereas, women are thought of as being less intrinsically motivated, less passionately involved with the scientific cause, less willing to suffer, and less available, with the consequence that women’s ability to meet the requirements of scientific work is viewed more skeptically. Though such categorizations are largely made “unconsciously” because they have been internalized and are inscribed into our conscience as objectified reality (Berger/Luckmann 1996), this by no means reduces their significance.

However, it is known that communication is hardly possible without identifying the gender of one’s counterpart – which is why Cecilia Ridgeway labels gender a “cultural super-schema” (2001). Nevertheless, there is empirical evidence according to which the social relevance of gender varies depending on context (Ridgeway 2009). In this connection, B. Heintz and E. Nadai (1998) speak of a deinstitutionalization of gender, in the course of which gender classification becomes an “option” that *can* be used for further social categorization, but not *necessarily* so (ibid.: 80). Under specific circumstances, gendered categorizations can even be forgotten, and their differentiating effect diminished (cf. Heintz/Merz/Schumacher 2007).

The impact of the “gender frame” (Ridgeway 2009), understood as being culturally formed assumptions about a binary order of gender, thus varies according to its cultural context and organizational rules and practices. For the case of science, recent studies have provided specific evidence for this hypothesis (see Heintz/Merz/Schumacher 2007; Leemann 2002). According to these studies, the following three criteria are decisive in determining how relevant gender is made in interactions: (1) the standardization of epistemic practices, (2) the mutual dependence of scientists in their work, and (3) the separability of private and career matters. Particularly relevant to the question posed here is the finding that when epistemic practices are highly formalized, the gendered categorization of individuals carries less significance and thus provides greater opportunities “to separate the performance from the person” (Heintz/Merz/Schumacher 2007: 268 f.; cf. Leemann 2002). This analysis mirrors findings from organizational sociology, according to which gendered categorizations are less potent the higher an organization’s degree of formalization is (cf. Cook/Waters 1998; Bielby 2000; Reskin/McBrier 2000; Allmendinger/Podsiedlowski 2001; Liff/Ward 2001; Matthies et al. 2001; Tomaskovic-Devey/Skaggs 2001; Costas 2003). From this we can derive that the social relevance of gender loses significance in those epistemic and organizational contexts in which requirements for scientific activity

are defined to a higher degree and framed in measurable performance standards. Since it is precisely this kind of formalization and standardization that has been stated as being essential to the “organizational turn,” it stands to reason that social differentiation based on gender is becoming less likely in the course of the ascription of merit and the subsequent recruiting processes. In other words, what may appear threatening about the “organizational turn” from the viewpoint of professional politics could, given the findings from gender studies, paradoxically enable science to approximate its meritocratic ideals more closely.

Thus, in what follows, we will focus on the question: To what extent can the stated structural shift be verified. For this, we will turn to the actual practice of the assessment in science and reconstruct which normative orientations guide scientific peers while they are assessing.

4 Empirical findings

Our subjects of study are research assessments of institutions of the Leibniz Association (WGL)³ carried out on quasi-governmental behalf, which involve peer review at a decisive point during the assessment process and which can have momentous consequences for said institutions. These evaluations usually result in recommendations as to whether funding should continue at current levels or be cut. Specifically, our empirical material consists of semi-structured interviews with reviewers who participated in such evaluations.⁴ For this article, we specifically analyzed interviews with reviewers who were either involved with the evaluation of Institute Epsilon, which primarily engages in fundamental research, or the more application-oriented Institute Delta. Both institutes are affiliated with the mathematical-natural scientific-technical section of the WGL.

The interviews primarily provide information about the ways in which reviewers formed a judgment about the institute in question. They are thus not generalizable for all scientists; nevertheless, they can help explore how the modes of the coordination of action “organization” and “profession” are referred

3 WGL is an umbrella organization of over 80 non-university research institutes financed by German federal and state governments. It was founded in 1997 as a successor to “Wissenschaftsgemeinschaft Blaue Liste.” Its institutions are regularly assessed on behalf of their investors every seven years. This assessment is organized by the Senate of the Leibniz Association, to which external scientists are appointed and which was installed specifically for assessment purposes.

4 The interviews were conducted in the course of the research project “Formation of Judgement within Peer Review. International Case Studies on Evaluation of Scientific Institutions” at the Social Science Research Center Berlin (WZB).

to during assessment processes in science, and point to clues about how the “organizational turn” might affect scientists’ guiding orientations.

Following our argument in chapter two, the analysis of the interview material will distinguish two levels of interaction with the co-ordination principles “organization” and “profession”: First, the *mode* of judgment, and second, the *object* of judgment. The mode of judgment describes *in which way* a specific judgment is formed. Thereby, we will state an orientation toward a professional logic when reviewers view themselves as colleagues providing advice and/or when they generate judgment criteria from the specific case at hand. By contrast, if their self-understanding is that of a hierarchically superior inspector, considering general standards rather than the concrete circumstances of the case, we will diagnose an orientation toward a more organizational logic. The level of *objects* of evaluations handles the question of *what* the evaluation is focused on: Is it the scientific performance of the institute that is primarily examined, or rather how scientific activity is organized?

Setting aside a systematic review of all the objects of judgment that were brought up during the interviews, we can nevertheless observe that organizational aspects of scientific practice prominently featured the discussion of the peers. At the same time, concerning the mode of judgment, the professional logic clearly dominated. Although this is not particularly surprising, since the interviewed reviewers were all academic professionals, it is interesting to note the circumstances under which these reviewers refer to organizational assessment standards when justifying their judgments, thereby causing professional and organizational logics to overlap, or even the former to be superseded by the latter. We will further elaborate on this below.

Giving advice from colleague to colleague can be identified as one typical approach to assessment in our cases. The majority of reviewers analyzed here viewed the members of the scientific institutions as their peers and approached the assessment from a case-specific perspective. However, the opposite type of reviewer can also be found – the “controller,” who follows organizational standards and who objects that the institute did not implement the previous assessment’s recommendations in every detail, therefore demanding that assessment results become more binding, for example by tying their implementation to funding:

“It happened, not sure if it’s in there [in the evaluation report, A/N], that I said, ‘However, one should handle the research expenditures a little more economically,’ meaning to put certain funding under reserve, well, this is difficult, well, these are things which aren’t that easy and as I’ve said, it doesn’t matter, we can demand this, feasible or not, well, said, ‘Listen, guys, you’ll only get the money for those top-projects of yours,’ well, these highly innovative, as we chemists put it, parboiling experiments, ‘if you come up with a strategy [specific details, A/N]’ because else

this is money down the drain. So these kinds of things, as I've said, they can definitely happen, I mean, to put this plainly, to put funding under reserve in order to put the squeeze on them." (Institute Delta, reviewer Kunst, 880-887)

This orientation toward an organizational logic to legitimate allocation of funding came up in other interviews as well. In this context, the crucial question is: "Is taxpayers' money being invested well?" – as reviewer Grimmer put it in the case of Institute Epsilon (1061f.). Aside from the fact that it is thus no longer individual scientific performance but the institute as a collective actor that is the focus, performance is also increasingly judged here in terms of the principles of New Public Management, which include competitive standards like focus and strategic positioning. Likewise, the scientific output of the institution to be assessed is another important judgment criterion. Interestingly enough, interviewees often qualify the suitability of such output-oriented indicators in the same breath, arguing for a case-specific assessment of the institution's output. The following statement exemplifies this:

"...although, if you ask me now what the most important thing or one important aspect is for me, then I'd say it's the number of publications on the one hand, but actually much more important is how are they written, in what journals are they. So to state it really clearly, citation index is one measure, and whatever other factors there were, bibliometric factors, I know all of them, or not all, but most of them. I consider those meaningful only to a certain extent, and I treat them as such, but it's good, for all intents and purposes, to know a couple of them, I've already named them, number of publications. Much more important to me is to look into some of the publications and to see how they are actually written, what does it say, and then maybe I'll look into-, into-, into literature where this publication is then cited, if it's a bit older, in order to see, well what did a different group make of it, I mean, of the content." (Institute Epsilon, reviewer Yakup, 264-276)

The tendency, clearly articulated here, to attach more importance to the contents of publications than to quantitative indicators is a continuous judgment pattern. However, in line with this assessment practice, assessment criteria or standards are rarely revealed; instead, in these interviews, something else appears as an indicator for good science, strongly resembling Polanyi's corpus of tacit knowledge (1985). The following quote from an interview with one reviewer with a business background stands as an example:

"So three criteria –, when I analyze, it's my feeling and-, for communication one could also say, is this wonderful, is this true, of vogue? You can feel that with people, if they-, what they say is all nonsense." (Institut Delta, reviewer Sabert, 438-441)

Feeling is not only strongly significant for the assessment of scientific outputs and the assessed institutions as a whole, but even more so for the judgment of their general performance *capability*. An indicator for this is most notably the intrinsically motivated scientist also identified based on feeling, as the following quote shows:

“Well it simply made a good impression, even if it wasn’t really my field, but you get a sense for it, if those people know their stuff and if they’re also having fun. You can see that right away, they enjoy doing science and what they’re working on right now, you’ll notice that a bit as well.” (Institute Epsilon, Grimmer, 309-318)

Additionally, this quote demonstrates that there is a tendency to refer to a scientist’s habitus precisely where – according to findings from gender studies – more organizational standards would be needed in order to avoid the gendering of professionalization processes, because it is particularly this image that, as shown in chapter three, enables gendered hierarchization. Hence, measures for a systematic human resource development and career coaching considered as one step toward gender equality and associated with the “organizational turn” are not of relevance as an assessment issue to the reviewers in the cases analyzed here.

In light of this, it does not seem particularly surprising that questions of gender equality – although they should be part of every assessment according to the procedure guidelines – are merely treated as a side note. In only one of the two assessment cases did the topic even seem to be part of the process – apparently only because a female reviewer put it on the agenda. For this reviewer, questions of gender equality are an indispensable part of assessing a scientific institution, as the following quote demonstrates:

“Well, I mean of course one thing is that I always look at the structure, and as almost everywhere else it was also the case there [at Institute Epsilon, A/N] that none of the permanent personnel was a woman. These are the points that I typically bring up.” (Institute Epsilon, reviewer Ehlert, 68-72)

In reviewer Ehlert’s view, women evidently do not get as many opportunities in scientific selection processes as their male colleagues, which is why she considers the percentage of women at an institution an indicator of the quality of human resource management. Consequently, she would like to call on the institute assessed here to assume its responsibility for the low percentage of women:

“And I think it is even written somewhere now [she probably means the evaluation report, A/N] that of course female junior scientists should be supported and so on. I mean, there are so many programs that you actually just have to keep your eyes open and this-, this I regard the director’s responsibility, to look at what advancement op-

portunities there are and then I'd pass on this information directly, if I had an excellent female doctoral student, or I'd send them out. I mean, of course I treat, I treat all doctoral students well, but this type of program specifically exists for women and you can just look them up." (Institut Epsilon, reviewer Ehlert, 554-563)

As long as women are underrepresented, reviewer Ehlert would like to see some personnel selection procedures complemented by organizational measures in order to prevent women from being disadvantaged in hiring decisions. Along this line, she calls for generalized criteria and standards in at least this one area, and in doing so partially draws on the organizational mode of action. In contrast, Mr. Grimmer, a different reviewer, believes gender segregation in science is not an issue that would be affected by bureaucratic arrangements. To him, consequently, the low percentage of women at Institute Epsilon is not a circumstance for which the institute's management could be blamed, but which is instead due to external factors:

"...a colleague, she was a lady who was as usual speaking about women's advancement, but there was nothing he [the Director of the Institute, A/N] could say on the issue, they advertise (positions), and if none apply because of the specificity of the discipline, this is not on the part of the Group Leaders or Director, because in our area of [name of field, AN]-study, there are actually relatively many women, so in the researcher's level, but, when you look at the group leader level, you probably know this yourself, they're thinning out for various reasons and if such a group leader position is advertised, it can be that the number of people for such a special area like here, which is such a specialized institute, you already know those couple of people who can even do this job, you know them anyway, so you can't directly accuse him, but this is probably, it is like this in almost all institutions." (Institut Epsilon, reviewer Grimmer, 358-369)

This last example not only illustrates how marginally gender equality is treated in the assessment of scientific institutions – in the case described here, the topic was only part of the procedure because a woman raised the subject; it also reveals that peers, when judging the performance of a scientific institution, will abandon a professional logic for more generalized organizational standards only when it comes to very specific aspects.

A concluding look on our empirical data regarding the question raised in this article yields that the peers who were interviewed in their role as reviewers did partially draw on the organizational mode of coordination, as their arguments regarding the question of the legitimation of governmental science subsidies show. Nevertheless, an organizational logic turns out to be overall less dominant during the assessment process than one might expect from the general debate, although it is invoked at times by procedure guidelines, at least in the sense that

an assessment of the institution as a whole is required (cf. WGL 2007). Much more predominant though is the reference to a professional logic, especially with respect to the mode of judgment and to the performance capability of individual (groups of) scientists or the entire institution.

5 Conclusion

In this article we examined the question if and to what degree the conditions for gendered ascriptions and, in this connection, for the social relevance of gender have changed in the course of a structural shift in science. For this, we first demonstrated that an organizational logic of coordination is gaining importance in science while professional principles are becoming less significant. Following findings from gender studies, this shift might have a neutralizing effect on particularistic modes of ascription of merit, status, and position. To which extent this hypothesis can be verified was tested using the orientation of scientific peers who participated as reviewers in assessments of scientific institutions of the WGL. The model of analysis developed here distinguishes organizational and professional principles of coordination on two levels: the mode of judgment and the selection of objects of judgment. It can be established as a result that the peers in the assessment procedures examined here primarily refer to an academic-professional logic when forming their judgments, especially about the performance (capability) of individuals and the entire institution – hence in the precise area where more standardized assessment criteria would be desirable, from a gender-equality perspective, since it is not the actual performance but the person who is the object of assessment here. Instead, the ideal image of the intrinsically motivated (male) scientist remains the standard in such assessment procedures.

Consequently, our findings do not point to changed *conditions* for gender ascriptions due to the structural changes in science. Despite these transformations, plenty of space still exists for stereotypical gender images, and, in this connection, the contradiction between what is viewed as the feminine and what is considered a good scientist remains. For this reason, one question begs to be asked: Might it be precisely this space that is the space science needs to be creative and original? And if this were the case, which other possibilities – besides formalization and standardization, which at the moment only serve the implementation of mechanisms connected to New Public Management – could one think of to prevent gendering processes without impairing science's autonomy? Or, do our findings perhaps indicate once again that access and advancement of women into professional fields only comes at the price of “de-professionalization” (Wetterer 1992)?

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Careers and the Reorganisation of University and Research Systems in France and Germany

Ilse Costas

1 Introduction

In the last decade in France, in Germany and elsewhere we have seen a restructuring of the university and research system under the neoliberal credo of marketization, competitiveness, autonomy from state tutelage and differentiation. In countless reports of commissions and government councils as well as in public discourse the competitiveness “en capitalism cognitif” (Report of the French Senate on reason of the challenge of low ranking of French universities, Bourdin 2008: 9) is discussed with highest priority. Until recently, only a few analysts have questioned the strategy of new public management to improve the efficiency of knowledge production.¹

Yet, now in face of the bankruptcy of a market driven and dominated economy and society another perspective should be taken: What makes higher education and knowledge so valuable is “...because they define what has over centuries made us human, not because they can enhance our global competitiveness”, quotation of the new President of Harvard University Drew Gilpin Faust in her inaugural address October 2007 (Faust 2007). Perhaps also in the policy of higher education and research some rethinking of the neoliberal restructuring processes will take place. In public discourse a swift away from blind confidence in the rationality of the allocation by the market can be observed since the outbreak of the global financial crisis. The faith in criteria like economic efficiency for the success of science, young scholars as “raw material” to be used, “the ideology of measurability”, the rhetoric of products and services to be produced by the university and conditions of global competitiveness, as declared José Barroso, President of the European Commission, in a speech at the Ludwig-Maximilians-Universität, is no longer accepted.²

1 «Il n’y a absolument aucune preuve – factuelle ou logique-que ce déplacement constitue une amélioration de quelque manière que ce soit, alors que les preuves du contraire sont assez nombreuses.» (Lorenz 2007: 50).

2 It is remarkable, that the discourse of the healing capacities of capitalism and market forces in higher education and research is attacked in this article of the otherwise conservative Süddeutsche Zeitung. Viel Elite, wenig Geist. Wie sich die Münchner Universität ‚vorne positioniert‘. Süddeutsche Zeitung, February 9, 2009, No. 32, p. 11. See also Unternehmen Universität. In der Bil-

This rather sceptical introduction does not imply that some structural change is not necessary, regarding the steering of research fields, research institutions and universities and considering gender issues, in particular. This paper looks at the ways the institutional set-up and the current changes of the French academic system influence gender relations in comparison to the developments in Germany. It seems to be advantageous analysing these two countries, because France will restructure its research system and strengthen the research capacities at its universities according to the German model. Concerning gender relations it has to be explored, if the German pattern of lower female rates and higher gendered vertical and horizontal segregation in academia can be anticipated for France, too.

The structure of the article is as follows: First the problems and conditions for the low performance of the French university and research system are analysed. Next gender-specific distributions in research institutions and in universities in both countries are compared. Then the restructuring processes of the research and university system in France are presented. Probable impacts on gender relations are discussed. How in different models of the university profession, being part of different institutional settings, processes of doing gender are shaped, is investigated in part 5. In the concluding discussion in a more general perspective hypotheses about the effects of new public management in higher education and research on gender relations are drawn taking into account the variety of structures and gender regimes in the compared societies.

2 Problems and developments under critique in the French university and research system

Although there are a lot of doubts that the different international rankings of universities are based on valid and reliable criteria and indicators (Bourdin 2008: 36ff.), nevertheless the performance lists like the Shanghai ranking or Times Higher Education ranking determine the opinion and assessment of society as a whole and the government, the research and university organizations, the science elite, in particular. We can observe here, how power of the discourse is materialized in social practices and in collective as well as individual opinions. In Foucauldian theoretical terms the productivity of power is realized in the production of knowledge and of truth regimes (Foucault 1969/1994 and 1975/1994). The acting subjects and the institutions concerned are restructured according to the new truths of measures and criteria of the neoliberal market discourse. In France this has been all the more the case as one of the priorities of the last and the pre-

sent government is to strengthen the international competitiveness of the French economy by intensifying research and development.

Which are the problems and conditions for the low performance of the French university and research system according to the applied criteria?

The attractiveness of a university or research career for the best postgraduates has decreased during the last decades. The number of postgraduates preparing for a PhD is insufficient. Instead of aiming at a career in academia these young academics prefer a highly prestigious professional career acquired by an academic education at one of the *Grandes Ecoles*. There, after difficult entrance examinations, a small number of students are trained for several hundreds of top positions in corporations, politics, and the administration. A work-place nearly for sure and high salaries is guaranteed, whereas at universities working conditions and remunerations are considered to be unsatisfactory (Hoffmann 2008: 3-4). In comparison to top-ranked U.S. universities and to the elitist professional *Grandes Ecoles* in France there is an unbalanced funding of French universities in relation to the student/staff ratio (Bourdin 2008: 54 ff.). This is all the more relevant as it is supposed to be the explaining variable with the highest influence on the position in the ranking lists (Bourdin 2008: 90; Schwartz 2008: 133-134).

The so-called massification of the French university system brought a higher increase of teaching staff and permanent positions in new universities and institutions of higher education with a strong professional orientation in the provinces and regions than at the traditional universities (Gall/Soulié 2007: 178 f.). This professional orientation demanded more intensive efforts in teaching, tutoring, pedagogy and administration resulting in diminishing research activities. Professional experts from outside academia have been hired for teaching with the aim to satisfy the demanded qualities of the market.

Because of the chronic underendowed French universities also in the sector of the established institutions, the massification followed the crisis of academic ethos (Gall/Soulié 2007: 192). This resulted in an increasing fragmentation of university staff. The unity of being 'enseignant(e)-chercheur(se)' (= university lecturer and researcher) at the same time became illusionary for more and more academics.

In France up to now research is concentrated in separate state institutions like the Centre Nationale de la Recherche Scientifique (CNRS) or the Institut Nationale Scientifique de la Recherche Médicale (INSERM). They have their own facilities and laboratories or run and finance them together with universities. In these cases the locations belong often to the universities. This cooperation is organized in so-called mixed units of university teachers and researchers, i.e. university faculty and researchers from the research institutions. Due to a high teaching load doing research has become nearly incompatible for many of the 'enseignant(e)s-chercheur(se)s' (Hoffmann 2008: 4; Schwartz 2008: 30 ff.). The researchers from the CNRS on the other hand are mostly teaching special

courses only which are related to their research interests. Teaching ordinary courses of the curriculum, crowded by many students, would be attractive only with more remuneration. Management of these 'unités mixtes de recherche' is described as very difficult and often inefficient, especially with the double leadership from the university and the CNRS or with a leadership only by the university, because the mixed units were dependent on two different administrations and time managements.³ Concentrating research funding and research activity mainly in institutions outside of the university system, ranking of universities will be low, if the main criteria are research activities indicated by publications or the amount of external funding.

The CNRS with a budget of 3.08 billion € in 2007 is the largest research institution in Europe with more than 26.000 permanent employees, among them more than 11.000 researchers with a female percentage of 31.5 %. Engineers, technicians and administrators amount to more than 14.000 persons.⁴ It has been organized in eight departments: Mathematics, physics, technologies of information and communication, engineering, chemistry, sciences of the universe, life sciences and humanities. Until recently the CNRS set itself to a certain extent research priorities and decided about the distribution of its resources. In its institutes and laboratories fundamental research as well as applied research is done.⁵

The low competitive profile of the French research and university system is indicated by or attributed to the following factors:

- a) purported low mobility of and between researchers and faculty staff,
- b) low significance of external markets for promotions,
- c) high percentage of researchers and university teachers in permanent positions as civil servants and
- d) lack of independent evaluation of both teaching and research.

According to geographic and institutional figures of mobility localism and recruiting in the same institutions in high percentages is reported after the post-doctoral period of faculty and research staff (Schwartz 2008: 56-71). Referring to 2007 86 % of the recruited professors came from positions of maîtres de conférences – a permanent position at universities next to a professorship. Among these 64 % were local candidates (Schwartz 2008: 60). 7 % had come from research positions in France or abroad (Schwartz 2008: 60). At this paragraph in the Schwartz-report the obligatory mobility to become a professor in Germany is mentioned (Schwartz 2008: 61). In comparison to Germany the low number of

3 www.larecherche.fr/content/recherche/article?id=23408, p. 3, accessed December 2, 2008.

4 www.larecherche.fr/content/recherche/article?id=23408, p. 6, accessed December 2, 2008.

5 Mission pour la place des femmes au CNRS, www.cnrs.fr/mpdf/spip.php?article201, accessed January 1, 2009.

candidates for a professorship is remarkable, but this may also be a consequence of a strong pre-selection by the competitive procedure to be admissible as a candidate (Schwarz 2008: 61).

The institutional mobility between the universities and the research institutions, although having been intended for the mixed research groups, has remained low from both sides (Schwartz 2008: 70). Researchers of the CNRS do not want to be charged with too time-consuming teaching while temporary researchers from the universities are not so welcomed in the research units. Their research engagement demands a high degree of specialization, continuity of efforts and work which is thwarted by high teaching and administrative burdens in the university (Schwartz 2008: 70).

Yet, long-term observations of staff mobility of special institutes contradict these claims. Christophe Charle, an internationally well-known historian of science, showed for the Institut d'Histoire Moderne et Contemporaine, belonging to the CNRS, that between 1979 and 1999 nearly 44 % (seven from 16) researchers left the CNRS to become university professors (Charle 2006: 40-43). Explanations of mobility or staying in the research institute cannot be broken down to simplistic banalities of competitiveness and immobility. For some researchers, entering in higher age into research positions in the CNRS institute, this position was the aim of their career ambition. It is not by chance that some female researchers with families, in particular, belong to this category. Some researchers were dedicated to long-term collective projects, like scientific editions or comprehensive fundamental projects. On the other hand the advantages of educating their own graduates and doctoral students at universities – one of the motivations and factors of attractiveness working at a university – are more and more in danger, because of the orientation of graduates to high remunerated professional education and the demolishing attractiveness of doctoral studies. And until recently, at universities research budgets were rare.

It seems that institutional and geographical mobility has not such a high priority in the career of French scientists.

This reflects the low significance of external markets in the French university and research system. Due to the centralized higher education system since Napoleon I with institutionally weakened universities, these had no resources to compete for faculty staff (Musselin 2005: 280). Professors and other university employees are state employees whose salaries and its stepwise increase are fixed by legal schedules and not by market processes. Musselin characterizes the system as remunération “indifférenciée” (Musselin 2005: 280).

A low scientific productivity and performance indicated by publications, a low number of Nobel prize winners and a relatively low international ranking is also attributed to the high percentage especially of researchers in permanent

positions as civil servants (Sarkozy 2009: 2, 4; Schwartz 2008; Bourdin 2008: 59f.; Böлке 2007: 9, 74).

Since 1984 in the CNRS researchers and other employees became state employees with a permanent position. This reform aimed at increasing the attractiveness to do research in an institution outside the university system (Picard 1990). Contractual work with low remuneration and insecure conditions of work had become dysfunctional to high research performance. (Further down we will come back to work conditions at the CNRS and its impact on gender distribution.) Since then research is developed, organized, and realized by the state financed institutions like the CNRS with its permanent research, technical and administrative staff. Thus, until recently the French research system was not based on competition between single researchers or groups of researchers applying for financial resources to a funding agency to finance time-limited research projects, in which staff can be hired for a short period of time only.

New public management of the universities and research institutions wants to impose a set of controlling, auditing and evaluating procedures on knowledge production to compensate the fact of its imperfect commodity form (Lorenz 2006; Charle 2006). The existing evaluation procedures in French research institutions, f. e. the CNRS, is based on an annual self report of staff. An evaluation of all activities is accomplished by the Comité National d'Evaluation de la Recherche, a committee elected on a national scale by the researchers of the CNRS and other research institutions. This form of evaluation has been declared as insufficient.

At universities teaching and administrative activities have not been considered at all in the evaluations, accomplished by the Comité National de l'Evaluation, which is elected by faculty staff of all universities. The existing practices of evaluation were ridiculed by President Sarkozy in a speech given to the French academic elite, blaming the CNRS for self-evaluation and faculty staff for no evaluation procedures at all (Sarkozy 2009: 2f.). In the same speech academia on the whole was attacked for low or no scientific productivity at all (Sarkozy 2009: 3-4, 6).⁶

Having discussed the problems under critique in the French university and research system it should be noted that gender equality is not a subject of this public discourse. This reflects the whole debate and political process of the new public management implementation in higher education not only in France, but in general (Enders 2001, Enders/Fulton 2002, Teichler 2005, Charle/Soulié 2007,

6 The arguments against this attack, see Audier, Henri-Edouard: Alain Perez des Echos, "muse" de Sarkozy, in: www.larecherche.fr/spip.php?page=imprimer@id_article=2491, accessed February 15, 2009.

Janson/Schomburg/Teichler 2007), leaving aside very few exceptions⁷. Processes of doing gender and new public management strategies in gendered institutions like universities are not reflected.

Aiming at revealing processes of doing gender in different models of research and university education in transition to new public management we will turn now to discuss gender relations in academia in France and Germany.

3 Gender relations in research and university careers

3.1 Gender distribution in research institutions in France and Germany

The CNRS had a pioneering role in the feminization of French research with more than 30 % in 1939, when in French universities only 6 % of faculty staff were women (Picard 2004: 70). From the beginning of the Caisse Nationale des Sciences in 1930, the predecessor of the CNRS, women researchers were supported and promoted by Jean Perrin, Nobel Prize winner in physics in 1926 and initiator of the Caisse Nationale des Sciences.⁸

When in 1936 Léon Blum, a graduate of the Ecole Normale Supérieure and member of the networks of left-wing scientists, became president of a government formed by the Front populaire, he opened the government and administration for women. The new established secretariat for research was part of the ministry of education and was given to the Nobel Prize winner Irène Joliot-Curie, a daughter of Marie Curie. Jean Perrin followed her in this office. The financial support for research, given by the Caisse Nationale des Sciences, were scholarships for researchers working mainly in university laboratories.⁹

The main reasons for the relatively high percentage of female researchers at the Caisse Nationale des Sciences (later established as the CNRS) are

- a) prominent female examples like highly awarded leading researchers, e. g. Marie Curie and her daughter and several other women (Sonnet 2004),
- b) the progressive political atmosphere of promoting women, but
- c) also a low attractiveness to male researchers doing research with scholarships in comparison to permanent positions at universities.

7 One of these exceptions is Sigrid Metz-Göckels's paper "Theoretische Skizzen zur Hochschule in der Wissensgesellschaft" in Kehm (2008: 207-229).

8 Jean Perrin supported Marie Curie in winning the Nobel Prize in physics in 1926 (Sonnet 2004: 40). See for the beginnings of the CNRS Picard (1990: 34 ff.).

9 Some important laboratories and institutes were financed privately, one example is the Institut de Biologie physico-chimique financed by Edmond de Rothschild (Picard 1990: 34).

Female percentages were 30 % in 1938/39 (Picard 2004: 70; Sonnet 2004: 45, tableau 1), 30 % in 1946 and 35 % in 1960 (Sonnet 2004: 45-49). In the whole state funded sector of research, including universities and private firms, the female rate in the 1960s did amount to 20 % only (Sonnet 2004, p. 49). From 1960 on to the present there has been a drop from 35 to 30 % in the female rate at the CNRS. This is not a coincidence.

From 1959 onwards there have been decisive improvements of the employment and career conditions for staff doing research funded by the CNRS. Researchers were transformed into civil servants with the possibility of being promoted into permanent positions. These changes had been strongly demanded by the researchers' unions (Picard 1990: 178 ff.). Since 1984 they got retirement payments. The career positions were at the beginning the 'attaché de recherche' for at least two years with the possibility to renew the contract three times, then 'chargé de recherche' and 'maître de recherche', ending with 'directeur de recherche' (Picard 1990: 305, footnote 67). Thus, a career as a researcher in a laboratory or in a research group of the CNRS or in a mixed unity of the CNRS and the university was adapted to career standards as civil servants at the universities. As it was mentioned above, alongside with the massification of the universities and deteriorating conditions for research after 1968, these improving conditions of a career in a research institute increased the attractiveness for male scientists. Nevertheless with a reduced rate of around 30 % women in research, it is still higher than at the research institutions in Germany since the last 30 years.

Looking at the vertical distribution of gender, women are not that much underrepresented as they are in Germany. They represent 26 % of directors of research, class 2, 13.4 % of directors of research, class 1, and 12.7 % of directors of research with excellence.¹⁰ The overall figure for directors of research in the public sector is 22 % (2003).¹¹

Until 1970 the female research directors could be found in all the disciplines of natural sciences, in mathematics, but not in the humanities like history, sociology or geography (Sonnet 2004: 50).

10 Mission for the place of women at the CNRS, in: www.cnrs.fr/mpdf/spip.php?article201, accessed January 5, 2009.

11 Rapport sur l'égalité professionnelle entre les femmes et les hommes dans l'enseignement supérieur et la recherche remis à Monsieur François Goulard, ministre délégué à l'enseignement supérieur et à la recherche par le comité pour l'égalité professionnelle entre les femmes et les hommes dans l'enseignement supérieur et la recherche mis en place le 26 janvier 2006, [p. 5].

Today horizontal segregation of researchers still exists with female rates of
16.9 % in mathematics,
17.8 % in physics,
19.9 % in sciences of information and communication,
19.2 % in engineering,
26.1 % in sciences of space,
31.0 % in chemistry,
39.3 % in life sciences,
43.6 % in humanities and social sciences.¹²

Here again in comparison to Germany the representation of women is considerably higher in sciences, mathematics and engineering.

In Germany research in public institutions takes place in the prestigious research institutions outside the universities, like the Max-Planck-Institutes, the Helmholtz-Forschungszentren or the Fraunhofer-Gesellschaft and to an overwhelming part in the universities. Research at universities takes place mostly in the form of projects for a limited amount of time and with a fixed budget, supplied by external funding agencies like the Deutsche Forschungsgemeinschaft, other foundations or ministries of the central state.

The female rate of researchers in state funded research institutions outside the universities with 26.4 % (2006) is the lowest in Europe¹³. This figure includes postgraduates like doctoral candidates, thus at least in comparison to the French data the female rates would be even lower. Only between 1 % and 6 % of the highest leading positions in these research institutions are held by women.¹⁴ Often these very prestigious positions are held by university professors of the highest category.

Concerning the time-limited research projects at the universities, in 2006 19.2 % of all projects were granted to applications of female faculty in permanent positions, i.e. mainly professors. The financial amount of these projects refers to 13.6 % of the budget of the Deutsche Forschungsgemeinschaft in this category.¹⁵ If we take as an indicator for horizontal gendered segregation the percentages of resources by discipline applied for by women with

12 Mission for the place of women at the CNRS, in: www.cnrs.fr/mpdf/spip.php?article201, accessed January 5, 2009. See also Crance (2006)

13 www.cews.org/statistik/forschungseinrichtungen.php?aid=53&cid=7, p.1, accessed January 13, 2009; www.cews.org/statistik/forschungseinrichtungen.php?aid=55&cid=7, p.1, accessed February 9, 2009.

14 www.cews.org/statistik/forschungseinrichtungen.php?aid=53&cid=7, p.1, accessed January 13, 2009.

15 www.cews.org/statistik/gremien-drittmittel.php?aid=59&cid=19, p.2, accessed February 9, 2009.

9.0 % in sciences,
 7.2 % in engineering,
 18.1 % in life sciences and
 21.5 % in humanities,

a much smaller presence of women on the whole and in sciences, in particular, is evident for the German case¹⁶.

Overall higher participation rates of women in research in France as well as higher female percentages in leading positions are due to a research career in the CNRS, independent of holding a professorship at the universities. The lower horizontal segregation may be a consequence of the uninterrupted presence of female researchers in the male ascribed disciplines since the beginning of the Caisse Nationale des Sciences and the CNRS.¹⁷

3.2 *Gender distribution in universities in France and Germany*

Although the gender distribution in university positions in France and Germany is difficult to compare because of the different structure of faculty in both countries the female percentages of professorships and of non-professorial positions are higher in France than in Germany. In 2007 17.9 % of all professors of the universities and of the Grandes Ecoles were women, while in Germany the percentage is 16.2 % for all universities and colleges like Fachhochschulen. Only 10 % of the highest category of professors are women¹⁸.

The female rate of non-professorial employees in teaching and research, mostly non permanent and including part time personal, is 37.1 %.

At French universities the non-professorial staff in teaching and research, the maîtres de conférences, employed in permanent positions, have a rate of 40.4 % women¹⁹. Professors and maîtres de conférences amount to 64 % (2007) of the teaching staff at French universities. Staff on a short-term contract has a rather small share of 7.5 %, whereas highschool teachers at university service have a

16 www.cews.org/statistik/gremien-drittmittel.php?aid=59&cid=19, p.1, accessed February 9, 2009. Life sciences include medicine, biology, agricultural sciences and forestry, and veterinary medicine.

17 Since the end of the 19th century until 1930 in Germany the female rates of students, doctoral qualifications and habilitations have been relatively higher in sciences and mathematics than at present (Costas/Roß/Suchi 2000).

18 www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/DE/Content/Statistik, accessed February 9, 2009.

19 Ministère de l'enseignement supérieur et de la recherche : Note d'information 07.46, décembre, p. 3.

share of 14.9 %²⁰. While the Grandes Ecoles like the Ecole Normale Supérieure are included in these figures, some institutions of high prestige like the Collège de France and the Ecole des Hautes Etudes en Science Sociale (EHESS) are not included²¹. That is why some data reflecting gender relations in these elitist institutions are presented next.

The EHESS is a post-graduate school and research institution with a high international profile taking 3000 students (2007). The female rate of staff is lower than at the higher education institutions discussed so far.

Among the faculty staff of the highest category there are only 15 % (2007) women. The female share of the maîtres de conférences is with 23.5 % also lower²². But the female shares especially at the highest level of directors are higher than at the German research institutions outside the universities, although a comparison is rather invalid because of the different character of the compared institutions.

Before going into a deeper analysis of the different models – in both countries – of the university profession and its institutional and market settings as well as its relation to gender, we will show how the research and university system in France shall be restructured.

4 Measures taken in the restructuring process of the research and university system and its gendered impacts in France

Conceiving knowledge more and more as a commodity, being produced and distributed under competitive market conditions, demands – according to its protagonists – a commensurable set of performance indicators and a similarity of knowledge production structures (Lorenz 2007: 35 ff.).

Focussing on restructuring the research system and bringing research back into the universities, the mixed units of research with the CNRS shall be reinforced, but with the universities as active motors. This includes improved possibilities of teaching-load reduction for faculty staff, being engaged in research²³.

20 Ministère de l'enseignement supérieur et de la recherche: Note d'information 07.46, décembre, p. 2.

21 Ministère de l'enseignement supérieur et de la recherche: Note d'information 07.46, décembre, p. 6.

22 Commission Egalité professionnelle femmes/hommes à l'Ecole des Hautes Etudes en Sciences Sociales, September 2007, tableau 2, p. 11-15.

23 Spring-Cleaning in France, in: *Nature*, vol. 453, issue no. 7192, May 8, 2008, p. 133; Pécresse, Valérie, ministre de l'enseignement supérieur et de la recherche, January 30, 2009 about the changes concerning faculty staff, in: media.enseignementsup-recherche.gouv.fr/file/2009/89/0/

The reinforcement of the universities as institutions in the market of knowledge and in the production of the academic labour force will bring autonomy to the universities and strengthen the administrative and financial position of the newly installed university presidents.

The cooperation with private companies will be intensified. The transfer of knowledge shall be improved. Financial support of research and development, especially support for the cooperation of young researchers with private companies, has to be promoted.

While increasing research activities at the universities with the respective facilities supplied by the ministry of research, the CNRS will lose its strategic importance for the direction of research.

According to the strategy of the ministry of research the complex and fragmented structure of the CNRS has been transferred into nine big national institutes: These are institutes for mathematics, physics, chemistry, engineering and technology of information, humanities and social sciences, ecology and environment, universe, nuclear physics and particle physics as well as biology²⁴. Contracts of the ministry of research with the research institutions like the CNRS and the universities will determine the strategy and direction of research. Financial resources will be distributed according to performance indicators²⁵.

The CNRS' own evaluation procedure has been replaced by the evaluation of the new state agency, the Agence d'Evaluation de la Recherche et de l'Enseignement Supérieur (AERES). In contrast to the existing CNRS' evaluation, being performed by a national committee, which has been elected by the researchers of the CNRS themselves, the Comité National d'Evaluation de la Recherche, the members of the AERES are nominated by the minister of research²⁶. Many researchers of the CNRS, organized in the movement "Sauvons la recherche", are afraid that the restructured CNRS would no longer be able to practice a research policy of its own in deciding about the distribution of financial resources among its departments, disciplines and research groups.

Yet, what will damage the unique position of the CNRS and other public research organizations in its core, is the foundation of the Agence Nationale de Recherche (ANR), provided with a considerable budget to finance research projects on a temporary basis, functioning similar to the Deutsche Forschungsgemeinschaft and the German Federal Ministries in project financing. In 2008 the budget of the Agence Nationale de Recherche with the sum of 955 million €

Courrier_EC_300109_42890.pdf. For the reform of the research system, see www.enseignementsup-recherche.gouv.fr/pid20003/politique-et-administration, accessed February 16, 2009.

24 CNRS-présentation, in: www.cnrs.fr/fr/organisme/présentation.htm, accessed May 3, 2009.

25 Ibidem.

26 www.place-publique.fr/article3065.html, accessed February 2, 2009.

amounted already to one third of the budget of CNRS²⁷. Public discourses, especially of President Sarkozy, about the restructuring of the research and university system leave no doubt, that the volume of financial resources for research projects on a temporary basis will increase, and the newly organized institutes of the CNRS will act more and more as distributors of financial resources instead of doing research with its own staff.

This change of paradigm of the structure of the research system is favoured by the demographic composition of the research staff itself: During the next five years one quarter (i.e. more than 15 thousand of the researchers and teachers-researchers) will retire²⁸. For the French government this opportunity of the “natural” reduction of permanent research staff alleviates the restructuring process of research organizations and to overcome resistance.²⁹

Impacts on Gender Relations

Although empirical data about impacts on gender relations are not yet available, because restructuring has just begun, nevertheless we will discuss some implications for gender relations resulting from the change of research conditions.

Intensified competition for research resources with precariousness of working conditions for researchers on short-term contracts (Böhlke 2007: 79) is opposite to favourable conditions for women as were realized up to now in the French research institutions. More researchers in precarious work conditions due to short term research projects, financed by the ANR, are already noticed (Bonelli 2009: 33). We know from many studies about careers in academia and from the French case, in particular, that – besides other advantageous conditions – “being hired for a permanent position in the early thirties, after a short postdoctoral period” is favourable to women scientists (Thibault 2008: 1). Concerning the work-life-balance, disposing of a secure workplace with the chance of a promotion in the research institute with an internal labour market, makes careers in academia more attractive for everybody, and for women, in particular.

27 www.cnrs.fr/fr/organisme/presentation, accessed May 3, 2009; www.wissenschaft-frankreich.de/informationen/forschung_in_frankreich/offentlichen_forschungseinrichtungen/cnrs/index.htm and www.wissenschaft-frankreich.de/informationen/forschung_in_frankreich/anr/index.htm, accessed October 10, 2009.

28 Hoffmann 2008:4. See also Contrat d'action pluriannuel CNRS-Etat 2002-2005. In: www2.cnrs.fr/sites/band/fichier/3f1d5636c99a3.htm, p. 34, accessed February 15, 2009.

29 Resistance against the new public management policy in the research and university system is organized by the above-mentioned movement “Sauvons la recherche”, (www.sauvonslarecherche.fr/). See its critical arguments and its “Petition in favour of an alternative reform of the French state higher education and research systems” in: www.sauvonslarecherche.fr/spip.php?page=imprimer&id_article=1795, accessed December 2, 2008.

For the German case it is known that doing research under conditions of project funding on a two to three years basis with restricted prolongation possibilities, favours frustrations and tensions. This system “greatly benefits from a permanent turnover of young academics who challenge their professors with new ideas” (Schimank 2001: 127). With a relatively stable number of professorial permanent positions, on which professors can apply for project funding to hire research staff, this system produces a built-in overproduction of researchers (Schimank 2001: 126f.). Thus, an oversupply on the academic labour market multiplies the insecurities and personal dependencies in an academic career. It is an open question, how gendered these effects will be in France, considering the above mentioned attractiveness of professional careers – up to now for men in particular-, which some of the prestigious Grandes Ecoles are preparing for³⁰.

Referring to the disciplines and contents of research, the influence of the logic of economic benefits and practical applications in the restructuring process of the research and higher education system in France may further reduce the resources in the disciplines of humanities and social sciences (Böhlke 2007: 79f.). The governmental research policy does not prioritize these disciplines³¹. Such an impact seems to be prevalent and is discussed in Germany today, given the distribution of large amounts of money (1.9 billion €) within the initiative of excellence³². Just these mentioned disciplines with a high percentage (> 40%) of female researchers in the CNRS³³ might loose research budgets, when economic benefits and practical applications will prevail.

Before discussing gender effects of the new public management policy on a more abstract level, different models of the university profession and their different institutionalizations are analyzed with regards to processes of doing gender.

5 Doing gender in different models of the university profession embedded in different institutional settings

Following Christine Musselin (2005) and other comparative studies (Jan-son/Schomburg/Teichler 2007, Enders 2001, Kreckel 2008), the German university profession with its incorporated unique construction of a male academic personality (Metz-Göckel 2008), by Fritz Ringer (1969) called the “Mandarin”, distin-

30 See also above part 2.

31 www.enseignementsup-recherche.gouv.fr/pid20003/politique-et-administration, accessed February 16, 2009, p. 1.

32 Richter, Sandra: Welche Geisteswissenschaften braucht Stuttgart?, in: Stuttgarter Zeitung, June 9, 2009.

33 See above part 3.

guishes itself more than their colleagues in other countries from the non-professorial faculty. Their social prestige is high. The master-disciple relation is characterized by dependency and insecurity of faculty staff in fixed-term contracts.

A relation of subordination is created by the modalities of the short-term work contract, in particular. Intense pressure to conformity and the powerful mechanisms of dependency result in the reproduction of the system, that is the acceptance of subordination with the aim to profit one day oneself from this system (Musselin 2005: 277).

There is nearly no promotion between the groups of master – disciple in the same institutions. After a long period of qualification, coupled with teaching and research positions dependent on the master, career advancement is only possible on the external market. As many researchers have found (Enders/Bornmann 2001, Enders/Mugabushaka 2005, Schimank 2001, Kreckel 2008), in this phase of the academic career discontent is at its highest, no matter what gender.

This career – model with a long period of dependency, precariousness and subordination is not attractive to women, nor are the conditions favourable to create innovative knowledge (like feminist theory and gender knowledge or any other knowledge).

Besides the structure of the career model as one of the main factors for a low participation rate of women in academia in Germany, an important dimension of exclusion and self-exclusion has been found in the social and cultural construction of gender and gender relations in German society as a whole and in academia, in particular (Beaufäys/Krais 2005). Here I am referring to the male bread-winner family pattern, the powerful discourse of a caring mother and her negative other, the career woman.

It should be mentioned that the German model of the university profession is not a product of market forces, but up to now its reproduction is supported by the market situation. Because of the high social prestige there is no shortage of male scientific labour in Germany. The supply of applicants for a professorship is high.³⁴ Thus, the probability to become a professor is relatively low with 8% of all Ph.D. holders. This stands in stark contrast to the US, where the probability amounts to 20 -25 % of all Ph.D. graduates (Janson/Schomburg/Teichler 2007: 131, 98, 102).

The new position of a junior professorship like the US assistant professor was introduced in 2002 by the German federal government. 6000 new positions were planned by the federal government. Later this was reduced to 1600, from which less than 800 have been filled. Yet, the low number of taken up positions

34 35.000-40.000 men and less than 10.000 women per year are competing for 1700 (2006) positions. (Bund-Länder-Kommission, Chancengleichheit in der Wissenschaft und Forschung, Heft 139, Tabelle 5.3.2.).

expresses rather a boycott of the mandarins than a warm welcome. 28% of the junior professors are women. Often the junior professorships do not offer the possibility of tenure track positions as they do in the US model (Janson/Schomburg/Teichler 2007).³⁵

In France the university profession³⁶ has a flat hierarchy without a master-disciple relation. The *maîtres de conférences* are not at the disposal of the professors. They have to some extent autonomy in the work organization. Both groups are civil servants in permanent positions. There are 37.000 *maîtres de conférences* (41% of faculty staff) and 20.000 professors (22% of the personnel) at French universities³⁷.

Recruitment procedures on the national and institutional level are similar for both groups. Salaries are fixed on a national scale, differences between both groups are not very high, remunerations are not regulated by the market.

Universities and their institutes have no bargaining power nor financial resources at their disposal for negotiations with professors for an increase of salary or equipment³⁸.

Since the 1980s with the so-called massification of higher education for both professors and the *maîtres de conférences* being 'enseignant(e) et chercheur(se)' (= teacher and researcher) has become an illusion.

The social prestige of a university career and of its positions has decreased, a career in academia has lost its attractiveness for young men, in particular.

Thus, it is not surprising, that in comparison to German universities with its above mentioned principles of selection and of career advancement the female rate in faculty at French universities has been higher since many years.

It is an open question to what extent the recently adopted measures of restructuring the universities and intensifying their research activities will change gender relations in faculty staff and deteriorate conditions in the research sector for women, as has been feared.

35 To enlarge the career positions for postdoctoral scholars, the German government started a funding programme focussing on sciences and engineering. Thereby, young academics lead their own research group for a two-year-period. In this case, the dependency on the professors are less intensive (Rössel/Landfester 2004).

36 See for the following Musselin 2005: 279.

37 Note d'information 07-46, tableau 1, p. 2.

38 This was a result of the reforms of Napoleon I, who dissolved the universities as independent corporations.

6 Concluding discussion: New public management and gender

What kind of hypotheses can we draw from the developments in different societies, here France and Germany, about the effects and impacts of the regime of new public management in higher education and research organizations on processes of doing gender? Which dimensions and interaction processes will be of decisive importance for the outcomes?

The new public management university, characterized as McUniversity by some scholars, has been described as “a highly masculine form of organization”, in which male constructed and ascribed values and norms like “aggressive and competitive behaviours are rewarded over cooperation” (Parker/Jary 1995: 330). These values are defined as general ones serving the rationales of efficiency, without asking for “the substantive rationality of the end” of scientific work (Parker/Jary 1995: 336). The performance indicators for scientific quality themselves are constructed according to concepts of “hegemonic masculinity” (Kuhlmann/Bourgeault 2008: 11). Tools for standardization, quantification and controlling, processes of auditing disseminate the illusion of objectivity, neutrality and universalism in the production of knowledge, which has been refuted by feminist and other critical methodology (Harding 1998, Hawkesworth 2006).

From a methodological perspective we have to take into account that in the compared countries the new public management policy meets different structures, systems and discourses of higher education and research with different processes of doing gender as well as gender relations. This results in a variety of patterns of more or less hierarchical gender relations.

Now, intensified marketization with far-reaching effects on internal decision making processes of universities and research organizations, “de-etatization” and new rules of financial distribution result in tightened performance controls in teaching and research, according to various, mostly quantitative, indicators. Overall, these criteria encompass the individual “production” outcomes like external funding and publications as well as figures of graduates being “produced” per faculty staff and period of time.

The underlying concept of research is taken from the sciences. If these performance criteria are applied to all academic disciplines, its impacts will change the importance and the character of research in the humanities with their tradition of more or less often “single researcher” projects³⁹. In these disciplines there

39 For Germany a precarious situation for small disciplines in the humanities, as far as financial and personal resources are considered, is deplored and the temper is described as a sentiment of loss of perspective (Süddeutsche Zeitung, No. 154, July 8, 2009, p. 7).

have been no traditions to evaluate the research projects and the performance of researchers by the amount of external funding.⁴⁰

As has been mentioned above, the restructuring processes in higher education and research in the European Union follow the Anglo-American model to improve its competitive positions in the global market of knowledge and commodities. However, concerning gender relations the market-oriented US universities, with their entrepreneurial-like managed departments, on average practice more gender equality in higher education and research institutions than f. e. Germany. Analyzing the effects of new public management and doing gender in a more global perspective we have to account for the ways, in which other factors like affirmative action policy, a relatively low social prestige of a university career for men as well as a career structure with a flat hierarchy and different patterns of the cultural and social construction of gender (see above chapter 5) are influential, too. In general, having intervening factors in mind, marketization may result in a continuum of different gender outcomes.

Placing the degree of gender equality in academia on the one side of the continuum and the degree of male dominance on the other side, different outcomes can be hypothesized:

Restructuring processes and measures, which permit a relatively short post-doctoral period of time before being employed in a secure position, are supposed to increase gender equality in university and research positions and vice versa.

If for a career an increase of local and institutional change is becoming indispensable in a newly introduced career structure, then, in a society with a gendered distribution of private and public work, gender hierarchical relations will deepen in academia. On the other hand, the female rate and gender equality would probably rise, when mobility patterns would not have a prohibitive character.

If personal dependencies for job contract renewals are increasing and the series of precarious jobs are augmented, as is to be worried in the French case of research restructuring, male dominance is supposed to grow in case of the planned relatively high remunerations.

Performance indicators reflecting gender equality, functioning as distribution criteria of financial and other resources, may result in a sustainable growth of women in teaching and research positions.

The composition of committees and their decisions about the employment of staff have to follow equality rules. Otherwise, especially under market conditions of surplus supply of academic labour, gendered vertical and horizontal segregation will remain or even accelerate.

⁴⁰ Taking performance criteria like productivity figures from economic rational calculus for serious, it seems to be strange and contradictory to evaluate the research output by the funding input. Thus, the efficiency measure becomes perverted.

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Reforming university, re-gendering careers. Informal barriers to women academics in Austria

Eva Flicker, Johanna Hofbauer & Birgit Sauer

1 Gendered access barriers Austrian academia

In 1897 the first woman academic graduated from an Austrian university (Gabriele Possaner, doctor of philosophy). It took until 1922 for a woman to reach professorship (Elise Richter, philology). Up to the late 1960s, fees and entrance examination made higher education mainly available for upper and middle class children. In the 1970s, significant steps were undertaken towards the opening of higher education to all members of Austrian society. Since then, student numbers increased significantly, meanwhile women make 58% of the total number of students, 55% of graduates, 42% doctorates. The share of women in academic staff, especially their representation in the higher ranks of academia, nevertheless remains limited. Among docents and associate professors (*Außerordentliche ProfessorInnen* and *AssistenzprofessorInnen*) 19% are women, only a group of 15% women hold full professorship. No woman has ever been elected/assigned as rector of an Austrian university, whereas 30% of vice rectors now are women after all, still only 15% are heads of department. In extra-university research institutes the rate of women in leading positions is even lower: 9%.

Why are women still underrepresented in Austrian universities? Which obstacles do highly qualified young women face when entering academic career paths or heading towards higher ranks of academic life? How do we need to conceive of gender relations in academia in order to understand the persistent reproduction of inequality without ignoring new opportunities for women scientists? And are the recent reforms of the Austrian university system a way to change gender inequality or, to the contrary, do they reproduce gendered careers? Approaching answers to those questions, we firstly take up the issue of university reform in Austria, providing background information on institutional and organizational changes and discussing their impact on the gendering of academic careers (2). Given the persistence of gender segregation in Austrian academia, a number of equal opportunity measures were taken on state and university level, yet with limited success. Reports on program evaluation show that structures which hamper women from full inclusion into academic institutions are reproduced as a direct or indirect consequence of recent university reforms

(3). Little knowledge exists for Austrian cases. Therefore, an explanatory concept is needed which allows for the detection of those barriers apparently evading direct intervention (at least in parts). Chapter 4 will give an outline of a theoretical framework, which might shed light on the barriers for women's careers combining a macro-, meso- and micro-level perspective. We introduce the concept of "career logics" (e.g. Gunz 1988) and argue that recent changes in the university system *re-gender* those academic career logics. Furthermore, we briefly discuss the explanatory model based on French sociologist Pierre Bourdieu's theory of academic field and social habitus which has been increasingly used in recent feminist studies on the academia (Beaufays 2003; Beaufays/Krais 2005; Engler 2001; Krais 2000; Zimmermann 1998) as well as in career research (Cor-sun/Costen 2001; Iellatchitch et al. 2003).

2 Transformation of Austrian universities since the mid nineties. Institutional contexts of university reforms

Austrian universities share several similarities with the German system of higher education. However, some important differences do exist. Like German universities, Austrian universities are characterized by a long history of state institutions: They have been funded by state money according to cameralistic principles, professors had tenured positions as public servants, and professors were – after a nomination process by university committees – nominated by the respective minister, since 1971 by the minister of science. The restructuring of the Austrian system of higher education has always been characterized – compared to the German university system – by a certain time lag.

Austria's "modernization from above" (Gottweis 1997), initiated by the social-democratic government in the 1970s, led to the opening of Austrian universities. Students from lower social strata and women were encouraged to enter the system of higher education. The non restricted open access to Austrian university without any fees – the only pre-condition was the "Matura" – was not only seen as a form of the democratization of science, but of the whole society. This attempt to democratize universities was also an opportunity structure for women. In the following years the number of students increased – also the number of female students. One structural deficit of Austrian universities stems from this time: the number of permanent professors did not increase proportionally to the student's numbers; so-called "external lecturers", hired per semester on precarious posts, filled the teaching gap.

However, democratization of the universities encompassed the transformation of the former hierarchical structure (*Ordinarienuniversität*) where decisions were mainly drawn by professors alone. The new "law on universities" (*Univer-*

sitätsgesetz) from 1973 decreased the power of (mainly male) professors and implemented co-decision procedures of all groups working and studying at universities – professors, assistants (*Mittelbau*), students and administrative staff. Now, assistants were not personally assigned to a professor, but to a faculty, which increased the autonomy of assistants, but which also democratized the recruitment process of assistants – the nomination was not only the choice of a professor but of a democratic committee. Despite of these democratic procedures, male bonding and male networks remained to be one of the main features of Austrian universities.

Another structural characteristic contributed to the conservation of a male culture and male networks at Austrian universities are the tenured positions of assistants. While in Germany, for instance, permanent positions at the level of assistants were abolished in the late 1970s, assistants at Austrian universities attained permanent positions after their promotion or habilitation – often without only poor evaluation processes. This led to a situation in the 1990s where only few positions for junior researchers were available, where the majority of permanent assistants were male and conservative – and less inclined to increase the number of female researchers or female professors. Due to this policy, the advancement of junior researchers was poor and it was rather difficult for women to enter academia: Only few university positions were available and funding for doctoral thesis was low.

Nevertheless, the democratization process of the 1970s and early 1980s was a window of opportunity to politicize the issue of gender imbalance at Austrian universities and to establish women's study courses at some universities such as Vienna and Innsbruck. The ministry established a special fund for women's study courses – an opportunity for female scientists to teach at universities.

In the late 1990s Austrian universities joined both, the EU initiatives to create a competitive European knowledge society, competitive compared to the US, and the Bologna system. The restructuring of Austrian universities aimed on the one hand at fitting into the research and university architecture of the European Union as well as of the Bologna system and on the other hand to mobilize the country's knowledge resources. Another aim was to “depoliticize” the landscape of higher education. Three laws initiated and accompanied the transformation of Austrian universities: The reform of the “Public sector employment law” (*Dienstrechtsgesetz*) from 2001, the “University act” (*Universitätsgesetz*) from 2002 (UG02), and the reform of the “University study act” (*Universitätstudien-gesetz*) in 2001. The main features and consequences of this transformation process for women's careers are presented in the following 11 points:

1. Already the “Federal Act on the Organisation of the Universities 1993” (*Universitätsorganisationsgesetz/UG 93*) initialized the transformation of Aus-

trian state universities towards managerial lead autonomous universities. With the UG02 Austrian universities became “autonomous”. They were partly shifted away from the influence of the ministry and the government. One of the major changes concerns the budget: Budget instruments might also be used as an incentive to hire female researchers and professors (Pellert 2002).

2. However, global budgets are meant to foster competition around universities’ own funds as well as between universities to acquire more state funding. To compare and evaluate scientific performance and quality, a system of evaluation was established such as the RAD, the Research Activities Documentation, and bibliometric instruments to measure and quantify scientific output, such as impact factors and numbers of articles in peer reviewed international journals. The instruments led to time-consuming processes of evaluation of departments and faculties with questionable effects. These instruments of competition and economization run the risk of under-evaluating scientific work and scientific biographies, which do not follow mainstream criteria. And they tend to reproduce the male culture in academia (Pellert 2002).

3. The idea of the internationalization of Austrian universities and the integration into a European or international space of competition. Both are resulting in the implementation of new standards in research: Austrian universities should transform into “research universities”. Teaching, thus, was sidelined. The quantity and the measurability of publications, mainly in peer-reviewed journals, and the money of research projects, acquired from third parties, became lead indicators for organizing scientific research. This focus on research might have a negative impact on women’s careers, because on the one hand peer-evaluation tends to be male biased and to strengthen male networks, and on the other hand teaching is becoming less important for prestigious positions in universities.

4. Competition between universities – in Austria but also across Europe – encourages universities to develop a unique selling position. This might restrict the description of professorship as well as the nomination of professors according to an assumed unique selling position in the mainstream. For instance, the University of Vienna has a huge potential of gender study but only small attempts are made by the rector by now to develop this as a major research focus – presumably due to the fact that gender studies are not seen as “selling”. This perspective of selling tends to recruit famous scientists, the stars of the discipline and may thus turn out as an instrument of male self-reproduction.

5. The idea of new public management also had an impact on the organization and structure of Austrian universities. Against the notion of flat hierarchies in public management literature, Austrian university were centralized: the rector as well as the deans of the faculty gained competencies and developed into monocratic institutions which have the power to draw top-down decisions without consulta-

tions of the lower organizations, as for instance the departments. This reform had the effect of a re-masculinization of Austrian universities: None of the universities has a female rector, and only a small number of deans are female. However, the gender knowledge and gender competence of major decision-makers in Austrian universities – the rectors and the deans – is presumably rather low.

6. The process of centralization in Austria has been reduced to mere consulting organizations without any power to decide on the departments' or faculties' major goals and trajectories. Moreover, the voices of women are silenced in decision-making processes because no collective organs exist any longer which would have an important say.

7. In this process of centralization, monocratization and de-democratization the already rather weakly institutionalized organizations of affirmative action were disempowered. The opportunity to intervene in decisions on a department level and in democratic committees has been abolished and no regular consultancies between deans and rectors and the "Working group for affirmative action" (*Arbeitskreis für Gleichbehandlungsfragen*) do exist.

8. The UG02 changed the right of nominating professors from the minister to the rector of the university. Still a committee, composed of peer professors, assistant professors and students has the right to make a suggestion. Also, external national and international reviewers count more in the process of nominating new professors. Internal committee members as well as external reviewers are appointed by the university's senate. These new instruments can be seen as an opportunity to crack male bondage at Austrian universities and open recruitment processes for women, because they base staff recruitment on scientific quality alone and not on gender prejudices. However, experiences until now show little gender sensibility neither of committees nor of reviewers. Moreover, the role of the "Working group for affirmative action" has been diminished in nominating processes. It has the right to consult but not to veto the decision.

9. Another important break in the transformation of Austrian universities was the reform of the "Public service law" (*Dienstrecht*) in 2001 (Flicker/Sauer 2002). This law put an end to the Austrian way of tenured positions and established a system of permanent positions only for professors and timely limited positions for pre-doc and post-docs. It is quite impossible to turn these timely limited positions into permanent positions, although it should be possible after a process of evaluation. The University of Vienna for instance, limits the time to hold a position at the university to six years. After that employees have the right to a permanent position according to Austrian labor law. The university risks a brain drain of young researchers in order to avoid employment of a group of researchers. Tenure positions are impossible in this system. The new "Collective bargaining agreement" (*Kollektivvertrag*), which came into force in May 2009 is

ambivalent with respect to tenure positions and leaves this up to the decision of the universities. Although we do not have figures, there is a greater chance for young female researchers at pre-doc level to enter universities than under old conditions, where the number of pre-doc positions was rather low. However, due to insecure career planning women might not be able to afford such a position.

10. The introduction of the Bologna system in teaching was also late in Austria. While the introduction should involve no costs, the number of seminars and lectures in the Master programs decreased while the financial resources were led into the Bachelor studies, especially in the first two semesters. The new university law, which will pass the parliament in June wants to implement the possibility to restrict the number of students in the first stage of study by hard exams and the introduction of strong preconditions for the continuation of the study. The Bologna system seems not to develop as a tool which would be able to systematically encourage female students for an academic career nor will it organize teaching in order to acknowledge teaching efforts for a scientific career. To the contrary, it seems that two “classes” of teaching staff will develop – those who teach in master programs and PhD programs, and those who teach at the Bachelor level. This might lead to the gendering of the two streams.

11. The new “Collective bargaining agreement” suggests the implementation of so-called senior lecturer position – a way to on one hand solve the problem of teaching overload and on the other to restrict the number of so-called external lecturers and to give some of them the perspective of a safe and rather permanent position. This runs again the risk of establishing second-class university professors with the risk of feminization of these positions.

3 Measures for the promotion of women in science and research in Austria

The development since the early 1990s “from a state-run to an institutionally autonomous university is a fundamental shift in the paradigms of higher education policy and consequently of equality policy as well.” (Wroblewski et al. 2004: 18) The measures for the promotion of women in science and research that took place since the 1990s have been integrated in those university reforms (UOG93, UG02, UG2009) and were implemented step by step with an attempt to impact on various levels (from micro to macro). However, the development of a comprehensive policy of equal opportunity and affirmative action was missed out. Up to now, international comparison shows that the share of academics in Austrian population, on the whole, is very low, the share of women scientists is still significantly lower – especially the share of women in technical fields.

The following typology lists four types of measures in promotion of women, operating on the macro level of gender mainstreaming and affirmative action as

well as on the level of individual promotion of women (cf. Wroblewski et al. 2004: 19 et seq.):

Programmatic Measures

EPPD-ESF Measure “Women and Science”/Gender Mainstreaming in European Union Research Programmes/White Paper for the Promotion of Women in Science/fFORTE (Women in Science and Technology, “Excellentia”)

Legal Measures and Legally Regulated Institutions

Federal Equal Treatment Act/Federal Act on the Organisation of Universities 1993/Federal Act on the Organisation of the Universities of Arts 1998/Decree for Affirmative Action Plan in the Sphere of the Federal Ministry for Education, Science and Culture/Working Group for Equal Treatment in the Federal Ministry for Education, Science and Culture/Inter-Ministerial Working Group for Gender Mainstreaming/Affirmative Action Plan on the Basis of the University’s Articles/Working Committee on Equal Treatment at the Universities

Financial and Non-Financial Promotion of Individuals

Charlotte Bühler Programme/APART Programme/Hertha Firnberg Programme/Doc-fFORTE/Gabriele Possaner Award(s)/Promotion of Women Related Publications/Mentoring Programme/Coaching Course

Networking and Accompanying Structural Measures

Coordination Offices for Women and Gender Studies/Support of Scientific Events with Women-specific Contents/Research Focus: Gender Studies, Policy-Relevant Higher Education Research/Austrian Congress for Female Scientists/Child Care Facilities at the Universities

The evaluation study of Wroblewski et al. (2007) identifies blind spots in the promotion of women as well as synergies and interdependences between those measures. One of the core problems is the lack of an efficient monitoring system (cf. Wroblewski et al. 2004: 26ff.). Data collection is quite extensive in the meanwhile, but the data are very heterogeneous and vary in terms of quality.

Regarding the above mentioned types of promotion measures, a few general conclusions can be drawn:

General and Programmatic Dimension

1. Choices of fields of study still show significant gendering: female students prefer humanities, social and economic sciences, veterinarian and human medicine.

2. Women start a doctoral programme in smaller numbers than their male colleagues.
3. Though graduating with better results the number of women gaining professorship or other top positions remains small. The incentive programme “Excellentia”, started in 2005, successfully increased both the number and the rate of new appointments of female professors. Universities increasing the numbers of female professors are able to claim financial benefit or rewards in return and deliberately appropriate those funds to the purpose they choose. First evaluations show that larger universities with more general research fields are more successfully gaining funds from “Excellentia”. The precise monitoring yet depends on the comparability of data.

Legal Frame

1. Equal treatment acts are well established but cannot be applied in practice, as there exist only few instruments for observing or influencing decision processes of the monocratic university organs.
2. Rigid schemes for scientific careers that were even tightened with UG02 seem to be a dominant cause for inferior career and employment opportunities. Under the UG02 the time period for getting access to career paths on the basis of doctorate and habilitation has been delimited to 10 years. Both preconditions, doctorate and habilitation, cannot be gained within the same working contract or university. Given family obligations or other non-work responsibilities a significant barrier to (women’s) careers results from those obstacles.
3. The most recent reform of the “University Act” 2009 (*Universitätsrechtsänderungsgesetz* 2009) stipulates that all university councils and boards need to include 40% of women members, which means a considerable challenge for universities with previously low rates of women in higher positions (engineering, natural science)
4. New managerialist university governance impedes rather than encourages innovatory research, i.e. research beyond mainstream. Restructured and target oriented research units focus on declared research focus areas. This selective concentration severely affects gender studies as well as other innovative topics. At the same time, the Austrian science ministry lost steering capacities in the area of the university autonomy.

Financial and Non-Financial Promotion of Individuals

1. Financial programmes promote women with temporary employment contracts at university rather than those from external research institutions. Some promotion programmes offer women university connection for the

period of the years funded. After that period of time, as funding terminated, those highly qualified women find themselves excluded again.

- Non-financial promotion programmes intend to provide for individual coaching and mentoring. As most mentors are not remunerated for their engagement, however, they do not offer the time or focus needed by their mentees.

Academic and Organisation Culture – male networks

1. Organisational structures show implicit influence on different careers of men and women. Decision making organs or groups are male dominated or embedded in male-dominated networks.
2. On the one hand self organisation and self motivation is necessary to build up individual expertise. On the other hand rigid peer review systems turn out to apply gendered criteria of assessment, being over-selective with regard to research contributions of women (Höppel 2002: 116).
3. Academic and non-academic research operate as practically two separate fields with only few transitions or transfer possibilities. In non-academic research institutes the necessity for recruiting funds tends to widen the research topics per person, so that it is much more difficult for individuals to develop a field of expertise and expert status. The chance for women to move on to a university job therefore is much smaller than for male colleagues.

“Bottleneck”, “Glass ceiling effect” and “the leaky pipeline” have been widely documented and accounted through empirical data for several years or even decades now. Political awareness of the problem of discrimination and the existence of career barriers for women in academia seems to be fairly high. Legal, financial and structural measures are implemented in Austria on micro-, meso- and macro-levels, yet showing limited effect and sustainability. Women are higher qualified than ever before, but they do not proceed on academic career ladders. The assumption seems obvious, that new logics of career patterns have emerged that still exclude women. What are these mechanisms of self reproduction of the male dominated academia and practices of women’s exclusion from the academia that are not yet identified? How can they still be continued without being disturbed by gender mainstreaming and women’s promotion?

4 Theoretical Framework – Future research program

Even when starting off as excellent graduates, participants in PhD-programs and members of research and teaching staff women tend to disappear on their way

further up academic ranks (e.g. Beaufays/Krais 2005 on the “leaky pipeline” in German Max Planck Institutes). Given that conditions for inclusion of women in academia ought to be more favorable in times of formalization of scientific output the question rises, what makes women’s academic careers still very fragile? Why do women rather than men fail to get access to more stable and secure employment contracts, even though measurements of quality assurance in the sciences were supposed to improve career conditions (e.g. Wroblewski et al. 2007)?

Reflexivity within science and science policy brought about acknowledgement of persistent structures of discrimination and self-exclusion, constantly reproduced within the very field of science. Equal opportunity measures were launched in order to re-balance career chances, yet they appear not far-reaching enough. Men as scientists still seem to enjoy more trust by superiors regarding their fitness with the requirements of modern academia whereas women rather experience deprivation from the support and recognition that their male peers enjoy (Beaufays/Krais 2005). As a consequence, many of them tend to deliberately give up on their career paths and leave their potential unrealized. How to conceive of those structures and processes of discrimination and self-exclusion that operate not only beyond the surface of discourses of modernization but also evade concrete affirmative action? Given that access to and promotion within the scientific field does not depend on qualification level or talent alone, we need to understand the dynamics of inclusion and exclusion that unfolds in a more subtle and indirect fashion. This is an important future research program for the Austrian case.

Pierre Bourdieu’s (e.g. 1990; 1998) sociology of practice offers a comprehensive theoretical framework for this purpose. Recent empirical research in the field of feminist sociology of science makes impressive use of Bourdieu’s concepts, in particular relating to his concepts of scientific field and social habitus. In order to translate those general concepts into the context of career research, the notion of “career logic” seems helpful. It was initially coined in an organization behavior context, defined as a system of criteria underlying decisions of recruitment and promotion that are apt to securing the persistence of an organization. Application of those criteria produces intended and emergent structures of careers, i.e. diverse career trajectories open to agents with different features. Considering universities as organizations, academic career logics evolve as the organization’s response to changing institutional settings (Gunz 1988). The question then would be: Which new academic career logics have been emerging from recent university reforms?

Pierre Bourdieu’s concept of social field and habitus adds much to our understanding of new career logics that might emerge as consequences of the new managerial university. As shown by recent contributions to feminist science,

Bourdieu's concepts are particularly apt to account for the reproduction of gendered inequality in academia.

Within the scientific field players take "predictable sides due to the more general structuring of the social space" or game (Martin 2003: 23). Actually, fields develop a dynamic coherence as more or less overt struggles over the standards of recognition and status production in the field evolve. With regard to career practices as a means of struggling for recognition, Bourdieu would nevertheless stress "social fate". Striving in the fields is coordinated neither by ideology nor by conscious strategy but by the habitus, "a cultural unconscious, a matrix of dispositions that serves to affectively organize perceptions" (Bourdieu 1969: 182; cf also Martin 2003: 23). Thus, habitus is linked to the field position, leading to career trajectories according to objective career opportunities. In other words, according to habitus career strategies become oriented towards "realist", feasible goals without necessarily being conscious or intentional.

The correspondence between objective position and subjective striving evolves as formal and informal role-demands are placed upon the individual within the very field (*ibid.*). Accordingly, dispositions of gendered habitus emerge from social practice in a gendered and gendering social space. Academic career logic in terms of Bourdieu's field and habitus theory, thus, allows for explanation of exclusion and self-exclusion at the same time. Exclusion of women is a consequence of the gendered competition which favors male peers in a very fundamental way. The fact that those are more likely to dispose of the strategic resources and appropriate habitus to adjust to new academic career logics however is to be explained by the dynamics of a gendered field: agents disposing over the stakes of the game are more likely to play the game to their advantage, thereby defining the rules of the game in favorable ways. In other words, informal barriers to women emerge as a result of lacking accordance of habitus and career logics, as they are deprived of the means to playing the "career game" according to current rules. This approach also accounts for self-exclusion as women are deprived of symbolic power, i.e. „the power to shape alternatives and contain opportunities, to win and shape consent, so that the granting of legitimacy to the dominant classes [or gender: the authors] appears not only spontaneous but natural" (Hall 1984, cited by Epstein 1992: 237f). Understanding occupational habitus as a system of dispositions towards career (cf. Iellatchitch/Mayrhofer/Meyer 2003 for the notion of "career field" and "career habitus"), a key issue for understanding the process of re-gendering careers in the course of university reforms thus is the social reproduction of gendered scientific habitus and field.

To be sure, reproduction is no self-containing process but rather involves tensions and contradictions as the struggles in the scientific field unfold (e.g.

Hofbauer 2004). Those tensions and contradictions can also be observed between various levels of social space, e.g. between

- macro-level of university structure and equal opportunity policy, yet showing limited scope as e.g. budget restrictions intervene;
- meso-level of organizational practice with mission statements on the one hand and gendered career logics emerging from actual recruitment and promotion practice on the other hand;
- micro-level practices of individuals who cannot make full use of equal opportunity measures as involvement in other social fields cause obligations or life-styles incompatible with life-long and full devotion to science.

5 Summary

In the paper we described the changes of the Austrian academic landscape in recent years (1), starting off with an outline of significant institutional changes (2). Stating the underrepresentation of women in Austrian academia notwithstanding modernization and institutional opening, a subsequent step of argument took us on to equal opportunity measures and their limited efficacy (3). To answer the question why equal opportunity measures have been of limited success and which impacts the re-organization of the academic landscape might have on gendered career paths in Austria we introduced Bourdieu's approach of academic field. We conceive academia as a field of power which produces a "career logic" that disadvantages women in general, moreover those groups of women academics who, for various reasons, do not (manage to) adapt to the demands of the new academic career logic. Career logic in Bourdieu's sense puts relations of power and dominance into the foreground.

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Grasping the poisoned chalice: Higher education and managerial identities in Sweden

Elisabeth Berg

Introduction

The Swedish Government has, through legislation, set up rules for how Universities should be managed with the rules for academics related to their professional autonomy and concerns for research. To this end, a new budget process was gradually introduced across the state administrative sector in Sweden during the 1980s (von Otter 1995), with the Swedish Government introducing a new economic system of governance for its Universities in 1993 (SOU 2000:82) through what have been called new public management (NPM) reforms (Henning and Holmberg, 2003). Budget requests have to contain analyses of the results, environment and resources. By comparing goals with achievements, and by analysing the changes in the socio-economic environment, the agency can itself suggest necessary reforms, including a reevaluation of goals. This new management system focuses on performance rather than achievement and processes, a development that has led to increasing administration (ibid).

The new management reforms have led in a direction that has caused more bureaucracy and administrative work, with more students for each lecturer, less hours for each course and more students per course (Berg, Barry and Chandler 2003). Changes connected with cut-backs have affected academics in different ways and also their academic identities, related to management and administrative work (Thomas and Davies, 2002). It has become a part of academic life to be involved in, for example, quality assurance, monitored by the National Agency for Higher Education in Sweden, something that has resulted in a more bureaucratic system of control to monitor results, creating thereby increased paperwork for all concerned (Henkel, 2000).

These changes have also had an impact for the identity of female academics, and how they have identified different strategies in order to navigate their path to a management identity (Barry, Berg and Chandler, 2006). The NPM reforms have brought with them more administration through bureaucratic procedures and accordingly more academics in middle management positions to monitor them. For some female academic these positions have become a career option, although it has

proved a double-edged sword involving more work (Barry, Berg and Chandler 2003). Administration and management can be an attractive choice for some academics, especially when teaching has sometimes become seen as more of a burden than something enjoyable (Ehn and Löfgren, 2004, Henkel, 2000).

There are more women than men, 57 percent employed as academics in Swedish Universities, mostly working as teachers, middle managers and administrators (lecturer positions for which a doctoral degree is not required), and when Universities are cutting back staff, administrators and lecturers become vulnerable compared to those with a doctoral degree (SCB 2007). This is a group of academics who were recruited when Universities were building up education in the 1970's, 1980's and 1990's, and when different University reforms led to changes where many occupations such as teaching, nursing, physiotherapy, social work, and health occupational therapy came to require entrants to have University degrees. These, but also other academics in different disciplines with no doctoral degree were recruited as teachers, administrators and researchers, something that was accepted as a way to maintain staffing levels at a time when Universities were growing. In the current evaluation process, however, the Government has put more and more pressure on Universities to have staff with doctoral degrees, leading to increasing pressure on lecturers to undertake doctoral studies (Swedish National Agency for Higher education 2008: 62).

These changes, ongoing since the 1990's, have not been fixed; instead they have been a part of a process of ceaseless change in University organizations. As Tsoukas and Chia (2002: 580) explain: "*Organisations are both sites of continuously changing human actions [...] and sets of institutionalised categories*". These changes are therefore not static, nor do they have a fixed position or end point; rather they are a complex fluid phenomenon embedded in everyday organizational life (op cit).

This paper has two aims: first, to explore understandings that women academics have of their work situation in academe in relation to New Public Management; and second, to consider in what way they shape their identities in academe in relation to teaching, research, management and managerial change. This paper is structured as follows: first, a consideration of the NPM in higher education and the changes that have occurred involving management, teaching and research, and a discussion about central concepts such as identity, administration and management; second, a discussion about methodology including research design, methods and a discussion about identification, collectively and individually; third, a presentation of seven women's experiences of being recruited to universities as teachers and ending up more as managers and administrators; finally, some concluding thoughts are offered.

New Public Management in Higher Education in Sweden

NPM reform, a widespread phenomenon in Europe associated with developments in politics, finance and fashion (Pollitt and Bouckaert, 2004), reached Sweden during late 1980s and early 1990s (Pollitt and Bouckaert, 2004). One reason for this relatively late implementation derived from a debate about efficiency and rationality between different political groups in Sweden in the 1980's who argued about the direction the public sector should take. In the end it was the economists who emerged triumphant; with public management reform during the 1990's and 2000's being implemented (*ibid*). This public management reform has been called a 'managerial reform movement' for change (Hood et al 1999: 189-190, Bislev, 1998), where managerial techniques and strategies from the private sector, including performance management, efficiency, budgetary constraint, and the importance of management and accountability are deemed important. The NPM has been labelled Neo-Taylorism, because its focal point is management, advocating a top-down approach where efficiency, budgets and goals are important (Pollitt and Bouckaert 2004).

Nearly 45 percent of all staff work with research and education in Swedish Universities, with 55 percent as administrative staff, librarians and technical support. Senior lecturers (PhD qualified) and lecturers comprise 27 percent each of the education and research staff, alongside 17-18 percent Professors, 7 percent research assistants and project leaders, 4 percent temporary teachers and 4 percent Assistant Professors (Swedish National Agency for Higher education 2008: 62). Of all staff working with research and education 43 percent are without a doctoral degree, of whom more are women than men (*ibid*).

There are today more women working at the Universities compared to the beginning of the 1990s (SCB 2000:82). Female senior lecturers were 17 percent in 1989 reaching, ten years later, 25 percent (*Ibid*). By 2007 female senior lecturers were 38 percent (SCB 2007). Female Professors increased from 6 percent in 1989 to 12 percent in 1999 (*Ibid*), and were 18 percent by 2007 (SCB 2007). One important reason for these changes has to do with attempts by the Swedish Government to recruit women to higher positions in Universities and Colleges, initiating special Professorships in gender research. The Government has also changed the rules relating to the way lecturers and Docents/Readers can apply for Professorships, in addition to the traditional system whereby applications can be made for Divisional Professorships that attract institutional funding. Applications can now be made for free-floating Professorships or personal Chairs, which are awarded on the basis of academic merit but attract no institutional funding (University Ordinance 12 § 1998: 1003). There are though still more women employed as lecturers, mostly working as teachers, middle managers and admin-

istrators (who have no doctoral degree). At 57 percent, these are the most vulnerable staff compared to those who have a doctoral degree (SCB 2007). This group rose after 1997 because of a University reform that sought to increase the representation of professionally educated staff in Universities.

Management and administration at Universities are to be found in different levels and groups. In this paper administration and management are connected with teaching and research on a departmental level. How academics use such terms is, consequently, highly variable. People may use the same term but have different definitions or they might mean the same thing when using different terms. There have been some attempts to clarify. Lawler and Harlow (2005), for example, seeks to distinguish management from leadership, with management focusing on efficiency and regulation, and leadership on change and motivation.

In Sweden management tasks used to be part of a Professor's responsibility, but this was something they largely extricated themselves from in the late 1960's when less research-experienced colleagues started to take over management (Björklund, 1996: 69). This has changed again and since early 2000, in the University where the interviews were conducted, Heads of Division are or should be the Professors.

Methodology

The methodology is social constructionist following Berger and Luckman (1979) and makes use of discourse analysis where the assumption is that people express, through the way they talk, how they understand their lives. This methodology is influenced by Foucault's discourse analysis, which is built on people's conception of reality and the way it is expressed (Foucault, 2001). The approach is to understand people's praxis – articulated through expression and linked to how they act. However, one of the criticisms of discourse analysis is the lack of agency. Because of this Alcoff's (1988) concept of positioning is used to understand people's praxis, as expressed and connected to action within constraints. Another central term is performance that is associated with Judith Butler's gender theory whilst, in this study, the term is more connected with John L. Austins' speech act. Put simply: by saying something, we *do* something (Rosenberg 2005). For instance, when someone orders another to *go* the person is also performing an act. Another example is when two people are marrying and the priest says '*I now pronounce you husband and wife*'. This is a statement that also confirms the relation between the couple. In the interviews the lecturers make statements, which also indicate and identify actions.

The data presented here comprises seven interviews drawn from a research programme involving 50 interviews with Swedish academics in 2001 and 2004. These seven interviews have been chosen because the women have been employed since the 1980's and 1990's mainly as lecturers but have also made themselves a career as middle managers. In their positions they perform quite a lot of administration whilst being responsible for staff development, timetables and personal issues. These women have over more than 20 years built up and administered different educational courses at the University and have also taken a considerable responsibility for and been engaged in what happened in the University in general. They have worked in different discipline areas and departments; education, music, civil engineering, health, social care, information technology and language.

These women have a vast experience of what has happened during those years when the NPM has been implemented. Their narratives provide an insight into an identification process where women academics have constructed and (re-) shaped their identities. In this paper identities are conceptualised as multifaceted and fluid, located in processes that engage with increasing managerial control attempts, within specific sites and particular 'cultures' (Hall 1990: 225). Seen in this way, the concept of identity has a number of meanings and uses.

One of the the key questions reflected on is whether management positions turn out to have been a golden opportunity or an invidious trap, a poisoned chalice for those academics who seek to develop a managerial identity. To avoid a structural approach devoid of agency the intention is to highlight that people are not "pre-positioned in how they participate in social events and texts", since they are also social agents who are active and who change and create things (Fairclough 2003: 160). Fairclough also points out the importance of self-consciousness, which is seen as "a precondition for social processes of identification, the construction of social identities, including social identification in discourse, in texts" (Fairclough 2003: 160), and this underlines that it is possible to act in different ways within particular discourses and that individuals have, although limited, space or room for manoeuvre.

Management discourse in academia

The construction and reconstruction of academic identities is related to change in academic life for the individuals concerned and is an ongoing process within organisations. Many academics were recruited to the University, after they had taken their masters degree, to a lecturer position. Three of the interviewed academics had worked as teachers in upper secondary school before they were recruited to the University and were employed in the mid to late nineteen eighties as

teachers when a new University department was being established. The other four interviewees had taken their degree at the University and continued to work as teachers, employed as lecturers who were expected to finish their doctoral degree. However, they did not complete their doctorates, partly because other assignments took over. Five interviews were conducted with five middle managers in their position as field leaders and two interviews with lecturers who had been head of division and head of department but worked now as lecturers. They all regarded teaching as the most important aspect of their work: "*If we do not have the students we have no University.*" The administrative work is also important and hard to avoid. One female middle manager described it in the following way:

The only thing you do is to satisfy the bureaucracy, their routines, nothing else. It is the same when you evaluate what you have done every year, the goal is to produce the document and the money steers this process. You never discuss research or discuss the research in a larger context. (I1, 2001)

In the long term they have had to keep up with administrative and teaching goals, otherwise they would have experienced difficulties fitting in among colleagues and the administrative staff. One field leader (I 2, 2001) discussed the implementation of the budget "*in financial and administrative terms.*" She suggested that it was a problem when every field leader had to take responsibility for these matters. One of the reasons was that she did not like to deal with finances. She thought it was difficult to have an overview because sometimes it could take just three students failing to carry through their studies which could crash the local finances. The budget was built on the number of courses and students and the principle that it was an individual responsibility for the lecturers to get students through their courses. The head of department had also argued that lecturers should generate their own external funding, and that it was their responsibility to find partners who could help them to pay for travel costs for guest lecturers. She was not interested in these kinds of tasks but had the feeling that she was not listened to:

It is hard to control the economy because they delegate it from the top to lower positions and different positions and there are people who take responsibility and see it as an important task. I have not found a way to see this in a positive way but I just can let it take the time it needs to be interesting. (I 2, 2001)

She did not find finance easy to work with and thought it would give her more administration. At the same time she could not avoid the financial responsibility. One field leader had taken this issue about finance a step further and raised financial matters with her 'chief', a male academic appointed to manage courses, or programmes of education:

He says that I am very clever and raise very intelligent questions and should thereby not be concerned about my lack of experience of economy [finance]. (I 4, 2001)

When these interviewees started at the University they did not join a research active department. Instead they encountered a discourse where research was not considered important. One woman explained how she understood the situation when she arrived:

There was very little research going on. It was a period of great expansion and the whole focus was on developing new courses and recruiting extra students and then, of course, teaching them. I suppose it was from the mid-eighties onwards when the focus of research came. (I 3, 2004)

Research was regarded as something that staff could engage in if there were time. A management job was seen as a challenge, as well as an opportunity to advance their careers. But one of them, a woman, who was working for a short while as an acting head of department, did not secure a permanent position as a head; the appointment went instead to a female academic who had a PhD. This woman, interviewed in 2004, described how she had reached a dead-end position because she did not have a doctoral degree. She went back to a subject specialist position, where she constructed colleagues' timetables and worked as a teacher. She felt that her experience and knowledge had been discarded. The discourse had changed, with doctoral degrees becoming more important and in some ways fundamental for working as a University teacher. It would seem that some academics have been willing to assume managerial identities, but this has often been seen to be at the price of engaging with research.

In many of the texts the terms 'administration' or 'administrative' are frequently used, with 'management' less so. Much of the time, however, it would seem that these terms are seen as synonymous, or at least that the distinction between them is blurred. This can be illustrated with reference to a Swedish principal lecturer, who had worked in the same position during the previous 10 years, and was accountable for part of an educational programme as a coordinator or course leader (and manager) for a group of sixteen lecturers, who said:

I must say I quite like management, I quite like administration, and I think I'm reasonably good at it but it also gets me down, and I feel frustrated at not being able to do research and teach as much as I'd like, it's hard to juggle everything. (I 5, 2001)

This lecturer and middle manager regarded management as interesting and definitely something she could identify herself with. Although she felt that she should be able to do all academic work – teaching, research and management –

she had, at the same, realised that it was impossible to coordinate them. To become a manager was not everyone's dream, however, evident when one field leader (lecturer) had been invited to join a management course but turned it down, aware what it would do for her research:

I don't feel it is in that direction I want to go, I'm not interested in any career in that direction [management], I feel I work all too much already, and if you drop the research ... it is more in that area the career possibilities exist ... today. (I 1 2004)

This lecturer was clearly resisting these changes, but she had to relate to this new direction and follow instructions. In the University where the interviews were conducted the management group had taken a decision to recommend that all heads of department, heads of division and field leaders attend a leadership and management course. In the interviews it was shown how this course strengthened the discourse of management for those women who attended. One field leader expressed her views in this way:

Leadership feels natural for me now; I'm taking on more obviously the role as a leader than earlier. Before I started this course I was nearly negative to the word manager because ... to lead and move around people has never been my style, but in all this I realised that the leader style I like is enormously useful and has improved [during the course], which is good. (I 7, 2004)

She worked as a middle manager, field leader, and was responsible for budget and staff, describing in the interview problems she had experienced with her staff and how difficult it had been for her to deal with them. But now, after she had attended the leadership course, she was more self-confident. She felt that the manager had chosen her as a manager and saw her as a part of the management group rather than identifying her with teachers and researchers:

I have become much braver and can handle much more, understand myself much better and believe that I have capacity to go through with different things. I have also said yes to more management tasks, something I do because I feel that is more what I'm able to do. (I 7, 2004)

This field leader describes in the interview how management and administration are the two functions she feels related to, and explains that she also understands academics are divided into those who manage and those who are managed. When she is interviewed she indicates that she is satisfied with her new function in academe and really enjoys working as a manager. This is similar to the view of the field leader (I 2), who is satisfied with her present job. At present these two are quite happy with their positions and cannot see any future danger from

having taken a poisoned chalice, quite the opposite since they consider that they have secured a good position at the University.

Another lecturer (I 6, 2004, earlier HoD, now lecturer) had the same experience as the other interviewees. She was recruited in the early 1980's and took on quite a lot of responsibility for developing modules and also teaching. During the 1990's she became head of division, and worked in that position for 5 years. A decision was then made in the University that all heads of division should have a PhD and she then lost her position when the department recruited a man to replace her early in 2000. He had no experience as a manager and was younger, but he had a doctoral degree. Her understandable reaction was that this was unfair. But when looking back she realises that there was a changing discourse, requiring everyone in charge of a division to have a doctoral degree.

Concluding thoughts

This paper has sought to explore the understandings that women academics have of their work situation in academe in relation to the NPM, and in what way they have shaped their identities in academe in relation to teaching, research, management and managerial change. The approach adopted has been to understand people's praxis articulated through expression and linked to how they act, using Alcott's (1988) concept of positioning to indicate action within constraints. Another central concept has been performance, connected with John L. Austins' speech act, in that by saying something, we *do* something (Rosenberg, 2005). While the academic respondents all talked about other colleagues who were research-active, they did not regard them as academics who were in the same position as they were, rather they described them as people '*over there*' who were doing research but were not identified or associated with what they as managers (or administrators) and teachers were doing.

These seven academics, all in their late forties and early to mid fifties, had a history that epitomized the history of their University in Sweden. They participated in the formation of new departments at the University where the expectation was to build up new degrees and where developing courses and recruiting students was seen as the most important task for both them and their organizations. They had all been recruited when there was a need for teachers and administrators, and none of them had a PhD. The discourse when they started their careers was that research was optional, and not a necessary part of their job. These academics, however, were aware that the discourse had changed, having witnessed a growth in academic colleagues who held PhDs, and they were increasingly aware of demands from senior management that all academic staff

should be research-active. At the same time external funding had become important for those wishing to start or continue with research. In short, these respondents shared a sense that their identity as a manager was in conflict with a research active identity – and that this was seen as cutting them off from something that had legitimacy and status.

The findings suggest that those academics who, early in their career, become managers, teachers or/and administrators are most likely lose research, something that can lead to a dead-end positioning for in the light of the changing discourse towards more intense research activity. Some realize that acceptance of management positions is something of a poisoned chalice because of the sacrifices that follow particularly the loss of research, but also of teaching. The results indicate that the women find it difficult to maintain a research active identity. One reason for this is that they identified themselves when they started as teachers and administrators, coming as they did from different disciplines, and also later as managers; they did not identify themselves as researchers. At this particular University it has become difficult to continue with research because competition for research funding has increasingly become the only means for realising and continuing individual research activity.

The new management system, NPM, has led in a direction that has entailed more bureaucracy and administrative work. At the same time the workload has increased, with more students per course and more students per lecturer. The NPM reforms can be described as seeking to implement “*deliberate changes to the structures and processes of public sector organisations with the objective of getting them (in some sense) to run better*” (Pollitt & Bouckaert, 2004:8). This has affected academic identity, with academics identifying different strategies. One of these is to become a manager.

Assuming management positions, it seems, turns out to require unpleasant compromises and sacrifices for those academics who seek to develop managerial identity in the fluid processes of change. These changes, ongoing since the 1990's, have not been fixed; instead they are a part of the process of ceaseless change that has gripped University life. Management can, however, consume those who take it on since it invariably entails the pursuit of short term goals, in contrast to research that adopts the long view in the achievement of its objectives. Changing discourse in the 1990's, when it became important to have a PhD, not least for management positions at departmental level, had a deleterious impact on the women whose accounts are reported here. Certification, research and funding have now become crucial for academics at universities, and these women academics find themselves disadvantaged.

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Is Science as way of life in transition? Some notes about the every day style of life of academics in Germany

Kristina Binner

Ten years after the declaration of Bologna in 1999 the European landscape of science is on the move. It is not clear yet, how far-reaching the reforms will be and what impact they might have on the universities, on the employment relations of the scientific staff and on their style of life. With a closer look at gender relations ambivalent tendencies in academia can be considered: On one hand women as scientists are under-represented in most European countries – especially in leading positions – on the other hand the integration of women is seen more and more not only as a question of social justice, but also as necessary for economic reasons.

Empirical processes of social change challenge the implementation of social theories. Having said this, the following article should be understood as a kind of ‘theoretical search movement’. It is intended to use the concept of “every day style of life” in the area of scientific work whereas gender specific recognition dynamics are taken into account. The article starts with a short introduction of the topic of gender relations in academia (1), before the concept of “every day style of life” is presented (2). In consideration of a gender perspective it will be discussed in the context of academia (3). In the next part it is asked, if specific norms in scientific profession exist, which include assumptions of a lifestyle (4) and if these assumptions of a suitable private style of life has an impact on gender specific recognition practices in academia. To exemplify the theoretical assumptions some empirical results from studies about gender relations in academia in Germany are given (5). In a programmatic conclusion the current reform processes are brought into discussion (6).

1 A short introduction of gender relations in academia

„How much the modern woman has achieved! She has captured the universities and with iron will and brave diligence she climbs by and by on the solar altitudes of human science”.¹ (Translated by K.B.; Budde 2002: 98)

1 Hedwig Guggenheim in an article of the “Münchner Allgemeine Zeitung” which was published on the 3rd of December, 1903 (Budde 2002: 98).

106 years after Hedwig Guggenheim's euphoric exclamation the percentage of women in academia is quite sobering. Climbing the peak of academia got stocked on half of the way: Although the universities could be conquered step by step as a place of education it is not the same case if women want to work there as scientists.

The following data will illustrate the German case. The "Gemeinsame Wissenschaftskonferenz" (GWG)² asserts, that in 2006 49.5 percent of the students, who matriculate for the first time in universities, are female and 51.2 percent are women who graduate from the institutions of higher education (GWG 2008: 12). The positive trend continues on the next level of scientific qualification: the percentage of women who get their PhD could be elevated from 30.7 percent in 1992 to 40.9 percent in 2006. But by taking a closer look at the next level, it must be stated, that female academics in high positions are remarkably under-represented. In 2006 only 15.2 percent of the professors in German universities are female, and in other scientific organizations outside the university only 8.4 percent are women working in leading positions (GWG 2008: 12)³.

The unequal participation of women and men in academia seems to be paradox, if you take a meritocratic self-concept of science into account, whereon Robert King Merton, one of the founders of the sociology of science has already referred to. He was the first one, who took a look at the social structure of the system of science. Merton comprehends science as a field whose functional capability and development is regulated by a set of norms, which he has called "Ethics of science" (Merton 1985: 86-99 [1942]). One important element is the norm of universalism, which means, that the recognition of scientific merits does not depend on individual or social characteristics like class or gender. However Merton notices that scientists sometimes ignore the norms and do not attribute scientific merits in a gender-neutral way. With the "Jesus-Sirach-Effect" he describes the social practice, when the recognition for the scientific work of female academics is denied and the merits are attributed to their male colleagues (Merton 1985: 157).

'Gender' puts the meritocratic self-understanding of science into question. It is also presented, that women as students get inroads in science, but not in the same way as employees. In this article the "style of life" is considered as an important aspect in the discussion of under-represented female scientists. The following chapter will outline the development of the theoretical framework.

2 Since the first of January, 2008 the GWG collects data about women in science. The "Bund Länder Kommission für Bildungsplanung und Forschungsförderung" (BLK) has done this before in Germany.

3 In Europe the European Commission collects data continuously (compare with Mary Osborn's contribution in this book).

2 The every day style of life and gender relations

In connection with professions the term “style of life” was already mentioned by Max Weber in his work “Wirtschaft und Gesellschaft” (Weber 1976 [1922]). With a view to craftsmen and petty bourgeois he asserts that due to their occupational specialization they share a specific, uniform style of life (Weber 1976: 295). The development of the style of life is influenced by the requirements of the profession and how work is organized. It thereby has an impact on success, social honour and recognition. Two essential functions of the group specific, occupational style can be considered: on one hand, the internal group identity is strengthened and on the other hand a specific style of life distinguishes the group from other groups and their lifestyles.

The relevance of the style of life is also a central element of a research perspective, which was developed nearly ten years ago. An important reason for working with the topos style of life was the assumption that profound social structural and cultural changes attach to the daily life.

“Every day style of life is defined by the interrelation of what persons regularly do in their different areas of life and mainly how they do it: How they practically arrange, what has to be done every day in the different social spheres in which a person participates in” (Translated by K.B.; Voß 2000: 322).

As it is noted above, the focus of attention lies on the individuals’ every day practices whose activities should be considered not in an isolated way but in their internal structural interrelation. Based on the concept it is intended, that the broadness of life – in fact, what is part of the daily life at a certain point of time – is captured (Voß 2000: 322).

The concept of every day or daily style of life includes structural and subject-theoretical assumptions. From a subject orientated perspective it is needed to be asked how the individuals arrange their daily style of life, what personal strategies they choose to cope with their lives, and in what manner the development of identity is attached to it. It is on the subjects how they arrange and bring together the different social spheres. However the organization of personal arrangements is influenced by structural conditions like available material or social resources. Furthermore social conventions and norms have an impact on the “arrangement of the arrangements” (Bolte 2000: 17).

Within this framework the spheres of work and life in which men and women participate differently and unequally can be focused on. In most cases the responsibility to organize a family’s style of life is attributed to women and they have to cope with different patterns of lifestyle and time of their family members (Rerrich 2000: 251ff.). The conscious dealing with time is an important aspect to

cope with the extensive daily life, time can appear as a factor of social inequality. Karen Jurczyk found out that the time pattern of women and men differ. While men are allowed to do an economic time-handling women are confronted with a normative frame of “anytime availability” (Jurczyk 2000: 241).

3 Notes on the scientific style of life

How can the scientists’ style of life be described? Some central characteristics of science as occupation are given in Max Weber’s article “Wissenschaft als Beruf” (1995 [1919]) in which he compares scientific career trajectories in Germany and the United States. Max Weber characterizes science as a hard work and he points out, that scientific ideas can only develop on the base of hard work (Weber 1995: 13). He mentions an inner vocation of scientists, who should dedicate their lives to serving science (Weber 1995: 15).

This ‘dedicating understanding’ of science suggests, that science as occupation takes a high importance in the arrangement of life. Against this background it can be asked how male and female academics arrange their private style of life, and in what family and gender arrangements they live in? How do they manage work- and life-balance? How do they deal with time? And what is the meaning of life worldly needs and resources to deal with occupational requirements?

Some empirical references are given in the study “Wissenschaftskarriere”, which concentrates on the under-representation of women in German universities. The main goal of the study is the reconstruction of biographical occupational careers of male and female professors in consideration of their personal and occupational situation (Zimmer et al. 2007: 90).⁴

The family and gender arrangements of female and male scientists differ considerably: Most of the male professors live in ‘traditional family arrangements’, they are married with women who mostly take care of home and children whereas their female colleagues live more seldomly in relationships and rarely have children. The bigger part of the professors, namely 91 percent, lives in relationships or is married, and 80 percent of them have one or two children. Furthermore, 82 percent perceive themselves as the head of the household (Zimmer et al. 2007: 147f.). Although more than half of the female professors live in marriage or partnerships (66 percent), this model of life does not seem to be such as dominant for them as it

4 The survey has been conducted between July 2002 and January 2003 and 619 female and 537 male tenured professors (W3-W4) participated. The study includes academics from different disciplines and was integrated in the EU research and training network “Women in European Universities”, a context in which similar studies are conducted in seven other European countries (see Siemieńska/Zimmer 2007; Zimmer et al. 2007).

seems to be the case for the male colleagues. In fact 20 percent of the female scientists are unmarried or divorced (13 percent), whereas only 3 percent of the male professors live alone or are divorced (5 percent).

Also the patterns of the organization of the daily style of life, especially the responsibility for child caring and housekeeping differs between female and male professors. Most of the male professors live in 'traditional households'. In fact, 66 percent of the male respondents answer, that taking care of the children is done by their women. But only 8 percent of the female professors answer, that they get help from their partners, 38 percent of them give their children in private or public financed child care institutions. Only one-fifth of them has shared the care work with their partners, and after all 18 percent of the female professors were mainly responsible for the childcare in addition to their full-time jobs (Zimmer et al. 2007: 153f.).

But in what way are other aspects of work-life-balance concerned by the time consuming scientific work? The majority of the professors answers, that they have "often" or "very often" done sacrifices in private life for the benefit of their academic career. Indeed 57 percent of the female and 42 percent of the male professors have abstained from friendships or they have spent less time with their partners like 40 percent of the female and 34 percent of the male academics respond in the survey (Zimmer et al. 2007: 169).

Summarizing some results of the survey, it is clear that male and female professors arrange their extra-occupational, private style of life differently. It seems as if female academics could not transfer their success in work and occupation in an egalitarian task sharing of housekeeping and child care in their private life. Women have to deal with bigger stresses and strains in their arrangements and in the same time show an enormous ability to fulfil the occupational requirements. In contrast to this most male academics can count on their wives who organize their family and social life.

4 Accepted style of life, professional ethics and gender relations

Are the above described patterns of lifestyle consistent with the normative imagination of a scientific lifestyle which is accepted within the scientific community?

Imaginations of the private style of life are part of a professional ethics which includes cultural values and standards of behaviour that members of the profession should rely on (Könekamp 2007: 112f.). In this context Bärbel Könekamp refers to the fact, that the development of professions was closely linked with the rise of the middle class intellectuals and their style of life in Germany, whose roots go deeply back to the 19th century. This middle-class style of life is based on a gendered division of labour. The "male breadwinner model" as it is

called in the welfare state research, draws upon the men who earn money and the women who organize the everyday needs in household and family. In the realm of these social circumstances professions and their group specific norms and imaginations about an adequate, suitable style of life have emerged.

But what can be comprehended by a professional style of life in academia? Understanding science as a way of life (Mittelstraß 1982) suggests, that a professional style of life in science corresponds with a subordinated meaning of extra-occupational contexts. One central element of a professional ethics seems to be the belief, that science is “hard, time-consuming work”, and the whole life context should be subordinated to the needs of the profession. In order to illustrate the mentioned professional self-understanding I would like to propose to look at an example given within a study carried out by Sandra Beaufaÿs. In her study she asks how scientists become scientists and asks for reasons why only a few women get a professorship (Beaufaÿs 2003: 12). An interviewed professor of biochemistry says in the interview, that the style of life of an academic differs from lifestyle of other employees. Furthermore, he explicates that academics should forego hobbies in the spare time and comes to the conclusion that scientists should abstain in general from the separation of work and life-sphere:

“[...] And this is a bit difficult und most people do not appreciate this, they say that one should have a complete different part of life, and with this I do not get along, that one should have a complete different part of life. Because it is dissatisfying and you are getting sad, if one splits oneself and says: here is occupation and there is the entire other part of life. It should be a unity, it should be an holistic life (Bio/Prof, m.)” (Translated by K.B.; Beaufaÿs 2003: 162).

Thus, it may be concluded that the part of life which is outside from science is awarded as less important: moreover self-fulfilment and the feeling of happiness should be sought in science. Insofar, it seems not to be preferred separating lifetime and labour time in a strict way. On one hand, there is the possibility of flexible working but, on the other hand within such a framework it is expected that science should not be comprehended as a normal paid job with strictly regulated working hours. The boundaries between lifetime and hours of work seem to be more fluently. Connected to this aspect it is also indicated that science tends to be an occupation and therefore includes the whole person and personality.

However, it is difficult for female scientists to participate in such a time consuming and including manner of style of life and to fulfil the ideal of a professional scientific style of life. They have to bring together different social spheres and are aside from the work mostly responsible for child caring and housekeeping. Female academics who live alone, are also confronted with a normative framework which draws upon traditional gender role models.

Indeed, male academics have also difficulties to fulfil the ideal of a professional scientific style of life. Contrarily to women, they are only responsible of one sphere of life, i.e. the sphere of work. Taken this into account it is much easier for them to pretend that they live a style of life which fits to the preferred ideal of the scientific style of life.

5 Recognition of lifestyle and scientific merits

Does the character of style of life have an impact on the recognition of scientific merits and connected with that, can gendered hierarchic effects be discovered? At first it must be said, that a merit, which is worth to be recognized, is the result of negotiations about what as a merit is attributed (Holtgrewe 2000: 65). Not only the competences of the employees are involved in the attribution processes of recognition, furthermore the whole person with its daily practices and its style of life is included (Wagner 2000: 154).

Referring to gender in social evaluation processes the case of successful female managers is explored by Hofbauer und Pastner. They discover that female managers in business interactions and communications were addressed as women and were referred to their femininity. For example a phrase like “girls of management” implies a subtle subtext, which devaluates the merits of the female managers (Hofbauer/Pastner 2000: 237). The authors point out, that work and merits are phenomena of perception and questions of the visibility of merits are coupled with (D)evaluation-processes that are not free from interest. Further Hofbauer/Pastner explicate, that especially occupations with high social prestige tend to persist in androcentric structures, and successful women have to adopt the dominant ideals of a male style of life. If they do not, they are addressed as just females and the attribution of merits is denied (Hofbauer/Pastner 2000: 237).

With this background it can be asked, how relationships of recognition are shaped in academia, a field of high social prestige and reputation. And what is the meaning of gender in these processes?

The above mentioned fact, that recognition is an intersubjective good is in the center of the studies of Steffanie Engler (2001) and Sandra Beaufaÿs in which they analyze the social construction of scientists in academia. The authors conceive ‘the pursuit of recognition’ as a kind of certain logic or guiding principle that structures the social practices in the field of academia. They comprehend science with Pierre Bourdieu as a social field or social game. Building on that, Engler argues that the exclusion of women from academia is not justified by their scientific work per se, but rather in the lack of attributed recognition. Although science refers on standards of merits which seem to be objective, they are not free from social influences or gender neutral. Because women have been

excluded from science for centuries, images of a scientific personality and masculinity are connected (Wobbe 1997) and something new, original, creative in science is attributed to men (Beaufaÿs 2003: 460).

In the study of Zimmer et al. it is indicated, that a majority of the interrogated female scholars do not feel accepted in the “scientific community”, whereas their male colleagues perceive the situation in a different way: 75.5 percent of the male, but only 39 percent of the female scientists agree with the statement, that women in leading positions in research are generally accepted (Zimmer et al. 2007: 161ff.). A similar pattern is reflected in the evaluation of the statement that women in high positions in universities are accepted. In contrast to 73 percent of the male, only 37 percent of the female academics agree with it. Despite these results, women perceive their situation in their home faculties more positive than in the scientific community in general: 75 percent feel accepted in their own department, whereas only 37 percent and 39 percent have the opinion that they are not accepted in leading or top positions in research and universities in general. Furthermore, 51 percent of them assess that they have to work harder than their male colleagues to be recognized, but 75 percent of the male professors do not share this perception (Zimmer et al. 2007: 161ff.).

It seems as if the evaluation of scientific merits is influenced by assumptions of the whole person. A big part of interrogated female academics has already made experiences with a lack of acceptance and more than half of them feel that they have to accomplish more than their male colleagues to get recognition.

6 Is the scientific style of life in motion?

The existing studies which are mentioned above have not yet included the structural reforms and their impact on working conditions, on carrier-paths or on the occupational self-understanding of scientists. But present studies in the area of research organisations which are settled outside of the universities reflect similar points. Research organisations like the “Gottfried Wilhelm Leibniz Gesellschaft” and others were already at the beginning of the 90s confronted with financial cut-back and therefore they were forced to implement restructuring processes. In a study which takes place in the “Gottfried Wilhelm Leibniz Gesellschaft” Hildgard Matthies diagnoses, that more and more scientists stake a claim for their life worldly needs and raise concern about the occupational ideal ‘science as way of live’. A new study which concerns to fatherhood in academia comes to similar results; a lot of male academics who are fathers have doubts about the dominant ‘myth of science’ and put the associated working culture into question (Reuter et

al. 2008: 17)⁵. After this, one can ask if obsolete occupational norms and connected images of a professional style of life are at the point of erosion. And do these processes of change offer new opportunities for women? Or can a more severe competition between the sexes be observed?

With regard to future research I would like to suggest to take a closer look on the academics' style of life: How do the structural reforms affect work- and life-arrangements of male and female scientists? The focus of analyses is not only on questions of work-life-balance but also on other aspects of the daily life lifestyle: What is the meaning of other fields like voluntary political or social work, or leisure time in a scientists' life, and in what form are gender relations attached?

From my point of view referring to the concept of daily style of life would also imply, that the understanding of science as work will deepen, and the object of research moves from the margins into the center of industrial sociology. Within this theoretical framework science can be understood as high-qualified work and it is possible to connect up discourses of subjectification and delimitation of work and life in other high qualified sectors like media or IT industry (media industry: Henninger/Gottschall 2007; Behringer/Jurczyk 1995 and others, IT industry: Manske 2007).

With such a work/industrial sociological framing reforms and their impact on working conditions can be observed in a critical and reflexive way and precarious working conditions can be discussed (compare Tove Soiland in this book). Furthermore studies in the field of sociology of work which deal with recognition processes in industrial relations in the field of modern knowledge work (Abel/Ittermann/Pries 2005; Schmidt 2005) can be drawn upon.

I also see fruitful connections between biographical approaches and the concept of daily style of life: The last mentioned concept focuses the broadness of life in a horizontal sense, the biographical perspective widens the view on the vertical dimension of the individuals' style of life. Following questions can be asked: Is a 'before' and 'after' the reforms in a scientist's style of life already remarkable? In what way have the scientists' work- and life arrangements changed? Taking into account that the occupational self-understanding and the identity as scientist were build up in the context of individual career paths one might ask, if current reforms affect the individual identity constructions? Can they draw upon biographical resources which help them handling the changing processes and how far any hints of reluctance can be discovered? How is the dealing with the aggravated pressure to be flexible and mobile, and can any gender specific differences be identified?

5 See also Brigitte Liebig's contribution in this book.

Given that the European reforms are realized differently in national contexts, and under consideration of specific national gender regimes, the concept of the style of life can be combined with feministic welfare state approaches (for example Pfau Effinger 2000). For example Zimmer et al. (2007) figured out that in Poland and Great Britain, two countries in which entrepreneurial universities were established very early, female professors were integrated in the context of precarious employment contracts. In respect of these circumstances they highlighted, that women got access to high positions in universities in a time, when universities lose their social recognition and reputation. In the authors' words women are "winners among losers" (Zimmer et al. 2007). Therefore it is necessary to ask in what extent the reform processes in Germany and other European countries influence the attractiveness of the 'workplace' university, if a less social popularity can be noticed, if these tendencies have an impact on the academics' occupational self-understanding and finally, how the mentioned processes affect the gender specific participation in academia.

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Academic Life and Gender Relations. The Case of Fathers in Professorship

Brigitte Liebig

Gender equality has become an accepted part of higher education reforms. European universities have developed a variety of measures aiming to support gender equality of their students and employees (cf. Löther 2006).¹ The quality of workplaces, especially the ‘family friendliness’ of universities increasingly count as an asset within the international competition for students and highly qualified academic talents. The initiatives not only react to a growing public awareness for discrimination and respective governmental policies, but meet current requirements resulting from changes towards entrepreneurialism within this field.

Quite often initiatives of family-friendly employers in higher education set their focus on women as (future) mothers.² But issues related to children and family also (should) concern men. The reorganisation of universities is situated in the context of profound social transformations, including changes in gender relations, the pluralisation of life styles and identities. Today, ‘active fatherhood’ has established as an ideal in large parts of Western society: The claim to participate at the upbringing of children seems to grow in importance for men as well (Reuter/Liebig 2009). However, the conditions of parenting men is rather marginal in the current public discussion and rarely taken up in gender studies or higher education research (Meuser 2005).

In contributing to the growth of this field of knowledge, this article aims on an exploratory analysis of different generations of male university lecturers with children. In addressing key concerns of fathers in professorship as a particular group of academic personnel, and starting from theoretical perspectives of gender and organisation studies, the analysis is based on biographical narratives of senior lectures, reading different disciplines at German and Swiss universities.

1 For an overview about policies for gender equality in higher education within the European Union see ETAN 2000.

2 As the metaphor ‘leaky pipeline’ describes, women do enter European universities in almost equal numbers, but get lost on the academic track much earlier and more often than their male colleagues (EU Commission 2006).

Men and masculinities in higher education

Within the last three decades the reflection on gender as a marker of difference and hierarchy in all spheres of society has found its way also into science and higher education research. Gender Studies developed powerful methodological and theoretical tools for the analysis of structural conditions, rationalities and everyday practises which constitute fundamental barriers for female careers (f.i. Beaufaÿs/Krais 2005, Matthies 2006, Müller 2008). Besides many other factors, they identified the anticipation of motherhood or already existing family related obligations as a most important obstacle for female academic success (f.i. Krimmer/Zimmer 2003, Gupta et al. 2005). But the social organisation and practises of academia also affect men. Besides a great number of women, younger generations of male academics at German universities increasingly resign to have children (Aufferkorte-Michaelis et al. 2005; Lind 2008, Metz-Göckel et al. 2009). Discrimination, so it is illustrated by these studies, not only relates to the category gender but also to parenthood.

Why are satisfying arrangements between academic work and other life-domains increasingly hard to achieve – also for men? In which way are parenting men involved into the gendering of academic organisations, and what is their part in changing gender relations? The paucity of informations about the specific environment, which organisations of science and higher education constitute for men and masculinities, as well as the gendered focalization of current equality measures can be regarded as a powerful element of resistance for gender equality and organisational change (cf. Müller 2007).

This article starts from the assumption, that higher education is a social field designed and shaped by hegemonic masculinities (Connell 1995). Traditions and ideologies generate cultures of work and organisation, which marginalize women as well as the social realities of 'unfitting' men (cf. McCready 2004, Collinson/Hearn 2005). Due to the organisation of science and higher education, the scientific expert of today either has to remain single or he arranges to delegate non-academic duties to his partner (see also Metz-Göckel et al 2009). The increasing childlessness of male academics raises questions not only with regard to the 'life-domain-balance' (Ulich 2005) of parenting men, but with regard to changes in gender relations including the division of labour in the private sphere. Women's movement, governmental and gender law, growing public awareness for gender inequality and organisational gender policies challenge hegemonic masculinities in higher education, and contribute to transformations and the dynamic of this field.

Reconstruction of male biographies

The arguments presented here start from an exploratory study of individual strategies and arrangements of work and life of fathers who currently teach science or humanities at German and Swiss Universities.³ It is based on semi-standardized interviews with 20 male senior lecturers and readers conducted in 2006. Belonging to different generations of academic staff, and between 38 and 69 years old, these men are fathers of a different number of children (1-3 and more respectively), and one of them is a catholic priest. The biographical interviews evoked thematically focussed texts, most convenient for interpretative methods of discourse analysis, which focus not only on the ‚explicit‘ statements of respondents but on their ‚tacit knowledge‘ (Polanyi 1966), that means most evident patterns of perception, cognition and feeling.

The method of text-interpretation followed the ‚documentary method of interpretation‘ (Bohnsack 2003), based on the tradition of the sociology of knowledge. As specific strengths, this method provides not only step-by-step techniques for systematic and controlled forms of interpretation, but – strongly based on a case-specific comparative reconstruction of patterns of orientation – the possibility to identify and confront typical orientations characterising professors from different generations and scientific fields. Analytically the interpretation seeks to outline especially the characteristics of academic life in relation to parenting and family as life-domains.

Ascetic work ethic and life

Science is not only a form of scientific practice but a social form of action and a specific way of life (Mittelstrass 1981). Up till now the academic work ethic is oriented at the ascetic life style of clergymen, who practised their learning detached from the world (cf.. List 1986). Their experiences and practises represent the roots of constructions of academic professionalism in its transcendent character, which is located apart from secular obligations. The biographical reports reflect this culturally leading idea on an individual level: The lecturers deeply understand their academic qualification and life based on enthusiasm and personal gratification, gained exclusively by academic erudication. Most of them perceive academic practise and personal fullfilment as undividable: In the academic world self-actualizing‘ becomes part of the individual's self-definition. One of the senior lecturers concisely put it in these words:

3 The interviews have been published in Reuter/Vedder/Liebig (2008); further findings based on these data are published in Liebig (2008) and Reuter/Liebig (2009).

“It means to do things with a certain passion, and for its own sake. It is not an artificial performance of one's duty but fulfillment of life, so to speak, self-realization”

In celibacy sexual love and reproduction are far from getting concerned. The historical premises of academia still affect the structural conditions of modern academic careers and work: As the biographic reports of different generations of men illustrate, the precariousness of income and professional perspectives strongly limited the possibilities of these men and their female partners to plan children. Kids have been born usually at a time when the professional and economic situation of the couple was uncertain.

Apart from heavy travel schedules, the academic careers of the respondents required greatest personal effort and discipline with regard to time-use and self-management. While at early steps of the academic hierarchy the careers offered a certain sovereignty of time and options to work from home, the 'academic work ethic' in fact strongly reduced the participation at family issues. Working at weekends, during holidays or at night counted as unquestionable reality for most of these men:

“Academia is dominated by the basic assumption – a hidden agenda you would say in education – one works from morning until evening and the weekend“.

Opposite to the flexibility of time, universities usually mention as argument to attract employees, time related wealth and time for one-self, which is noted as important elements of life-domain balance in current definitions (Jurczyk 2005) are not related to these academic biographies. The implicit achievement related demands of academia prevented these men to become 'time pioneers' as they were discovered in administrative bureaucracies (Höyng/Puchert 1998)

Due to the recent restructuring of universities the 'precarity of time resources' (Krais 2000) has even increased according to our interviewees. Control over time gets more and more lost in the course of additional administrative work and teaching hours. Especially positions on higher levels of the academy seem strongly related to reduced autonomy of work organisation. Working hours and mobility requirements of a dean or head of institute are described as similar to those of management functions in economy and unofficially count as incompatible with family.

“If you strive for a top career, at the top of a large research institute, this is not possible with a family. It is as a 250% managerial job. In this case you work on demand seven days a week”

The blending of work and life

Quite contrary to 'work-life-balance' perspectives, which inspire current family policies, the blending of work and other life-domains constitutes basic cultural characteristic of the academic sphere. As the interviews show, the modern organisation of science in form of universities and academies – which is oriented at the separation of work and family in industrial economy – seems to have marginal impact on the culturally anchored understanding of academic work, which starts from the assumption of a – pre-industrial – union between work and home.

The dominance of this assumption is illustrated by the fact that family obligations – contrary to official programmes and measures – implicitly count as a personal issue at universities. As almost all of the male academics report, the structural integration of child care and family services is still too small in higher education as well as in the communes. Good organisational skills and ideas were/are necessary, in order to compensate the lack of onsite child care, leisure rooms for children, mobility programs for families, or the costs of external child-care and day school. All these forms of day care offers seem for them especially important, since their academic trajectories were based on a high level of geographical mobility, and family or other forms of private social support are/were not available for them and their spouses. A senior lecturer reports:

“We both come from Bremen, i.e. from a town far away, and we have no familiar support here. This gets better now, since my parents in law get early pension and are able to come for one week or two in difficult phases. But this was not possible before.”

In order to balance professional and family life traditional gender relations in the private sphere constitute(d) a crucial resource for many of the professors interviewed here – at least during the early childhood of their juniors. Typical of the older generation of men are family arrangements, in which women guarded households and cared for children, while fatherhood was limited to the nurturing of the family. Usually the female partners supported the careers of these men crucially in an emotional and motivational way.

But the biographies of younger generations of male lecturers impressively also illustrate changes in patterns of couplehood and parenting. Though, the transformations described are mainly caused by the emancipatory life styles and identities of their female partners. In the couplehoods of the younger generations depicted here, spouses are quite often academically and professionally qualified. However, they have adapted their professional ambitions to the conditions of their husbands academic careers, and still relieve(d) their partners strongly from domestic burden. A philosophy professor with five children comments this situation as follows:

“Surely, it was a relief that my wife had, so to say, no unchangeable professional career ambitions, so that it was from her perspective no problem to define herself as mother”.

The fundamental meaning of ‘work-life-boundaries’ for the organisation of higher education is even more clearly demonstrated by biographies, which deviate from the traditional pattern of work-family-arrangement. In these few cases, both parents invest(ed) strongly into their professional careers. The narratives of these professors disclose the challenges, the physical strain and psychical claims these couples have to master in order to organize and maintain family. Quite often these commuter marriages ‘run in circles’ failing to achieve their so-called ‘work-life-balance’ in a daily struggle between day care, school and unpredictable events, such as visiting a doctor. A political scientist, whose spouse works successfully as an entrepreneur, mentions:

“If I would not know my wife since more than 20 years, and if we had not a very, very good and cooperative and always renewably understanding of our roles and marriage, than we had not survived the last two years in this constellation. Just because the burden was and still is too big. This is caused professionally: Firstly by the constellation of entrepreneurial activity and my job and second by the academic trajectory”

Narrations like these also describe the situation of a new generation of fathers, who want to participate actively in the upbringing of their children and household related work. As a social minority at university organisations they critically reflect normative assumptions and structural demands of academic trajectories and – in doing so – quite often perceive a considerable gap between their personal perspectives and the attitudes of childless men. More than ever family seems to jeopardize the effectiveness and routines of academic careers and work: The competition for power excludes interests and duties, which seems not directly related to academic issues. New divides between parenting and non-parenting men, between traditional and new gender arrangements and identities turn up.

The power of hegemonial masculinities

However, hegemonic connotations of masculinity still dominate higher education and cause detriments for all those, who deviate from the normatively and structurally set pattern of life. Exemplarily this is demonstrated by men, who could be described as ‘new fathers’ (Tazi-Preve 2006): During their (partly delayed) ca-

reers and at their workplaces they faced forms of discrimination that quite often resemble those known of their female colleagues (cf. Biller-Andorno et al. 2005). The respect for colleagues, who search personal gratification and fulfillment not primarily in academia, is very small. The consequences of this premise can be observed for instance in appointment procedures, which ignore experiences gained by ‘care work’.

“For men it is today still difficult to say: ‘I will have a time-off because of my baby’ – if not say, it kills your career. I do experience in all appointment commissions that the life course and publications get compared to the age of the candidate. Noone is interested, why there is a gap in the list – if it was lazyness or the founding of a family.”

Fatherhood belongs to an invisible category of difference and fathers most often hide the fact that they have kids at home – a neglect which could be interpreted as a form of ‘stigma management’ (Goffman 1963, Maas 1999). As the interviews illustrate, male colleagues quite often do not know from each other, if they have children. The situation reflects the power of a collective norm, which disqualifies any family orientation going beyond ‘breadwinning’.⁴ Parallel to official discourses on life-work-balance and family-friendliness, familiar issues are collectively ‘de-thematized’ at universities (Müller 2007; Liebig 2009).

In order to exemplify this situation, the following passage illustrates considerations of a sociologist, who got the possibility to apply part-time for the position of an associate professorship as a young man. It describes the fact that ‘part time work’, which officially counts as an element of ‘family friendly policy’ in higher education, contradicts the informal rules of the academic functioning.

“Originally I intended to include into my application explicitly my great interest in working part-time. In order not to impair the chances of my dossier, I eliminated this addition after careful consideration – as my colleague at the institute did as well”

But the marginalization of family obligations or extra-academic issues in academic organisations is paralleled by narratives, which illustrate the transformational impact of changing gender relations for organisational changes and innovations at university. These data show, that parenting involves crucial aspects of social learning which constitute obviously resources for academic careers, as well as for teaching in higher education.

The biographical reports also support recent survey data on academics, which show that family responsibilities contribute to less stress and burn-out

4 Disciplinary cultures seem to reinforce this meachnism; in sciences parenting appears as an even greater taboo than in the humanities.

(Lind 2008). Parenting and family obviously has a protective quality in academic work life, and it even serves for greater efficiency. Asked about qualifications gained by childcare experiences these men stress 'soft factors', such as social and communicative competences, and their abilities to understand the needs of younger generations. Quite often academics who are fathers intend to give an example as parenting man for younger of generations of men, and foster the 'work-life-balance' of their academic staff.

Conclusion: Rethinking of academic careers and academic professionalism

As the interviews with different generations of male teachers at universities show, academic cultures include a certain notion of work, which constitute important obstacles to existing measures and offers to explore better balances between academic work and family responsibilities. Hegemonial constructions of academic trajectories and work arrangements in higher education are based on a traditional division of labour between the sexes and result in detriments for all those men, who deviate from authorized connotations of masculinity. The discursive exclusion and neglect of fatherhood constitutes a crucial micro-political strategy (see also Thomas/Davies 2005, Jüngling/Rastetter 2008) which stabilizes hegemonial constructions of academic life and the gendered organisation of universities.

Family-friendly policies and governmental programs, which aim at the 'balancing' of work and family in science and education, are likely to fail, as long as the blending of these spheres constitutes core element of academic culture and self-understanding. More than that: Starting from concepts which are rooted in industrial economy and propose the segmentation of work and life as "two entirely different matrices of order and meaning" (Nippert-Eng 1996), current work-life-projects basically help to organise family duties around academic life, and guarantee the preservation of traditional gender arrangements in society.

Based on the empirical results, a rethinking of academic careers, the creation of new paradigms for the arrangement between work and life – for both women and for men – could start from different perspectives: Firstly, it should include a critical reflection of norms and rules of scientific knowledge production and teaching, situated not only in a life-course perspectives, but the new organisational principles of higher education. Secondly it should reflect on possibilities to support a 'pre-industrial' blending of work and life arrangements, consonant with acknowledged academic values and "frames" (Verloo 2006), as well as individual biographical situations. And thirdly, it could at the same time start from work/family border theory, which states, that "border-Crossers, whose

domain members have high other-domain-awareness will have higher work/family balance than border crossers whose domain members have less other-domain awareness” (Campbell Clark 2000:765). Actively parenting men and changing gender relations challenge the structural premises and rationalities of academic life. They provoke new questions about academic cultures as well as the (des-)integration of fatherhood as marginalized masculinity and demand the integration of familiar issues into the gender mainstreaming of the academy. Higher education should get prepared for men and women, who start from a new societal understanding of parenthood, far away from stereotypes such as the ‘male breadwinner’, or ‘male achiever’ and want to make use of paternity leave, part-time work or other family friendly policies.

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Gender Knowledge under Construction. The Case of the European Union's Science and Research Policy

Karin Zimmermann

1 Introduction

This article draws attention to gender expertise in the areas of politics, science, and administration. It is based on the results of a research project (Zimmermann/Metz-Göckel 2007),¹ in which a large number of official documents of the European Council, the European Commission, and the European Parliament were analysed. In addition, fifteen women and one man were interviewed: politicians of the European Parliament, members of the European Commission, administrators of the Directorate General Research, and female scientists being their advisors. The interviewees were active in employing a new gender equality policy procedure, known as Gender Mainstreaming.

Gender Mainstreaming explicitly addresses female scientists by offering them different opportunities to join the European Union's Framework Programmes for Research and Technological Development as researchers, referees, and political advisors. The chances and opportunities, as well as constraints and limitations of gender (mainstreaming) expertise as a device of scientific political counselling are being analysed in this paper. In the first section the specific of the policy model is presented. The policy model is a result, the policy outcome, of social practice in making Gender Mainstreaming work for gender equality in the field of science and research. An insight into the social practice of the policymaking procedures at European Union's level is given. The interviewees, cited in the second and third section, worked as appointed gender experts.

All in all gender experts seem to walk a tightrope, which sheds light on a lack of knowledge about the political and administrative procedures to fit to Gender Mainstreaming procedures. The existence of this lack of knowledge of the procedures suggests that there is a need for more clarification. It indicates an ambiguity about social power, which requires a sociologically informed deconstruction of social power relations. Against this background some methodological and epistemological limitations of women's cooperative constellations are

1 The research project was conducted at the Dortmund University between 2003 and 2005 and was funded by the German Research Foundation (DFG).

discussed, because they remain significant for achieving social and political change in the field of science and research.

2 Gender Mainstreaming Science and Research Policy – The Policy Model

In 1996 Gender Mainstreaming was brought into the European Union. Confirmed in numerous studies about its historical background, Gender Mainstreaming is an international phenomenon originating in development policies. Adopted by the United Nations at the 1995 Fourth World Conference on Women in Beijing it was taken up by the European Union. In the Treaty of Amsterdam (1997), where equality of opportunity was included in Articles 2 and 3, the Treaty's new Article 13 enables the EU to take measures against discrimination, while Article 141 provides a legal basis for equality of the treatment of women and men.

The official adoption of Gender Mainstreaming was first mentioned in a publication of the European Commission entitled "Incorporating Equal Opportunities for Women and Men into All Community Policies and Activities" (European Commission 1996). A publication on European Union's level of decision making is designated for the Council of the European Union, the European Commission, and the European Parliament. Publications are most important within policymaking procedures on the European Union's level of decision making. Accordingly, the policymaking elite network includes: the Council of the European Union at highest level, consisting of the governments of the member states; at the second level the European Commission with the Commissioners responsible for a specific political field (employment, environment, research etc.), and finally the European Parliament. In their official view the term Gender Mainstreaming involves "*mobilising all generally policies and measures specifically for the purpose of achieving equality* by actively and openly taking into account at the planning stage their possible effects on the respective situations of men and women (*gender perspective*)" (European Commission 1996: 2, emphasis in original). Since 1996, when the above cited Gender Mainstreaming publication "Incorporating Equal Opportunities for Women and Men into All Community Policies and Activities" had been adopted, a specific Gender Mainstreaming publication about the area of science and research was prepared. This initial step towards the field of science and research dates from February 1999: the publication entitled "'Women and science' – Mobilising women to enrich European research" (European Commission 1999). Here the policy making elite focuses on the underrepresentation of women in scientific research and technological development, which in their view "must be rectified in the interests of equal opportunities for men and women and acquires therefore the promotion of research by, for and on women" (European Commission 1999: 11-14):

- To promote research *by women* means the promotion of women as researchers and women being involved in the various stages of the consultation process as well as the implementation of the Framework Programmes for Research and Development.
- To ensure that research funded by the European Union meets the needs of female as well as male EU-citizens is meant by promotion of research *for women*. This demands alertness when drawing up work programmes and in-depth analysis as to how women are affected in all fields covered by research.
- Finally, research *on women* means the contribution which research can make “to our knowledge of what it is to be a woman, and of gender and gender relationships and of the impact of these concepts on European society“ (European Commission 1999: 11).

It can be seen that the concept primarily addresses women with the intention to mobilize female scientific potential “to enrich European research” (European Commission 1999). Since then the European Union’s Framework Programmes on Research and Technological Development became the main context in which this concept was applied.

The Framework Programmes on Research and Technological Development were launched in the 1980’s. Today they are the European Union’s main instrument for funding science and research in the member states. While the fifth Framework Programme (1998-2002) was still in place, a new phase started with the Lisbon Agenda in 2000. The Lisbon Agenda’s vision is for the European Union to become the most competitive knowledge-based economy in the world (European Commission 2000). The new phase increased the activities in the field of science and research, provided the policy making elite with the opportunity of linking research more directly to the economic agenda, and generally claimed “a more pivotal role for knowledge-related policies” (Beerkens 2008: 417).

Against this background of a more pivotal role of knowledge-related policies the mobilization of women scientists led the European Union’s policy making elite to implement a gender equality strategy within the field of science and research, which could be seen as expertise intensive. This strategy is closely intertwined with the goal to raise human potential in order to fulfil the Lisbon agenda and includes a three-track strategy, administered by the Framework Programmes for Research and Technological Development:

- *Participation* in the Framework Programmes for Research and Technological Development sets a clear quantitative target of at least 40 percent women: participation of women scientists as researchers; women’s participation as referees (valuators of funded research projects, fellowship pro-

grammes etc.) and finally as experts in the different consultative committees, panels etc. – thus the participation of women scientists and gender experts as advisors of the policymaking elite.

- The initiation of a *political forum* for networking and mobilizing female scientists and other stakeholders in the political and scientific field from all over Europe, stipulates scientific (gender) expertise, and female scientists as political advisors. In preparation of the drafted policy model expert groups were recruited: ETAN (European Technological Assessment Network) to promote communication and debate between policy researchers and policy makers on important science and technology policy issues, or WIR (Women in Industrial Research) and ENWISE (Enlarge Women in Science to East) etc. Today, the European Platform of Women Scientists in Brussels,² another project funded under the sixth Framework Programme, plays an important role in networking the networks of women scientists all over Europe.
- Both tracks are linked to more technical instruments of New Public Management establishing a statistical data basis, of which the European Commission makes use for its benchmarking of the participation of women scientists within the Framework Programmes in the European Union's member states. It also receives information regarding the member state's follow ups and the European Commission's mobilising strategy.

In summarizing this three track model, we can confirm that it mainly seeks to provide data to make full use of information about women's participation within the European Union's Framework Programmes conceived to promote science and research. Statistical data thus obtained and regularly published by the European Commission (She Figures 2003, 2006, 2009) can indeed provide useful information on the amount of women who end their scientific career before gaining a Grade-A-Position. Simultaneously, the demonstrated official "gender perspective" on "research by, for, and on women", first outlined by the European Commission in 1999, remains a fairly instrumental method of political planning and decision-making in favour of economic goals. The resource-oriented mobilization of human, specifically of female human resources is another argument against an 'only-women-related' policy model. It finally signals a 'technocratization' of gender equality policy as it is criticized in the ongoing discussion about Gender Mainstreaming (Walby 2005).

The outlined policy model can be seen as the policy outcome. In the following sections the question of social practice in making Gender Mainstreaming work for gender equality in the field of European Union's science and research policy will

2 European Platform of Women Scientists, <http://www.epws.org>.

be raised. The question is about gender expert's chances and constraints shaping the policy agenda, thus the expertise intensive approach – a policy model that is heavily based on scientific gender knowledge – matters. It opens new ways of access into the field of European Union's science and research policy.

3 The Lack of Knowledge of the Procedures – Trying to employ Gender Mainstreaming

Some authors have pointed out that the implementation of the Gender Mainstreaming approach at European Union's political decision making level has created new "access points for diverse interests and expert elites" (Mazey 2002: 229). As yet very little is known about the interactions of participating gender experts within that field of science and research. An insight into the social practice of that field could bridge this gap and may, to a certain extent, help us to better understand shortcomings of the ongoing implementation of the above outlined policy model.

Concerning the discussion about the outcomes of our own empirical research project (Zimmermann/Metz-Göckel 2007, Zimmermann 2006) I would like to introduce first of all the early study about mainstreaming gender in the European Union of Pollack and Hafner-Burton (Pollack/Hafner-Burton 2000). These authors explicitly integrated the field of science and research into their case study. Informed by literature on the emergence and goal-achievement of social movements, they looked for political opportunities, capacities of resource mobilization and the impact of women's groups in framing the gender issue and ask whether or not the Gender Mainstreaming approach fits to the "existing dominant frames held by various actors" (Pollack/Hafner-Burton 2000: 435).

Most dominant was the network of the above outlined policy making elite: the Council of the European Union, the European Parliament and the initiating European Commission, respectively its administration (Directorate General). At the European Union's highest echelon for policy making in 1995 the Commissioners' Group on Equal Opportunities was founded, which symbolised a political commitment of the Commission to mainstream the gender equality issue from the top of the policymaking process. Then the Inter-Service Group with some fifty-five officials from all Directorates General of the European Commission was established in order to coordinate the inner institutional actions. However this did not lead to an integrative, horizontal, institutional approach with gender mainstreaming being a transversal issue that would change the structures and cultures of the involved organizations and units (Rees 1998).

The Directorates General of the European Commission became important, because of their responsibility for policy preparation and formulation. In 1998 the Directorate General Science and Research established a new unit (a subdepartment in the Directorate General Research) entitled “Women and Science” in order to make the above mentioned concepts work: research *of*, *for* and *on women* as well as the three-track strategy of forty-percent women’s participation, political forum and the benchmarking system. In accordance with findings from Pollack/Hafner-Burton, some “gender advocates” inside the Directorate General Science and Research were most important. It is not to say that the gender issue had been supported from the top of the Directorate General, but in the “Unit Women and Science” there were several employees working as gender experts.³ Calling them “gender advocates” (Pollack/Hafner-Burton 2000) means that they are officials from within the institution, but their commitment for gender equality issues is intrinsic. It enables them to bridge institutional barriers by cooperating with other gender committed participants from other institutions like the European Commission governments of member states in the Council of the European Union, the Equal Opportunities Unit within the European Commission, or the Women’s Rights Committee of the European Parliament and some other institutions.

The Women’s Rights Committee of the European Parliament, who had often supported gender equality issues, was indeed very important, when Gender Mainstreaming science and research policy had been adopted. However this network was not strong enough to support the gender mainstreaming issue in the field of science and research policy, especially because of the fact that the help of the Science and Research Committee of the European Parliament was missing (Zimmermann/Metz-Göckel 2007: 65ff). According to all information given by the interviewees in our study – from the European Parliament, the Directorate General Science and Research having women scientists as their advisors – it was essential to launch a twin-track strategy in order to bundle the gender equality and the research issue. If there had not been someone who was a parallel member: of the European Union Parliament’s Committee of Science and Research and of its Women’s Rights Committee, the bundling of both policy issues: gender equality and science and research, would not have been possible.

This is one example of a network with ‘exclusively women’ members who were strategically committed to realize gender equality. Under specific conditions such a “velvet triangle” (Woodward 2003) may be performed and successfully utilized to influence dominant policy frames. As Woodward (2003: 85) observed “the strongest emerging form is a triangle with three major types of

3 After the elections of a new European Parliament in 2004 the unit “women and science” was renamed to “scientific culture and *gender* issues” within the Directorate L “science economy, and society” (see <http://ec.europa.eu/dgs/research/organisation.cfm?lang=en#directorates>).

participants (...). At the three nodes of the triangle at the level of the European Union we have the following constellation: the Commission officials (the so-called femocrats) and europarliamentarians with feminist agendas, gender experts in academia or consultancies, and the established organized women's movement" (Woodward 2003: 85). Following Woodward's general definition of velvet triangles, it can be confirmed that an identity-based network within and around the European Union's policymaking elite was of crucial importance.

In the result of our case study about the field of European research policy there were participants from within the Directorate General Research and female politicians from the European Parliament with feminist agendas – who bundled the science and research issue as reported above. Furthermore, there were gender experts from the academia working as political advisors. How did the interviewees as "social agents" in that very specific "social field" – of different, but given positions as administrators, politicians, women scientists, and gender experts being political advisors – deal with the gender issue in their day to day interactions? What was their "social practice" like?⁴

In short the answer is: in a highly complex field of policymaking held by various social agents involved in more or less powerful official and informal networks, gender advocates seem to walk a tightrope. The most striking feature is a *lack of knowledge of the procedures*. An example of that lack is given in the following quotation of an interviewee. She can be characterised as a gender advocate and member of various velvet triangles who feels anchored in the women's movement. Before she was working for the Directorate General Science and Research, she had changed her professional positions several times. She had switched between the position of a researcher at the university, as gender mainstreaming expert and as adviser of a government in a European Union's member state, active at the top of European Union's policy arena. Then she, more specifically her gender advocates network, had tried but failed to mobilize support to launch a gender mainstreaming tool on the agenda at the highest political decision making level (Council of the European Union). In her statement she reveals experiences of walking a tightrope within a field of power:

"To succeed in that technical structure, you need the help of the commission. Without this help, you cannot succeed in six months even to bring that to the agenda of the council. Because they have the knowledge, they know the procedures, and of course they have the network in the institutions. (...) And it is obvious that, at that level of decision, you need to have very good friends everywhere, at all levels and in all institutions in the commission, in the countries, in the representation of each

4 The term "social agent" and "social practice" is explained later (see Analysing the Ambiguity of Power Relations – Conclusion).

member state. Everywhere you must have people who can really help you. All the blocks and arguments against your issue are always in terms of procedures. This is really one of the major reasons why it is so slow and why we don't succeed. Apart from the fact that there is no political commitment, the problem is more than that. There is a lack of knowledge of the procedures. And there is a very small number of people who have that. And there are very few women who have that. So you are really blocked. But this discussion is never ideological, and even not political. I was trying to push them to go on that field, because there I knew I had the arguments and I could answer, and I could argue and so on. But the problem then was – of course they are very clever, they did not go there, but let you believe that – in fact, they always forget to tell you which procedures you have to go. And I'm not saying that the most responsible for this double play is the commission.”

At first glance this may seem to be an unsurprising finding. Of course one can imagine that a complex reality needs multiple double plays to reduce complexity. Furthermore, the statement confirms the dominant role of the European Commission as the architect of networks that political scientists had pointed out long ago (Héretier 1996; Wobbe 2001). More importantly, it draws attention to rising conflicts when femocrats, institutionalized social agents, who are responsible to put the gender equality issue on the political agenda, are reluctant “to go there”. In the quoted case the coalition broke down because of the double play saying “to go there” but for personal strategical reasons decided not “to go there”, meaning not taking the risk to lose the acknowledgement of more powerful agents and more dominant interests.

This is an example that shows the general weakness of gender equality issues, a reason why gender committed advocate coalitions often “have proven adept (...) in order to fit with the dominant frame of a given DG [Directorate General], most often by emphasizing the gains in *efficiency* (as opposed to equality) that are likely to be realized if and when gender is taken into account across the policy process.” (Pollack/Hafner-Burton 2000: 440, emphasis in original)

In conclusion the empirical findings about the lack of knowledge of the procedures, can be confirmed by the following citation: The “dominant frame of the organization emphasized scientific excellence at the expense of any and all social considerations in the awarding of research grants” (Pollack/Hafner-Burton 2000: 448). In consequence the dominant organizational frame “scientific excellence” became a most important argument in the way of appointing women from the academia to become policy advisors.

4 To walk a Tightrope – Learning from Women Scientists being Political Advisors

Policymakers in their work are guided by “a way of selecting, organizing, interpreting and making sense of a complex reality to provide guideposts for knowing, analyzing, persuading, and acting” (Rein/Schön 1993: 146). The way policymakers selected women scientists to be their guideposts for knowing was primarily associated with profits offered by the reputation of women scientists and not by their gender committed behaviour or scientific gender knowledge. In a very strategic manner openness was constitutive for the above outlined (gender) expertise intensive approach: the recruitment of women scientists from the academia. It strategically offered women scientists to become expert elite allies vis-à-vis the policymaking elite at the time when the mainstreaming approach was implemented for the first time. The conditions for entering the policymaking field as described in the following statement of an interviewee in our empirical study are – to this day – rather informal:

“You have a lot of researchers working for the European Commission and the Directorate General Research. They are officials, they are *functionaries*, they are working for ministers, and they are counselors and political advisors. These people are always in the corridors here lobbying, of course for money but also for ideas and for which policy field and research field you put at the top of the agenda. They are not so disinterested people as they want you to believe. So in these committees most of the time there are researchers like me. I’m a researcher, but I think I spend more time in other places as in university research. So it is a mix of people (...) who have their names as experts.”

In her statement concerning the mixture of people who are highly recognized scientists and at the same time functionaries, the interviewee stresses that she is not so naive as to believe that scientists do not have their own agendas and interests, even like functionaries; thus this statement must be understood as a critical reflection of the idealistic view on scientists, who are often thought to only deal within the scientific and to escape the political or administrative contexts. On the contrary the result of our research is that we should look closer at scientific gender experts being concerned with the governance of science. Of course scientists may have their own interests, maybe different from interests of politicians and administrators who are their partners. However the idealistic view as well as a certain kind of belief in the (gender) neutrality and objectivity of scientific knowledge still matters. An example confirming this assumption was given by another interviewee – a women scientist who worked in one of the committees created in favour of “mobilising women to enrich European research” (European Commission 1999). This expert advisory group

„got messages that gender was an important issue for the politicians. They came and said: ‘produce your recommendations about gender inequality in science’. And we were producing recommendations. We were not really political clever in our group. We didn’t know, that we should do lobbying for ourselves and women in science for instance in our countries. But now, I think, we were really political naïve. We believed the statistics would speak for themselves and all people will see this statistics, and they would by themselves know, what has to be done.”

These women scientists were not politically naïve, but they seem to still believe in the objectivity and neutrality of scientific knowledge when they skirted the political context and supposed that statistics would ‘speak for themselves’. In other words: they grabbed hold of scientific knowledge by telling the truth: if people follow scientifically legitimized ‘truth’s’, they will know what has to be done, independent from any socially or politically motivated interests, or personal commitments. This relation signalizes a significant relationship between cause and effect. However the difference between cause and effect, in the social practice, in the end cannot be definitely identified. Furthermore, the example reveals another lack of knowledge of the procedures. It is due to an ambiguity of power within a social field like the investigated field of the implementation of Gender Mainstreaming into European Union’s science policy.

An ambiguity of power relations is constitutive for the moving of scientists from various disciplinary scientific fields to policy fields. Such movements between science and politics are defined as “cross over” (Zimmermann et al. 2004: 83ff). Cross over movements between science and politics constitute a dilemma by, on the one hand, taking advantage of privileges and, at the same time, deny the existence of these privileges. The general interpretation of this dilemma is: scientists are often assumed to not be involved in political decisionmaking processes, but rather to act outside the political field even when they work as political advisors.

Legitimacy of participation at the supranational European Union’s decision-making level is mainly shaped by rules of “informal governance” (Christiansen/Føllesdal 2003). Informal governance is conceptualized as a specific form of supranational integration within the European Union’s policy making processes, whereby “client-patron relationships” play an important role (Christiansen/Føllesdal/Piattoni 2003: 15f). In the field of science and research policy, these relationships allow lobbying for one’s own interests, specifically the research interests of the social group scientists feel committed to. Scientists from academia, regardless if male or female, who – as political advisors – have a reputation as scientific experts are in the thick of informal governance: “Just as Commission officials may be later hired by industry, so too do gender experts spend time at the Commission before returning to consultancy or national governments, to

later find their way to an international meeting, or as an author on a policy report for a European political party – like friends in mutual safe and acknowledged associations solicit ideas for investigation, strategies and policy measures” (Woodward 2003: 85).

The described mechanisms of social inclusion of scientific expert elite allies are due to “cross over” movements between science and policy (Zimmermann et al. 2004). This could also be found in the specific case of the European Union’s science and research policy at the time when Gender Mainstreaming was first implemented (see the three-track strategy of resource management introduced earlier in the first section). The presented empirical findings about the implementation of Gender Mainstreaming in the particular case of European Union’s science and research policy fit in with some of Woodward’s conclusions about the implementation of Gender Mainstreaming in the European Union’s policy context. In concluding the impact of women’s cooperation – especially the “velvet triangle” – Woodward confirms that the particular political configuration in the European Union’s case of Gender Mainstreaming “has included the most established and advanced of feminist actors in Europe (...) without broad-based legitimacy with any grass-roots movement” (Woodward 2003: 90; Verloo/Lombardo 2007).

In conclusion, the findings of our analysis of the social practice of the participating scientific gender experts, their cross over between science and policy, indicate the necessity of discussing the “ambiguity about power” (Holly 2008: 179) in social fields as well as rethinking women’s cooperative constellations, and further to evaluate their contribution to a more pivotal role for knowledge-related policies.

5 Analysing the Ambiguity of Power Relations – Conclusion

According to Holly (2008) more research on women’s cooperative constellations is urgently needed, precisely because they are significant for achieving women’s substantive representation and policy change. Pointing out empirical, methodological and epistemological limitations, Holly presents a critical analysis of different concepts of feminist constellations in processes of political decision making and their ambiguity about power: borrowing power and eliminating power at the same time. Following Holly (2008: 174) the triangular geometry of Woodward’s concept brings several questions to the forefront: Are women’s cooperative alignments basically about exchange of information or do they rather serve

goal attainment? Are they fundamentally about personal and informal networks comprised of individuals sympathetic with each others' ideas and values?⁵

The triangular geometry refers to "iron triangles" conceptualised as male, stable, centralised, and institutionalized power constellations – as opposed to feminist triangles conceptualized as unstable, decentralized and so on. In consequence, velvet triangles become "by their very history of construction, dualistic and ambiguous in their relation to power. One the one hand, they describe structures for achieving policy goals by women, positing them as constellations of some power, but simultaneously referring to some alternative to 'ordinary, 'male power. On the other hand, 'real' power is conceptualised as being somewhere 'outside' women's activities, and women's cooperative constellations find their place in the margins of this power, as quantitatively or qualitatively lesser. Ambiguity about power, its nature and desirability become thus epistemological and political strait jackets for re-thinking the study of women's cooperative constellations" (Holly 2008: 179). The really crucial point is the third node of the velvet triangle that "has primarily included the most established and advanced of feminist actors in Europe" (Woodward 2003: 90). Are gender researchers and gender experts "outside helpers or an integral part of a triangle?" (Holly 2008: 174).

According to the concept of cross over between science and policy, social agents coming from various scientific (disciplinary) fields may be regarded or see themselves as 'outside' the policy field, whereby they are directly involved and inextricably intertwined in a variety of formal and informal procedures. In order to reveal this social cohesion it is worth thinking about the "social practice" and the "social field" (Bourdieu 1998, 2004).

Both concepts: social practice and social field are based on a relational epistemology, and not a dualistic geometry. According to Pierre Bourdieu's relational approach the social practice of multiple agents of particular social fields are held together by specific power positions and dispositions of the agents in relation to each other (Bourdieu 1998, 2004). As Engler (2001) points out in following Bourdieu's concepts of understanding and analysing knowledge and social power

5 Holly discusses the case of the new women's movement and their involvement against the background of a relatively 'women friendly' gender equality policy. In so far it is a specific nordic discourse, but in my view it is important for further discussion on the European Union's case. It concerns, as for instance Mazey (2002) pointed out, the processes of policy transfer within the various European national (gender) cultures (see also Woodward 2003: 81ff.; Walby 2005). In addition, since 1997 the new Nordic member states Finland and Sweden, together with the Netherlands, provided the influential mode at the time when the gender mainstreaming approach was implemented on European Union's level. The circumstances created an approach more top down than bottom up. "In keeping with its own technocratic policy style, the E.U. has largely adopted the 'dominant' Nordic, top-down, *expert-bureaucratic* model of gender mainstreaming." (Mazey 2002: 232, emphasis in the original).

relations, it is the “illusio” (Bourdieu) that affects the day to day interactions of the different agents in relation to each other. According to Bourdieu there is a kind of pre-reflexive belief, which is usually not questioned in the social practice. In consequence, the constitution of social orders is not a purely mental operation which as such is established only in the agent’s thinking or knowing, rather regularities of social practices and society originate in physical actions of the agents who have a “practical sense” (Bourdieu). It is a capacity, bestowed by the “habitus” (Bourdieu) to produce ways of acting that agree with the social order, but in a fairly creative way of acting. It means, constraints and freedom are intertwined as well as “the gendered and gendering habitus” (Krais 2000: 57). That is to say, social agents dispose of a gendered “bodily hexis” (Bordieu) that brings behaviours to the forefront which seem to be ‘natural’ but which are ‘in reality’ socially constructed, or to be more precisely: which are under social construction.

The underlying relational thinking provides a useful methodological tool even to reflect the traditional distinction between power and knowledge. Consequently, knowledge is not something that one person or a group of people do or do not possess; rather, knowledge is imbued with power and power is intertwined with knowledge. In conclusion relational thinking can illuminate power-knowledge relations as a social practice which is shared in common.

If knowledge-related policies – in the European Union’s vision of a most competitive knowledge economy – play a more pivotal role, it will be worth to rethink the participation of gender experts and female scientists for scientific, political counselling. The social movement crossing over science and politics will come into the focus then. The suggested analytical concepts *illusio*, *bodily hexis*, *social field* and *practice* – based on a relational epistemology –, help to shed light on the social sense beyond the formal and informal procedures of gender knowledge under construction.

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Women in cutting-edge research – gender equality and the German Excellence Initiative¹

Stephanie Zuber

“The chair has been offered to a woman. But that is by chance, of course, solely because she was the most qualified person in the field in this case.”²

It is a well known fact that Germany occupies one of the hindmost positions concerning the equality of treatment of men and women in academic life – especially with respect to the top-level posts. Due to this fact the universities applying for grants within the German Excellence Initiative were asked to outline their strategies for the promotion of gender equality in a precise and convincing manner as early as in their draft proposals. The project on hand entitled “Women in cutting-edge research” presents a complementary study of the accordant handling of gender issues within the Institutions of the Excellence Initiative. The project aims at the establishment of a complex approach to the topic by means of a combination of quantitative surveys, ethnographic case studies, bibliometric devices and measures of network analysis. While the project is currently still at the beginning, this article will report some of the first impressions of the field based on data that has already been analysed. The relevant data derives from different sources; it has partly been specifically collected for the purpose of the study by the project team, and partly adverts to data furnished by others, especially by a report of the Joint Commission of the German Science Council and the German Research Foundation on the Excellence Initiative, as well as by a first monitoring report on the Excellence Initiative published by the iFQ.³ The article is organized in the following way: after a brief introduction to the Excellence Initiative and the respective discourse on equal opportunities (1) an outline over the actual

1 This article is based on the preliminary results of a project conducted in collaboration with Anita Engels (project director), Jönnna Atzeroth (with focus on the analysis of the online-survey) and – recently – Sandra Beaufaÿs. The author would like to thank Daniel Schluchter from the University of Hamburg for helpful comments.

2 The citation is from an interview in a Cluster of Excellence, found in Sondermann et al. (2008: 75); translation by the author. German: „[D]er Ruf (...) ist eine Frau rausgegangen. Das ist aber Zufall natürlich, weil das die bestqualifizierte Person war in dem Fall.“

3 The Institute for Research Information and Quality Assurance (iFQ) is an auxiliary attachment to the German Research Foundation, entrusted with the monitoring of the Excellence Initiative.

measures promoting equality of treatment together with recent figures on women's quotas in the Excellence Initiative is provided (2). The article closes with a sketch of the communicative framing of equal opportunities beyond the actual measures taken (3).

1 Background: The Excellence Initiative and the communicative framing of the discourse on equal opportunities

The Excellence Initiative was enacted by the German federal and state governments in 2005 in order to strengthen the scientific standing of Germany in general and especially to promote the cutting-edge research undertaken at German universities. Three different lines of sponsorship have been put out to tender: (a) Graduate Schools were introduced in order to promote junior researchers; (b) Clusters of Excellence were introduced in order to promote certain thematic priorities on the level of cutting-edge research; (c) so called 'Institutional Strategies' were introduced in order to promote the advancement of whole universities.

The proposals were evaluated in a two-staged process by the German Research Foundation (DFG) and the German Council of Science and Humanities (WR), using selection- and decision-making panels created solely for this purpose. The final approval took place over two granting rounds conducted in 2006 and 2007, each resulting in a 5-year run duration of the grants. In the end, 37 Clusters of Excellence, 39 Graduate Schools and 9 Institutional Strategies were granted, comprising a financial volume of 1,9 billion €.

The sponsorship resulting from the first two granting rounds is still in effect and both DFG and WR have come to a very positive interim result on the consequences of the scheme in November 2008. According to them, the Excellence Initiative induces a "great structure- and profile-building effect" for the German universities (DFG/WR 2008: 6). DFG and WR have therefore prompted the government not only to continue with the program, but also to raise the financial volume. Correspondingly, a second sponsorship phase extending up to 2017 and comprising a further 2,7 billion € was decided upon in April 2009.

The universities were asked to outline their strategies promoting equal opportunities as early as in their draft proposals. Such a request did not come as something entirely novel, not even for the German applicant bodies and submitters. Surprisingly new, though, was the vehemence and ferocity with which the request was formulated. After the universities had laid out the usual considerations on equality of treatment in their draft proposals, the former president of the German Research Foundation, Ernst-Ludwig Winnacker, approached them by means of a letter. In this letter, two aspects were pointed to: the mostly positive

feedback from the review panels (composed to 85% out of non-German referees), on the one hand – and the harsh critique, on the other hand, that was formulated especially with respect to the inadequate handling of gender related aspects: “All referee groups have emphatically criticised the utter inadequate handling of matters of equality of treatment in most of the proposals. According to the international experts, one could hardly resist the impression that the topic had been treated by means of lip service rather than by means of actual provisions and concrete target-setting. We should take this critique seriously, even if it may not apply likewise to every applicant. Please allow me to ask you imploringly to support the researchers at your university in their endeavour to formulate concrete objectives and to make for arrangements that will justify a position in the international top flight with respect to the provision of equal opportunities” (Winnacker, Letter to heads of universities, February 2006, translation by the author).

This letter leads to intense activities on the side of the submitters – maybe, because this time the critique was not formulated by political agents, but by academic peers. Furthermore, the general discourse on equality of treatment in German universities had gained momentum in the course of the last years, now comprising not only more but also different agents. The accentuation of equal opportunities as a relevant part of the proposals for the Excellence Initiative was followed by an agenda called the ‘female professorship program’ (Professorinnenprogramm) in 2008. It is featured by the Federal Ministry of Education and Research and aims at the provision of 200 additional posts for female professors at German universities in the course of the next five years. Besides, in 2008 the DFG has defined so-called ‘Research-oriented Standards on Gender Equality’ (Forschungsorientierte Gleichstellungsstandards) prompting the German universities to comment on these standards and to formulate their own targets concerning a heightened representation of employed women. An evaluation of these measures is in planning, as well as the idea to draw on the results of the evaluation for the prospective granting of funds in certain sponsorship lines. It remains to be seen, though, which effects these measures predicated mostly on monetary incentives will have for the equality of treatment in German academic life.

2 Measures of equal opportunities and women’s quotas in the Excellence Initiative

The project „Women in cutting-edge research“ pursues two objectives: the first objective is to establish a broad methodical approach to the complex topic of female under-representation in cutting-edge research and to contribute to the respective current research. The second objective is to accompany and to assist

the Excellence Initiatives in their endeavour to realize different arrangements fostering equal opportunities. The second objective requires a prompt reworking and feedback of the intermediate results, so that the respective institutions can benefit from the project instantaneously.

The project is confined to the first granting round of the Excellence Initiative, totalling 38 grant-receiving institutions. From that round, 36 Excellence Clusters, Graduate Schools and Institutional Strategies have partaken in the project. The first phase of the study was completed in the beginning of 2009. Pivotal to this phase was an inventory of the actual provisions advancing equal opportunities in the course of the Excellence Initiative. The inventory drew on three distinct data sources:

- Conversations with members of the senior management of the Institutions of the Excellence Initiative concerning their experiences with the realisation of measures encouraging equal opportunity as well as conversations with the parties responsible for gender equality in those institutions
- Extracts from the draft proposals of the Institutions of the Excellence Initiative focussing on matters of equality of treatment (the extracts were provided by the institutions themselves)
- Answers from the Principal Investigators to specific questions concerning equality of treatment (the questions were formulated by the project team and were then integrated into an online-survey conducted by iFQ, the Institute for Research Information and Quality Assurance)

The participation rate was extremely high – it lay around 95%. Taken together with the composition of the actors partaking in the interviews, this indicates that ‘equal opportunities’ is perceived as a topic of great importance in line with the Excellence Initiative. Suitably, the Institutions of the Excellence Initiative are either planning to realize or have already realized a great number of different measures aiming at the promotion of gender equality – ranging from very small to very large measures. These measures can broadly be sub-divided into four distinct aspired objectives:

- The proximate recruitment of women: quotas, active recruiting strategies, grants specifically for women
- The amelioration of the reconcilability of cutting-edge research and family-life: child care, part-time schemes, dual career arrangements and other facilities for families
- The elevation of the attractiveness of a professional academic life for women: role models, career options and other propositions

- The strengthening of women in professional life: mentoring, workshops, coaching and other provisions

Even though some of the reported concepts are quite ambitious, they usually resort to well-known measures in practice. Very common is e.g. the consideration of female career patterns in specific areas of subject. And another facet – the compatibility of work and family-life – regularly receives central attention as well.

Structurally, the different measures are located quite diversely. In almost nearly all of the cases, previously existing arrangements and institutions fostering equality of opportunity on the level either of the university or of the faculty were incorporated. Whether this practice amounts to a mere delegation and rolling off of responsibilities or whether true synergies are created is difficult to judge on the basis of the available draft proposals and conversations. In spite of this, many Institutions of the Excellence Initiative deem it sensible to establish a genuine competency for equal opportunities *within* the Cluster or the Graduate School or at least to raise the respective capabilities of the university by drawing on funds from the Excellence Initiative. Initially, only a few institutions have considered the auxiliary employment of somebody engaged mainly with these affairs in the Excellence Initiatives themselves. In the end, though, quite a lot of respective jobs were created, some of them dealing with gender matters exclusively, others dealing with gender matters and other assignments concurrently. This has led to the necessity to renegotiate the competences between the pre-existing equal opportunity commissioners on the university level and the newly installed persons responsible for gender equality (often labelled ‘gender commissioners’) on the level of the initiatives.⁴

Adjacent to the high significance of equality of treatment, which has been signalled by the aforementioned concepts, one question begs answering: is the fortified discussion on gender equality yet reflected in concrete figures that can be gathered on short notice? The answer to this question can fall back on data that has been collected in line with the monitoring of the Excellence Initiative by the iFQ in 2008 and 2009 (the data comprise the first and the second granting rounds):

4 Especially some of the 9 universities engaged in Institutional Strategies are very active in this respect. The conference at the University of Göttingen, for instance, which induced this anthology, stems from funding line ‘Institutional Strategies’. Another example can be derived from the RWTH Aachen University, which has published a profile of the development process and the first implementation process (see Leicht-Scholten 2008).

Table 1. The data concerning the Excellence Initiative stem from the following sources: Sondermann et al. (2008): 1; Hornbostel/Sondermann (2009): 6, 7, 9, 10, 12, 13; DFG/WR (2008): 3, 4. The comparative data stem from: DFG (2007): 5; GWK (2008): 2, 8, 11, 14.

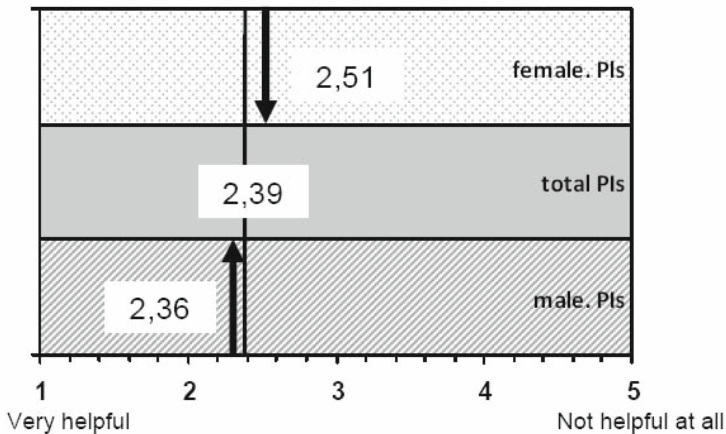
<i>Women's Quota in the Excellence Initiative and comparative data</i>	
1. Principal Investigators in Clusters of Excellence and Graduate Schools in spring 2008 (N = 2.461)	13,8%
2. Comparative data: Professors in Germany in 2006 (N = 37.694)	15,2%
3. Reviewers of Clusters of Excellence and Graduate Schools in 2005 – 2007 (N = 492)	12,4%
4. Reviewers of Institutional Strategies 1st/2nd Round in 2005 – 2007 (N = 150)	16%/29%
5. Comparative data: Reviewers of Individual Grants Programme (DFG) in 2004 (N = 4.920)	9,0%
6. Junior professors in Clusters and Graduate Schools funded by the Excellence Initiative in spring 2009 (N = 71)	36,6%
7. Junior professors funded by the Initiative in line with the Institutional Strategies in spring 2009 (N = 28)	57,1%
8. Comparative data: Appointments for junior professorships in Germany in 2007 (N = 193)	39,9%
9. Senior professors in Clusters and Graduate Schools funded by the Excellence Initiative in spring 2009 (N = 110)	21,8%
10. Senior professors funded by the Excellence Initiative in line with the Institutional Strategies in spring 2009 (N = 117)	25,6%
11. Comparative data: Appointments for W2-/W3-professorships in Germany in 2007 (N = 2595)	21,9%
12. Post-doc-level researchers in Clusters and Graduate Schools funded by the Excellence Initiative in spring 2009 (N = 663)	33,9%
13. Doctoral students in Clusters and Graduate Schools funded by the Excellence Initiative in spring 2009 (N = 2.224)	38,0%
14. Comparative data: Ph.D.-theses submitted in Germany in 2006 (N = 24.287)	40,9%

As can be seen above, the women's quota lies at 13,8% in the group of the Principal Investigators of the Excellence Initiative, which is a group mostly comprised out of professors. This is not higher than the women's quota of the Ger-

man professoriate in general. There is a remarkable above-average portion of women in the group of the general personnel, though, which have been recruited in line the Institutional Strategies. The referees involved in the evaluation of the Excellence Initiative also exhibit a quota that is higher than the respective quota in other, comparable review processes. In the other status groups the quota is about the same no matter whether one looks at the Excellence Initiative only or at the academic landscape in general. It is important to keep in mind, however, that the subject areas in which the the Institutions of the Excellence Initiative operate might play a role here. It is quite possible that during the period when the data was collected, subject areas traditionally featuring a low women’s quote were over-represented in the sample.

Within the Excellence Initiative, men and women do not differ very much, at least not in respect to a number of basic figures and the degree of their integration into the Institutions of the Excellence Initiative.⁵ The male and female Principal Investigators, for example, likewise rate the present equal opportunities measures as only partially helpful:

Figure 1. From an online questionnaire addressing PI’s. The question was: “How would you assess the gender equality measures at your Institution of Excellence?”



5 The project „Women in cutting-edge research“ participated in the online-survey of the iFQ, in which all PI’s were addressed, with a number of questions. The response rate of the 2252 PI’s was 62,7%. After the elimination of missing information on the gender and methodical errors N was reduced to 1385 cases.

Asked for the greatest potential effectiveness of a single measure, male and female PI's alike voted childcare on place one, followed by dual career measures and family friendly working hours. Other measures, ranked as rather secondary by male and female PI's similarly, included mentoring and coaching. The female PI's, however, assessed the potential effectiveness of mentoring and coaching as higher than the male PI's did – maybe due to differing experiences with these specific measures.

With respect to the relevance that single criteria should be appointed to in future proposals for funding under the Excellence Initiative, a gender-specific difference can be noted, albeit only at the low end of the relevance chart. The female PI's required a stronger allowance for the criterion 'equality of opportunity' than their male colleagues.⁶

3 Gender in line with the Excellence Initiative – communicative framing ,beyond' concrete figures and measures

Beyond the inventory about the types of measures promoting equal treatment in the Institutions of the Excellence Initiative and beyond the numbers reflecting the respective women's quota, some interesting issues emerge. Two points will be briefly illustrated here: (a) the contradictory and inconsistent complex communicative framing or broaching and de-broaching of gender issues, and (b) the topical nexus of time commitment, performance and gender which is common to different 'scientific myths' and which seems to gain relevance in the area of cutting-edge research.

The communicative framing or the broaching and de-broaching of gender issues

Almost everybody in the Excellence Initiative deems equality of treatment – often in the sense of measures aiming directly at the advancement of women – as very important and everybody cites respective measures. Gender equality is most definitely an important issue at the moment – but whenever concrete persons are concerned, great efforts are undertaken *not* to relate the respective women to provisions of equal opportunity. This is the first reason for the quotation preceding this article: "The chair has been offered to a woman. But that is by chance, of course, solely because she was the most qualified person in the field in this case"

⁶ Eleven single criteria could be ranked. The female PI's ranked the above-mentioned criterion on rank six, the male PI's on rank nine. The funding refers to Graduate Schools and Clusters of Excellence.

(cited in Sondermann et al. 2008: 75). The Institutions of the Excellence Initiative energetically try to augment the numbers of women working there by means of measures fostering equal opportunities. But once the women are really in place, they are suddenly perceived as being there out of pure ‘chance’, because – so the logic of the discourse goes – they were the best in the field. The resulting situation is one where arrangements advancing equal opportunities and active recruiting strategies aimed at women have to be concealed once they have actually worked. This pattern emerges quite often.⁷ And it illustrates that while issues of gender equality can be easily communicated on a meta-level; there prevails a strong taboo to apply this discourse to concrete persons coevally.

The topic of personal experiences with gender related discrimination is structured exactly oppositional. During the evaluation and interpretation of the conversations, we were quite surprised how often the topic of discrimination turned up, because we had not addressed it directly. The moment of surprise is not constituted by the sheer fact of the existence of discriminatory practices themselves – but rather by the fact *that* such practices are communicated. Respective personal experiences as well as reports and hearsay of the adventures of others were often mentioned in a very casual manner. On the meta-level academic life is pictured (by men as well as by woman) as one where gender related discrimination does not take place, while concrete exposures to discriminatory practices are revealed incidentally on the personal level almost at the same time.

This runs along with some allusions which point to the fact that it becomes increasingly difficult to broach the issue of gender equality in academic life as such in face of a prevailing political rhetoric of equality (see for example Müller 2008 with an illustration of the same point with reference to students). Gender is *not supposed to* play role or to make a difference in science – and especially not in cutting-edge research orientated at criteria of excellence (see Brouns 2007). In every-day academic life, though, gender does constitute a structuring aspect of differentiation and discrimination. The handling of this paradox challenges female and male scientists alike, because the neutralization of the social category ‘gender’ implies a constant communicative achievement that absorbs attention and provokes uncertainties affiliated with various courses of action (see Bergman et al. 2005).

Our research has allowed us first insights into a field that is structured very heterogeneously. There is much talk about gender and equality of treatment, but the social reality is full of situations in which a broaching of these issues would indeed constitute the breaking of a taboo.

7 We assured our interlocutors not to use their statements as direct quotations, but they did make pertinent statements a number of times.

Academic performance, time commitment and gender

The aforementioned points to the fact that equality of treatment and scientific excellence follow two different logics, which many actors find difficult to communicate simultaneously. It further points to an interesting trilogy of academic performance, time commitment and gender: Scientific achievement is generally presupposed as something that is in some way *measurable*. Scientific achievement is also generally connoted with a high commitment of professional time, the basic idea being that scientific success comes as a direct result of the (measurable) amount of invested time. Furthermore, both of these aspects – time and success – are supposedly unaffected by the factor gender. The assumption, though, that gender is unrelated both to the question of time input as well as to the question of scientific success, is highly problematic.

Beaufaÿs (2005) has shown that male and female scientists alike are deeply convinced that scientific performance is in some way objectively measurable. They are also deeply convinced that they apply these objective criteria ruthlessly in order to select the ‘best’, for example in their function as reviewers for grants and sponsorships for junior researchers. Querried in more detail, however, very different selection criteria were brought up: foremost a high level of frustration tolerance, followed by endurance, resilience and engagement. Performance is, according to Beaufaÿs, always the *representation* of performance: “This perennially inscribed act of construction is taken for granted to a degree that it gets disremembered in practice just like the act with which performance is attributed to persons” (Beaufaÿs 2005: 56, translation by the author).

We have found numerous and partially ambivalent broachings of the issue ‘performance’ and ‘quality’. While the primacy of objectivity can certainly be discussed from a theoretical point of view, some junior researchers criticised the preponderance of sheer publication figures with respect to the evaluation of their achievements and opted for a stronger consideration of future performances (in other words: an assessment of their *potential* for performances). On the concrete level of the Excellence Initiative, once again, most persons concerned seem to think that in the end, whether with respect to the proposals or with respect to the people employed, *naturally* the ‘best’ have been selected – without any further thoughts on the nature of this selection process. This constitutes a further reason for the quotation at the outset: “... because she was the most qualified person in the field in this case”.

The second factor of the trias is made up of the high amount of invested professional time associated with scientific success. Kraus and Beaufaÿs reach the following conclusion after realising two qualitative studies: “The idea of science as a life-form that does not allow for any side engagements next to it, is a

basic element of the belief that holds and stabilizes scientific work” (Beaufaÿs/Krais 2007: 78, translation by the author). Long hours of attendance, for example, count as a criterion for the quality of junior researchers. Krais and Beaufaÿs insist that they are discussing a symbolic dimension here, a dimension, though, that produces non-symbolic effects. Haffner (2007) concludes on the basis of a wide quantitative study that many of the factors potentially relevant to academic performance – career motivation, mobility, continuing education, professional stays abroad, also kids – do not really have much influence on the actual career of academics. What is of importance, though, is the time commitment with regard to office hours, laboratory hours and hours spent on official journeys (home work is rather irrelevant to careers). And in this respect, men are often in an advantageous position over women because of their private preconditions.⁸

Conversations with members of the Excellence Initiative show that the factor time is being broached in very different and also ambivalent ways. Sometimes, high time commitments are described as essential for excellent science, and this is the starting point for those measures of equal opportunities which allow women to require additional means for technical assistants in order to disburden their time-schedule. Sometimes it is negated that it poses a career problem for a female Ph.D.-student with a small child to spend a couple of months at home. Sometimes the issue of high time commitments is described as a ‘myth’, sometimes it is mooted that the temporal flexibility makes up for the usual 12 – 14 hours per day – even part-time professorships seem theoretically possible now. And often the point is stressed that high time commitments do pose a problem for people with small children – but that this fact applies to female and male junior researchers alike.

Both factors – performance and time commitment –, as well as the entangled myths, seem to be of great importance in the field of cutting-edge research. And notwithstanding the view regularly expressed in the conversations that gender is irrelevant to both factors, they do in fact constitute very applicable links for a more thorough study of the trilogy of academic performance, time commitment and gender in line of the Excellence Initiative.

4 Future prospects

The project „Women in cutting-edge research“ will gain a much deeper insight into the negotiations and the bargaining around equal opportunities in line with the Excellence Initiative. These insights will be analysed by means of a combina-

8 See also Kreckel 2005 for the interrelation of the factor time and the academic careers of women, including an illustrative reference to the concept of science as a „1 ½-persons-job“.

tion of qualitative and quantitative methods. Potential factors affecting female researchers either negatively or positively on their way to cutting-edge research will be studied in detail. Based on this, concrete measures and courses of action will be recommended to further the equality of opportunity in cutting-edge-research in general as well as specifically in procedures of peer assessment and in academic review processes.

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Contemporary Challenges for gender research in the context of globalisation

Ilse Lenz

Gender research faces inspiring and interrelated challenges in globalisation. As globalisation and modernisation are deeply connected processes, we can say that the resulting *rapid transformation of gender relations* is one basic challenge. In short, this transformation can be seen as selective incorporation into *and* exclusion from the public spheres of work, politics and civil society along the lines of gender, class and ethnicity. Gender relations are changing because now some women as well as most men are integrated into the public spheres of work, politics and civil society (while most women are still assigned to carry out unpaid care work in the home) (cf. i.a. Lenz et al. 2007). Thus, the situation is different from the former hegemonial exclusion of most women from these public spheres. These processes of selective incorporation and exclusion create new chances as well as new deep tensions and contradictions with which gender research is confronted today.

Whereas globalisation contributed to a transformation of gender relations worldwide, according to some thinkers it has now moved to a second stage: The unilateralism under the US and the West is shifting towards a multipolar fragile balance including China, Brasil, India and Russia. Ian Nederveen Pieterse sums up the evidence for a “next round” of globalisation in which its axis is turning slowly like an oil tanker from North-South to East-South” (Nederveen Pieterse 2008: 707). He points to the rise of Asia and increasing East-South trade (ibid.).

What are the challenges arising from this shift of globalisation for gender research and how far is it prepared to respond to it theoretically and analytically? This issue brings us to a further challenge which results from the changing position of gender research itself: Gender studies have moved from an innovative but marginalised approach in science to an institutionalised research field which is „in and out” of academia and can claim some power of definition today. It is important to consider the transformation of structures as well as the change of the social sciences which have developed as observing institutions (Beobachtungsinstanzen) of these structural transformations. So gender research is well advised to observe its own developments reflexively. Thus it can realise its own potential and reflect on its epistemic power while it can also critically monitor its implication in discourses of dominance which may accompany its „empower-

ment in academia". To combine a critical perspective on academia as a location of social power and dominance *from without* with an engagement for changing and democratising it *from within* is the contradictory working process of gender research engaging in science.

In the following article I will discuss both of these interrelated challenges. First I will consider the transformations of gender relations in globalisation in more detail. Then I will touch on international gender studies and look at their potential to confront the challenges resulting from these transformations.

The challenge of globalisation

Globalisation is entering its next round and shifting to new economic and power relationships, it was argued above. Therefore an integrated perspective is highly relevant which combines the view on the global reconfigurations of economic, social and political relations with their concomitant gender transformations. However, social science discourses have long concentrated on Western dominance and assumed that Western gender relations form a hegemonial paradigm for development. Even with globalisation critics, this dualism of "West" and "Non-West" was upheld – and thus the eurocentrism which is inherent to this dualism because it still focusses on the "West" as the assumed apex of power.

The main arguments in this article are, that a multifocal perspective on gender relations is necessary which is more adequate to the multipolar power relations in present globalisation and that international gender studies can rise to this challenge. Forces of globalisation as gender asymmetric capitalism and global governance interact with regional and national structures of gender asymmetry and in these interactions several varieties of gender regimes¹ have evolved. While they cannot be elaborated in this context, I would like to mention some important forms:²

- the Western liberal gender regime for example in Great Britain or the USA
- the corporate gender regime for example in Germany or Japan
- the social democratic gender regime in Scandinavia
- the developmental gender regime in the Latin American states

1 Gender regime is generally defined as the combination of the structures and institutions shaping gender relations and gender culture (Connell 1995); the term has been developed i.a. by the GLOW group on Globalisation, Gender and Work (cf. Gottfried et al. 2007) and in the comparative debate on welfare states.

2 Only some important forms could be mentioned here. As I will discuss gender studies in East Asia later in this paper and my own research focus is on East Asia and Europe, in the following I will concentrate on gender regimes in these regions.

- the various developmental gender regimes in the postcolonial African states
- the developmental gender regime in the East Asian states like South Korea, Singapur or Taiwan.
- the postsocialist gender regime in China with its combination of capitalist economy and authoritarian communist party rule.
- the postsocialist gender regime in Eastern Europe and the Russian Federation with its combination of capitalist economy and democratic transition.

In the following part, I will first sketch some central aspects of global gender transformations and emerging gender regimes following such an integrated perspective. I will shortly sum up newer empirical data in a rather descriptive way. Globalisation is often analysed by looking in its main fields: economic, political, social and cultural globalisation and I will follow this example. Therefore I will first discuss some gender issues of economic globalisation.

Economic globalisation has been characterised by the ascending power of financial capital, an acceleration of foreign direct investment (FDI), high enterprise mobility and offshore production on a global scale and the rise of transnational corporation (TNC; cf. Lenz 2002). According to the yearly surveys of the UNCTAD,³ FDI has been increasing in the long run. It has been mainly directed to developed countries and it also mostly originated from them.

But since the 1990ies, developing, especially newly industrialised countries gained in importance as sources of FDI which they diverted to developed as well as developing countries. One important reason is the outward expansion by Asian TNCs from China, India and South Korea. However, South-South investment from East Asia, especially state and semiprivate investment from China, in the extracting and mining industries in developing countries especially in Africa and Latin America is another important cause. Therefore some developing states as China, Brasil, India, South Korea and their leading TNCs have entered the global economic game on their own and they develop North-South as well as South-South cooperation. They bring in their their own strategies and varieties of capitalism with their related gender arrangements (cf. below).

TNCs as specific forms of internationalised economic organisations appear as main global actors. They have emerged with spectacular dynamism in the last forty

3 UNCTAD is the UN organisation United National Conference on Trade and Development; its annual publication *World Investment Report* gives an overview of FDI flows and TNCs (as well as some data on the 100 largest TNCs respectively) in developed and developing countries, whereas the OECD concentrates on OECD members and the ILO on national employment data.

years.⁴ Since the 1990ies the importance of TNCs from East Asian and Latin American newly industrialising countries has increased (UNCTAD 2008: XVI).

The qualitative aspects of FDI and TNCs are crucial as they have shaped gendered work organisation and organisation culture. As pioneers of industrialisation, TNCs have spread their gendered work organisation and gender culture in offshore manufacturing in newly industrialised countries (NICs). In textile, electronics or food manufacturing as well as in semiskilled service jobs (for example tourism), they have gendered jobs by assigning low skilled jobs without upward mobility to young women with some education before marriage. In other industries like car assemblies, men were recruited into unskilled jobs which gave access to some on-the-job-training and some mobility however, and into skilled jobs as foreman or technicians (Anker 1998; Lenz 2002).

Economic globalisation was thus characterised by selective incorporation and exclusion along gender, class and ethnicity. First, the global mobility of capital and the reallocation of production sites have contributed to polarisation along these categories: Irregular, low paid and unskilled work was redistributed along the global value creation chains to women and men sometimes from marginalised ethnic groups in the old or new working class. But a second point is that middle class women could also join the management ranks of global corporations. In place of a general exclusion of women from management positions by gender, now positions at work are increasingly allocated in an interplay of gender, ethnicity and class. However, most women still are burdened with unpaid care work.

By drawing large groups of women into the labour market in postindustrial as well as newly industrialised countries, globalisation also has enhanced market individualisation of women. This has contributed to the erosion of male dominance in the home as the model of the male breadwinner and the dependent housewife/mother has been weakened and women gained some autonomous access to resources like education and income. Thus women have been integrated into the imperatives and rules of the market. These rules are designed for “free market subjects” offering their free and increasing unlimited labour power and not for persons engaged in care relationships as taking care of children, elderly or sick related persons.

4 Their overall numbers grew rapidly from 7000 in 1969 to some 40 000 parent firms with 250 000 foreign affiliates in 1994 and doubled again up to 79,000 TNCs and their 790,000 foreign affiliates in 2007 (UNCTAD 1995: XX, 2008: XVI). In 2007, the value added (gross product) of foreign affiliates worldwide represented an impressive estimated 11% share of global GDP in 2007. The number of employees rose to some 82 million (UNCTAD 2008: XVI). While this expresses a rising importance of employment in global firms, still in quantitative terms 82 millions are not dominant in view of the about 3 billions of persons employed at world level (cf. ILO (2009): *Global Employment Trends/January 2009*. Geneva: 12).

Whereas economic globalisation can be characterised as the selective incorporation and exclusion along gender, class and ethnicity, in political globalisation global regulation has developed based on the norms of equality, nonviolence and development. It evolved mainly in the UN decades of women and their follow-up (1975–2005) (cf. Lenz 2007; Pietila 2007). The EU incorporated its basic norm of gender equality in the Amsterdam treaty 1997 which has legal force. Thus, whereas economic globalisation was based on neoliberal deregulation and the expansion of the market, political globalisation in its first round until about 2000 also included regulation for gender equality.

This global gender regulation was based on universal norms and values while recognising sociocultural differences between regions, nations and religious or cultural communities. The UN decades of women (1975-) and its World Conferences, especially the Fourth World Conference on Women (held in Beijing 1995) provided arenas and a framework for states and social/women's movements for debating and establishing universal norms on gender equality (UN 1995). The UN is the central legitimate institution for establishing universal norms as it constitutes the international community of nations. Gender perspectives were also integrated into the social UN conferences of the 1990s. The UN decades provided a rapidly expanding international opportunity structure for women's movements all over the world (Lenz 2007, 2008; Moghadam 2005; Pietila 2007). Three results of the UN decades of women should be highlighted in this context:

1. They provided spaces for communication and agenda setting by femocrats and by global and transnational women's networks.

2. They established universal norms for gender equality especially at the UN World Conferences on Women. Most important are the *Convention for the Elimination of all Forms of Discrimination against Women* that was adopted by the United Nations General Assembly 1979 (CEDAW 1979, cf. Zwingel 2005) and the *Declaration and Platform for Action* of the UN Fourth World Conference on Women in Beijing 1995 (UN 1995). The Platform for Action 1995⁵ can be seen as a charter for global gender democracy. The central principle of gender mainstreaming is fundamental for changing organizations and enterprises; it has been incorporated in the EU treaty of Amsterdam (1997) and in gender policies of many nation states.

3. They also provided for and stimulated the establishment of gender policy institutions in the national states. In 1979, CEDAW stated that departments for

5 The Beijing Platform for Action 1995 had the broader goals of empowerment and autonomy including the body and sexuality, equality in work and society, development and structural change, peace and non-violence in public as well as personal relationships and political participation. It also proposed goals, strategies and measures for gender equality in twelve fields of action and contained detailed time frames with specific targets for supranational organizations, national governments and organizations from the economy and civil society.

women's issues should be established in national and local administrations. Women's political machineries – women's offices or ministries, EO departments etc. – were enlarged or established in the subsequent national negotiations on UN gender norms and their tasks included implementing these norms (Unifem 2000: 37-61). From the first stage of the decade of women (1975-1985) these norms and institutions contributed to an expansion of the political opportunity structure as femocrats were established in state and supranational bodies as potential allies.

The Beijing conference 1995 set a goal of integrating women with a share of at least 30% in government and parliaments. The rapidly increasing participation of women in many states from the North and the South resulted from internal social change as well as from the influence of global gender norms. In other words, while internal change often was the major driving force, national reform forces and women's movements referred to global norms to promote political representation. In South Africa for example, black women engaged in the struggle against Apartheid. They achieved high political representation after the transition and equality of gender and sexual orientation in the new constitution 1996. They also gained support and legitimacy by referring to the goals of equality and gender mainstreaming of the Platform for Action 1995.

Regulation for gender equality formed part of the first round of political globalisation. In most of the rising multifocal powers, economic integration and political participation of women have increased due to internal changes and these global norms. One essential point is that in globalisation, gender regimes are not determined only by either external or national factors. Rather, external and internal influences work in interrelated ways towards the development of specific gender regimes. For example external FDI as well the internal high integration of women into education and wage were crucial factors for the high labour market involvement of women in the postsocialist gender regime in the People's Republic of China. Global power relationships as the economic power of TNCs from the capitalist metropolises influence and intervene often strongly into the formation of gender regimes in the global East or South. But neoliberal globalisation also had a strong impact for example on gender regimes in corporate welfare states in the global North. From this interplay between national, regional and global forces, diverse gender regimes have been shaping in the last decades; the present basic constellation of some of them shall be shortly outlined now.⁶ The socialdemocratic gender regimes in Scandinavia realised high participation of women in politics and the labour market, while increasingly drawing men into family and care work. Liberal welfare states like Great Britain and the US now combine a high female economic activity with rather low political representation

6 The following statements and figures are based on the gender sections in the statistical annex of UNDP 1995, 2001, 2002, 2005, 2006, 2007/8.

in parliament (15-17%). In corporate welfare states the developments are divergent: In Germany, medium economic activity of women and a slow change from the breadwinner-housewife-model was combined with increasing political participation up to about one third of the seats. In Japan, on the other side, medium economic activity of women went hand in hand with stagnation of political representation (10% in parliament).

In the emergent powers, gender regimes are also quite different. The post-socialist gender regime in the People's Republic of China relied on export oriented industrialisation based on cooperation of Chinese management with foreign investors the economy. By providing general education and basic skill formation for women and men, the state created the foundation for joint ventures with TNC in labour intensive production based on women's work. This promoted large female nonskilled and skilled industrial employment. According to some studies, global Chinese TNCs tend to a management system of desorganised despotism in which workers are subject to comprehensive paternalist control but also to comprehensive utilisation (cf. Lee Ching-Kwan 1998; Lüthje 2007). Due to the Chinese state ideology of equality in work, women receive at least basic vocational training (OJT) and can join management (Guthrie 2006). But economic capitalist freedom is combined with dictatorial political control by the CP which claims the monopolistic political leadership. The CP and the semiofficial Women's Federation propagate the ideology of public gender equality. In the last decades, however, the recourse to Confucianism as well as the propagation of a soft and nurturing sexual female role in commcerical media and in science have both worked to popularise gender difference and tend to delegitimise equality. While a new private sphere is emerging in capitalist transition, it is widely connotated with gender difference and a recourse to neotraditional Confucanism and its unequal gender roles. The gender regime in China combines high economic activity by women (and a certain access to management and skilled work) with moderate political participation (about 20 % in representative bodies). As the Chinese Women's Federation engaged in speaking out on women's problems in economic and poltical change after 1983, there is also a critical discourse on inequality and gender which is supported by the cooperation with gender studies.

The postsocialist gender regimes in Eastern Europe and the Russian Federation combined the transition to capitalist economy with representative democracy. Due to economic needs and the ideology of women's equality by work, their economic participation is high, but their poltical participation has dropped to the bottom line.⁷ This political exclusion was further promoted by nationalism

7 Women held 6,4 % in parliaments in 2001 and 8 % in 2005; cf. UNDP 2001, 2005.

and by rightwing mobilisation with their dual gender images of male power and female motherhood.

In the developmental gender regime in East Asian states like South Korea or Taiwan, globally oriented industrialisation was led and coordinated by authoritarian neopatriarchal coordinating states. These states were based on male centred values and divisions of labour legitimised by Neoconfucianism, but they provided high level comprehensive education for boys and girls. This created the base for the democratic transition in the 1980ies and 1990ies which was based on democratic and feminist forces. Exportoriented state coordinated economic development was based on women's low wage labour in manufacturing and while female economic activity increased rapidly in the "tiger states", gender labour market segmentation was deeply entrenched. But the feminist mobilisation of women resulted in growing political participation which in South Korea was doubled from 5,9% in parliament to 13%% in 2005 (ibid; Hong 2006). The developmental gender regimes in the Latin American states show a similar pattern of considerable economic activity of women (at a somewhat lower rate) and slowly increasing political participation. In Latin America, feminists now call for the return of the state to carry out gender just policies in globalisation. National and anticolonial discourses were important as well in South Korea's equal opportunity policy which looked for gender democratic Korean ways in globalisation and for revising the former colonial Japanese heritage.

The emergence of new powers in globalisation may lead to a multipolar balance and increasing influence of their varieties of gender regime in the 21 century. But of course, the situation of men and women in the regions which are suffering from globalisation must equally be taken into account. Some examples are the men killed and the women victimised in failing states in armed conflicts exacerbated by their global context or the women farming increasingly ecologically devastated small plots.

The challenges of globalisation for gender research

If gender research wants to respond to these challenges, it should develop rooted global and transnational perspectives. This confronts us with the basic epistemological problems of the reflection of global power relationships in social science as well as with universalism and cultural relativism.

Global power relationships have been debated intensely in gender studies (cf. i.a. the summary in Connell 2009: 44-9). One of the main debates was about eurocentrism and universalism: Western feminism was criticised for projecting Western women as modern and universal while constructing a monolithic image

of third world women as victims (Mohanty 1991, 2003). Therefore Western universalism was criticised as eurocentric. But while this critique threw light on international power relations, it remained in the boundaries of the dualism between the West and the “other” which it attacked.

I would like to propose another reading of the issue of universalism. Social science evolved from the European enlightenment and it developed in the tension between universalism and its Eurocentrism which was enhanced by its affinity to the European nation state and its imperialist expansion from the 19th century. But its universalism also made for international codevelopment around the globe and for ensuing debates so that it changed to an universal thought system in modernity. In the 19th century already, social sciences with their regional rootings and international horizons developed in East Asia, Europe, Latin America, North Africa and the USA (Osterhammel 2009; Gransow 1992 for China). At present, these social sciences have universal issues, theories and methods and they debate them at the global level. But they also unfolded situated perspectives from translating and rooting these universal issues, theories and methods in distinct sociocultural contexts and reflecting on these contexts. Therefore, in long term perspective they could overcome the Eurocentrism which characterised the European approaches in the 18th and 19th century by vigorous critique and self reflection. The critique of Eurocentrism in the last decades brought forward the potential of *reflexive universalism* in which the Eurocentric or ethnocentric perspectives of nationalised social science are reflected.

The development of gender studies may illustrate this point. Already around 1910, “the woman question” was intensely debated in social sciences in China, Germany, Great Britain and Japan. With the waves of new feminism from the 1960ies, gender studies differentiated as critical research perspective in social science in various world regions. They were interdisciplinary and international in their constitution, as new approaches and knowledge were transmitted internationally and their main subject i.e., gender demanded the contribution and integration of many disciplines as cultural and media studies, social science, psychology, medicine and biology.

Gender studies developed in various regions in asymmetric power relationships namely the Western predominance in theories and resources and the male centeredness of social science. As Nicola Spakowski showed in a thoughtful analysis of women’s studies in China, feminist influences from the US and Japan and founding from the Ford Foundation made for a strong Western predominance at their very start. However, Chinese researchers defined their own experiences and needs when receiving Western theories to develop gender studies in China. She speaks of “self defined reception” (2005: 54) of Western feminist theory, but looking at gender studies in East Asia at least, the concept of self

defined development may be more adequate. In similar processes of appropriation of global concepts and self defined development, gender studies in various world regions evolved an universal orientation and regional rootings. By questioning global power relationships as well as their own positions, they evolved the reflexive universalism mentioned above. They acknowledge the differences of gender relations and gender culture in diverse regions, but also recognise the universal humanity of men and women and their basic autonomy.

Therefore, an important second point is that this internationalisation of gender studies around the globe now brings the potential for universal and contextualised gender research or in other words for a reflexive universalism. Thus, gender research can establish itself as an observing institution of globalisation which combines universal and contextualised perspectives. Some short sketches of gender studies in East Asia shall now illustrate this universal orientation and regional rooting.

Women's studies developed in Japan at the end of the 1970ies in protest to the exclusion of women from the academy under the impact of the new women's movement. They were based on the precondition of the high education level for man and women in the Japanese corporate welfare state. This tended to empower women in opening new ways in academia but also to delegitimise their exclusion from good and skilled jobs as well as from academic careers. Women's studies research program implicitly centered on questioning and reevaluating Japanese modernisation from women's experience. While they critically took up theories from Europe, the USA and in some degree from China, they also referred to the rich heritage of the history of women, the ethnography of gender and the sociology of work in Japanese sciences (Lenz 1996). Men engaged in men's studies and gender studies in the 1990ies and gender was taken up as relevant sociological perspective. After 1990, gender studies in Japan outreached to East Asia and researchers took part in cooperation with researchers and institutions in South Korea, Thailand, the Philippines and China. They were confronted with Japan's military past and the national formation of Japanese feminism when researching on the Pacific War (1937-1945) and the forced prostitution by East Asian and some Japanese women for the Japanese Imperial Army. The issue of nation and gender⁸ provoked critical self reflection by Japanese gender studies on Japan history of imperialism and their present relationship to East Asian and global gender Studies.

In South Korea, women's studies formed at about the same time as in Japan and took the everyday experiences of women as their starting point (Huh 2005). These experiences were shaped by neopatriarchy in family and wage work, international exploitation in Free Export Zones by internaional TNCs and in sex

8 Cf. Ueno 1998; Germer 2003; Mackie 2005.

tourism and by the dictatorship which ruled with short interruptions until 1987. Thus, women's studies confronted the issues of the nation and women's experience especially in contact with a women's movement which also emphasized the suffering of women, of mothers and of the Korean people (Kim 2005). This reflection was deepened by research on the so called "comfort women", Korean and East Asian women which were forced into prostitution for the Japanese army which started in the 1980ies. Feminist researchers questioned the national Confucian morality which framed this issue as one of national humiliation. They asked why the "comfort women" could not find a voice to tell of their suffering and why they were and are silenced, thus raising the problem of hegemonial norms of femininity of women and the sexual double standard. South Korean women's studies have engaged in networking with women's studies in East Asia to develop comparative paradigms and they edited an outstanding collection on Women's studies in Asia (Asian Center for Women's Studies 2005).

Women's studies in the People's Republic of China developed from questioning the effects of the economic capitalist transition on women's lives. They could build on the ideology of women's equality by public work and their access to education during the Maoist era (Wang 2005). At the starting point, they received the support of the National Women's Federation which was looking for a new role in economic and political change. Debates arose around the Marxist and Maoist theory of women's liberation and the need for independent Women's studies which then could find their own footing and institutionalisation in many universities (Wang 2005; Spakowski 2005). The IV. UN World Conference of Women in Beijing 1995 brought global influences and networking as well as international legitimacy for women's studies. The main issues were the postmaoist transition, the changing chances in economy and politics and the meaning of gender difference or equality in this context. Some currents emphasized (biological or social) femininity and criticised the Maoist schematic gender equality in which women had no voice and were homogenised as "iron girls" fighting for socialism. Other approaches analysed these discourses from their implicit construction of gender and while critical of the socialist ideology of collective gender equality, criticise the spread of essentialist ideas of gender difference and women's role which legitimises the widening gender inequality in economic transition.

The triannual international conference Women's Worlds was held in Seoul in 2005 and Chinese, Japanese and South Korean women studies exchanged vividly among each other and with global gender studies. They demonstrated their theoretical and empirical innovative potential in fields as economy, work and gender, gender and history, violence against women in China, Korea, Japan, the Philippines etc, and young feminism in East Asia.

This example suggests that gender studies now have the potential to critically analyse and reevaluate globalisation and modernisation. They do not stay fixed to their boundaries – be they national or world region/North, East or South. Rather they have the potential for multipolar perspectives in order to observe globalisation and to critically intervene into it. Transnational and global exchange and cooperation are one elementary essential to realise this potential.

I would like to end with some examples how to promote this cooperation:

1. Gender studies should provide transnational and global perspectives in the curriculum. For example, students should read and research in comparative ways about “gender” as a category and “gender studies” and debate what it means in China, in Germany, in Japan or in Korea. Transnational internet courses and debates can deepen this reflection on the contextual and the universal meanings of gender.
2. Institutional mechanisms and facilities for transnational research have developed, but should be consolidated and aim to include the researchers from the global East and South and younger researchers. Further important means of exchange and cooperation are transnational internet homepages and journals with transnational editorial boards.
3. Joint research in networks and tandems, tridems or quadrems etc. on topics as gender asymmetry and varieties of capitalisms/gender orders, ecological risk and gender, realisation of peace and security in the home and around the globe can concretise these promises.

The challenges are immense – as are the potential subjects and chances.

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‘Security’ Architectures, New Ontologies and the Category of Gender. Contemporary Challenges in Feminist Technoscience Studies¹

Jutta Weber

Introduction

When Afghanistan refugees pass the mountainous border to Pakistan they get their irises scanned by UN officials². Asylum seekers in Europe mutilate the tips of their fingers for not being identified via the Eurodac, a database of the fingerprints of all asylum seekers of the EU. More and more European countries introduce passports with RFID chips containing biometric data of their citizens. It seems that the body becomes the primary source for the technological verification of identities in the 21st century and the border becomes “part of the embodied identity of certain groups of people, verifiable at any of the many points of access to increasingly interconnected databases“ (Van der Ploeg 2005: 133). These are only some examples of manifolded discourses and practices within the context of new ‘security architectures’ with its social sorting, policing, militarization and re-masculinization of society. These systems get increasingly enlarged – legitimized with security issues during the ongoing western ‘wars on terror’. Astonishingly, there is only little discussion on new ‘security’ resp. surveillance technologies with their practices been deeply inscribed into our everyday life. In my opinion these issues are main challenges of feminist and other critical technoscience studies today.

Other central issues are the profound changes in the ontological and epistemological groundings of technosciences. With the molecularization of matter and bodies, the dissolution of the borders between nature and culture and the increased production of hybrids we are faced with a move of recent technosciences towards a constructivist understanding of nature, bodies and bodily processes. This development partly obliterates the feminist critique concerning the essentialism of western science and that of humanist concepts such as nature, body or sex,. At the same time we do not only find a concept of the body as a toolkit

1 In the following I will partly draw on Weber 2006

2 UN News Centre 2007

– a thoroughly constructivist and denaturalized understanding but also a movement of renaturalization of bodies transformed into body data and closely linked to renaturalized processes of essentialized biometric identification processes. These are two contradictory movements which need to be reflected.

There is a bunch of other crucial issues in recent feminist technoscience studies such as the interdisciplinary travelling of concepts between technosciences, humanities and social sciences, the recent discussion on human-animal studies, or the growing interest in issues of materiality. But with regard to limits of space and time, I will focus on the first three topics which demand – at least from my perspective – urgent and comprehensive discussion. We really have to address these issues and to reflect them as well as our own position in these discourses and practices – to stay a lively, interesting field of research.

Technoscience

Before I go into more details, I would like to introduce the term ‘technoscience’ – which replaced the term ‘science & technology’ in science and technology studies (STS) in the last decade – and to discuss its development and meaning in contemporary feminist STS.

Originally, the term ‘technoscience’ had been conceived by the French scholar Bruno Latour to describe the close amalgamation of science and society, whereas Donna Haraway elaborated it further highlighting the cultural and historical dimension.

According to Latour, ‘technoscience’ comprises all the elements which are linked to scientific issues „no matter how dirty, unexpected or foreign they may seem” (Latour 1987: 174). Latour argues that all successful research must involve and mobilise powerful allies – from economic and political resources to infrastructures and non-human actors such as organisms or machines. This common basis is also one of the reasons for the permanent intermingling of nature and culture, for the production of hybrids, cyborgs and chimeras in modern times.

Donna Haraway puts the term technoscience in a broader frame. For her, ‘technoscience is cultural practice’ (Haraway 1997: 149) She – and other scholars especially in the field of cultural studies of technoscience – reinterpret technoscience as an integral part of western culture (Reinel 1999: 166) Science and technology are intimately interwoven not only with each other but also with society, industry, culture and everyday life. According to Haraway ‘technoscience’ is technoscience culture in the sense of a life form, an comprehensive practice, which again is a product of the increasing technicification of everyday life as well as a hybrid of posthuman high tech and postmodern pop culture. In

this understanding, the implosion of science and society, of nature and culture, science and technology, is not an old and only recently understood feature of (non-)modernity (as Latour argues) but it also indicates a new epoch emerging in the 1950s of 20th century: „... , technoscience indicates a time-space modality that is extravagant, that overshoots passages through naked or unmarked history,. Technoscience extravagantly exceeds the distinction between science and technology as well as those between nature and society, subjects and objects, and the natural and the artifactual that structured the imaginary time called modernity. I use technoscience to signify a mutation in historical narrative, similar to the mutations that mark the difference between the sense of time in European medieval chronicles and the secular, cumulative salvation histories of modernity.” (Haraway 1997: 4-5) The implosion of nature and culture and the intensive production of hybrids is not a specificity of modernity but is the expression of a qualitative historical change.

For Latour as well as Haraway, 'technoscience' signifies the dissolution of the traditional distinction between science and technology, knowledge production and application-oriented engineering, theory and practice. Most of *contemporary* Western theory recognizes science and technology as a central part of our culture with its discourses and practices tightly interwoven with our daily life, with industry, art, politics, etc. Therefore technoscience can be seen *as culture*, as a social practice, a heterogeneous, complex and at the same time as a situated process in which many different agents produce meanings and configure cultural boundaries.

On the History of the Feminist Critique of Technology

For the feminist and other critique of technology, the understanding of technoscience as part of everyday culture was for a long time not self-evident. In the *70s and 80s*, science studies in general concentrated on classical sciences such as physics, biology or chemistry. The focus was directed towards the so-called 'Big Science' (Price, 1963) and often science and technology were equated with hierarchically organized scientific and technological projects realized/organized by governments and the military. Huge technological systems like nuclear power plants, weapon systems, and undertakings like the Manhattan Project or ARPANET were seen as the prototype of technology. This is one of the reasons why feminist theory described science and technology as a 'masculine culture' (Wajcman, 1991), partly driven by masculinist dreams of omnipotence or ruled by fantasies of death (Easlea 1983; Keller, 1985). The equation of science and technology with military and government projects often led to a demonology of

technology in feminist theory. Think for example, of the early critiques of reproduction technologies which were considered to be driven by the longing to unveil the secrets of life and a masculinist will to appropriate women's reproductive abilities. (Corea, 1985; Wajcman, 1991). Today, in-vitro-fertilization and pre-natal screening is a common practice.

Technology was – and for example with regard to engineering education and culture – still is described as a genuine 'masculine culture' grounded in power and gender relations, as well as identity politics. From the 70s and 80s on, some argued that this masculine culture grounded in a 'natural' tendency of men towards aggression and an obsession with control, while others distinguished – like for example Judy Wajcman – 'between different forms of masculinity in relation to different areas of technology' (Wajcman, 1991: 143).

One of the reasons for the lack of interest in science and technology studies in feminism until the late eighties was the understanding of science and technology as military-biased 'Big Science' and 'masculine culture'. And the reluctance to deal with military issues in feminist contexts might be still the reason for the absence of feminist military and security technology studies today.

In the 80s, science & technology were not only identified with 'Big Science' but media and household technologies as well as new technosciences such as computer science, robotics or neuroscience were, for the most part, disregarded. But the increased use of TV, video, personal computers (PCs), mobiles, and other communication and information technologies as well as the proliferation of biotechnology in agriculture, medicine, and procreation challenged the identification of science and technology with centralized, top-down research projects and huge technological systems. With these developments, science and technology are increasingly understood as an integral and central part of everyday life.

At the same time, more and more feminist and other theorists have shown how technoscientific discourses and practices lead to a reconfiguration of nature, body, and other central humanist concepts. New ways of appropriating nature in Western societies reshape the relations of nature, gender and technology facilitating the idea of the co-construction of technoscience, society, and gender. To give an example: When reprogenetics or sex change becomes a common commercial practice for many people or care robots are developed to take over the feminized task of caring for children or sick people, old borders between sex and gender, between private and public, 'masculinist' technology and a 'feminine' lifeworld implode. Technoscientific practices as well as the constructionist move in feminist and other science studies work towards an implosion of borders of the social and the technoscientific. Thereby, relations of domination are becoming more complex and opaque, while the reshaping of central categories through technoscientific practices opens up new options for the reconfiguration of gender,

nature, and sociotechnical systems. With the growing complexity of sociotechnical structures of domination the reshaping of old hierarchical categories seems possible and technophobia or demonology of technology appears more and more inadequate to understand contemporary technoscientific culture.

I think studies on the bonding of technoscience and biocapital (Franklin 1993; Haraway 1997; Rose 2001), on new forms of 'technobiopower' (Haraway 1997: 12), on the emerging concept of 'Life itself', rethinking Foucault's approach of biopower in the age of technoscience (Foucault 2003), is quite promising but needs further elaboration – not only with regard to the life sciences but also in ICT, security and surveillance studies, etc.

In my view, the aim of today's technoscience studies is to understand our life conditions in the age of technoscience, to make the omnipresence of technoscientific discourses and practices in our daily life visible and to analyze its immanent power relations and mechanisms of in- and exclusion, not only with regard to gender, race, class, age etc. but also with regard to structural effects of standardizations and categorization (Bowker/Star 1999).

Today it becomes obvious that technology as an intimate part of our life can no more be regarded as the 'Other,' but as an integral part of our human condition.

Women Technoscientists, Masculinist Engineering Culture and Human Capital

In a historical perspective, feminist studies of science and technology were mostly driven by women scientists and engineers. They were confronted with the discrimination and silencing of women in science and technology via institutional and gender identity politics. In face of this situation, they began to analyze the mechanisms of their exclusion and reconstructed the achievements of other women scientists, making them more visible and public. This supported the deconstruction of scientific values such as neutrality and objectivity – a trend that we also find in fields like philosophy and history of science of technology of that time³.

But feminist STS also made the underlying misogynist stance of many scientific constructions visible. For example, feminist analysis made the construction of a world with strict sex differences (male/female) in the field of biology visible adding culturally grounded and value-laden properties such as active/passive, independent/dependent, primary/secondary to those different bodies⁴.

Additionally, the increasing hybridization of science, technology, military, industry, and politics also helped to undermine the understanding of science as

3 See for example Rheinberger 2007.

4 See Keller, 1995: 87.

the only legitimate producer of knowledge. From the 70s on, the women's and other social movements challenged so-called scientific 'truths' about the nature of nature, of woman, and of sex.

The growing interest in science and technology studies from the 80s on is partly attributable to the deconstruction of the grand narratives of progress, scientific truth, and objectivity. Together with the deconstruction of traditional scientific values and the challenging of given and essentialist sex differences, technoscience became a more promising field for women's, feminist and gender studies.

Today, only little research (funding) goes into critical studies on technoscience and technobiopower, in the deconstruction of the gendering of science and technology. Most of the research funds go to research on mechanisms of exclusion of women technoscientists respectively to attempts to promote women's participation in science and engineering. This might not be surprising as governments, professional organizations of scientists and engineers as well as companies increasingly discover women as a valuable resource in their search for human capital in science & engineering where the numbers of enrolling students are declining permanently (<http://www.wisecampaign.org.uk/>; <http://www.uicwise.org/>; <http://www.komm-mach-mint.de/>). In addition to a huge and still growing number of studies on women in science and engineering, a lot of practical activities are sponsored – different kinds of women's summer schools, projects like the German *informatica femminile* (<http://www.informatica-feminale.de/>) in Bremen, the Austrian *ditact* in Salzburg (<http://www.ditact.ac.at/>) or the *Computing Women Congress* (<http://www.cwc.org.nz/>) in New Zealand.

Technoscience edutainment is today well-sponsored by governments (think of science museums, science competitions⁵, Girls Days⁶, children universities or Lego Mindstorm robot courses⁷) as well as by companies and private funds⁸ while research funds for feminist science and technology studies are rare.

The women's summer schools but also the technoscience edutainment are supposed to work against the disinterest of girls in technosciences, to support female students in their career and networking activities and to compensate dis-

5 See for example the 'Forschungsexpedition Deutschland' <http://www.forschungsexpedition.de/> (last access Aug, 13th 2009).

6 For example, in Germany there are yearly *Girls Days* in every German city, where attention is mainly given to interest girls in technoscientific careers.

7 *Educational Robotics* – mostly Lego Mindstorm robot courses for girls and sometimes also boys – became quite frequent in German speaking countries. Not only the *BMBF*, the German Ministry for Education and Research, but also renowned Institutes for Science & Engineering such as the Fraunhofer Institutes support these courses. Astonishingly, they never underwent *long-term* evaluations in order to know whether these actions have a sustainable effect with regard to the interest of girls and young women in science and engineering.

8 See as an example the 'Ideenpark' conceptualized and sponsored by ThyssenKrupp.

advantages they experience during their academic studies and to promote science & engineering as an attractive profession for women. In the beginning mostly female – and often feminist – technoscientists had been initiating and organizing summer schools, conferences and professional networks while today it is more top-down organized and oriented along the interests of technoscientific entrepreneurs and companies. Many scientists, students, institutions, and managers – not only from the technosciences but also from the humanities and social sciences – were and are engaged in these projects in the last 30 years. Best-practice-certificates were awarded for different kinds of summer studies. But it seems as if these academies, seminars and summer schools mostly reached those women who are already studying science & engineering and that these activities didn't help much against the disinterest of the majority of women in technosciences. After all these years of research and actions, the percentage of women studying science and engineering isn't much higher in many fields than it was 30 years ago. On the contrary, in some fields the numbers are even declining. For example, in computer science in Germany, 19,6 % of the first-year students in 1977, 16,8 % in 1987 and 17,4 % in 2006 were females⁹. And while the numbers of freshwomen in electrical, mechanical and construction engineering rose significantly in the 1990s in Germany (which might be related to the German reunification and the fact that the former Democratic Republic of Germany had an established tradition of women studying science and engineering and of female engineers and women technoscientists working in the industry), they are now declining again since 2003¹⁰.

While it was crucial to make the marginalization of women in science visible, the symbolic and sociopolitical dimensions of this marginalization and the persisting effects of a masculine engineering culture were and still are underestimated. In a time where we still have a male-dominated engineering culture while the positive image of science and technology as well as the interest in pure research are declining, it seems to be the easier option to invest in advertisements and to establish career programs for women scientists and 'other Others' than to rethink the values, task and direction of today's science and engineering professions.

In such a time, it seems to be consequent to neglect feminist and other critical technoscience studies that analyse engineering cultures, the gendering of technology design or the mechanisms of 'technobiopower' (Haraway 1997, 12) while investing broadly in mainstream technology assessment and innovation studies.

But a profound change in western engineering culture can only be established on the basis of a solid theoretical and empirical *analysis* of the gendering

9 Statistisches Bundesamt 2006, nach <http://www.kompetenzz.de>.

10 <http://www.kompetenzz.de/Daten-Fakten/Frauen-in-den-Ingenieurwissenschaften-Das-Ende-einer-Erfolgsstory>.

of science & technology in all its dimensions – not only by affirmative actions for women scientists, guidelines for gender-sensitive technology development and the development of so-called ‘female’ or ‘women-friendly’ technologies. Especially the latter has a tendency to reify gender dualisms insofar as so-called specific ‘needs’ and preferences of women are constructed, materialized in technoscientific applications and thereby prolonged. In my opinion, this is the effect of the attempt to integrate women in a masculine engineering culture without challenging and reforming the latter.

Technoscience & Transgender: The Body as Tool Kit

But I want to return to my starting point, the gendered critique of science & engineering and theoretical developments in recent technoscience studies. It is important to point out that recent radical changes in the *theoretical* premises in science and technology are not the effect of the feminist and other critiques of science and technology in the first place, but the outcome of the emergence of new technosciences. The epistemologies and ontologies of the latter depart from the classical Cartesian heritage, with its dualism of observer and observed, subject and object, body and mind, moving towards constructivism and ‘posthuman’ concepts of nature, matter and the body. And it is a certain irony of history that these changes happen parallel to the radical challenge of the scientific and technological discourses of truth by the feminist critique of science and technology which made visible that nature, sex, and biology are not given, but agents in a high-stakes game.

Technosciences – different from traditional sciences – do not concentrate on subjugating nature and its processes through creating artificial natures via technological artifacts and systems, but through designing and engineering nature in the sense of reshaping and improving it on the basis of the molecularization of matter (Kay, 1996). Today’s technosciences conceptualize nature as a toolkit which makes the world a realm of endless possibilities of recombination – using artificial evolution and tinkering to explore new and innovative possibilities of development and investment. As a consequence, organisms are no more conceptualized as static and situated in a given order, but understood as evolving, parallel and distributed networks, that is, ‘fast, responsive, flexible and self-organizing system[s] capable of constantly reinventing itself, sometimes in new and surprising ways’ (Hayles, 1999: 158).

In other words, the constructionist understanding of a fluid nature, of ever changing organisms, and sex as modifiable is not only the result of the inquiry of critical feminist theory but part of the epistemological and ontological grounding

of contemporary technosciences. While traditional modern scientific theories regarded women and nature as immutable, the posthuman bodies of technoscience are conceptualized as flexible, fluid, and ever changing. With this epistemological and ontological changes, the idea of natural behaviour of the sexes, of a 'natural' nature governed by teleological and harmonious principles became history – and with the radical feminist critiques of the naturalist or essentialist grounding of the natural sciences and its critique – at least with regard to the *practices* of technoscience such as molecular biology, robotics and Artificial Intelligence. What I am not saying, is, that (re-)naturalization is not an issue anymore. Beside the move towards denaturalization in contemporary technosciences, we find a strong rhetoric of renaturalization in popular science, technosciences, and popular culture. Spontaneity, change, and dynamics – central keywords and properties in contemporary technosciences – are often reinterpreted as natural, evident, and given by 'Mother Nature'. The change of ontological and epistemological groundings in the technosciences are made invisible by declaring the turbulent, evolving body not as an effect of the change of paradigm in (techno)science but as natural again. But this doesn't make the move towards constructivist grounding undone.

At the same time naturalist understandings of (bodily) identity are reinforced via biometrics, DNA and fingerprint databases. And I think it is one of the central tasks of feminist technoscience studies to invest more into these contradictory movements of denaturalization and renaturalization in the age of technoscience. I think we need a closer analysis also with regard to recent discussions on trans- and postgender, of critical feminist concepts of queer, fluid bodies and identities.

Technoscience and the Fluidity of Sex/Gender

Precedent and partly parallel to the claim of the fluid, open and changing character of the gendered body in postmodern feminism, denaturalizing technoscientific discourses and practices such as new reproduction technologies (IVF, surrogate motherhood,¹¹), cosmetic surgery, hormone therapy and sex-change surgery undermined the dual sex/gender-system and the so-called 'natural'. In these tech-

11 Another case in point is collaborative reproduction, in which body parts from different, sometimes anonymous donors are made to fit together in the laboratory. The laboratory product -- an artificially fertilized egg -- is subsequently implanted in a woman, who is not necessarily the child's genetic mother. Collaborative reproduction becomes possible by the separation of sex, sexuality, reproduction, and kinship through which new complex relations of social and biological kinship emerge. These denaturalizing technoscientific practices also produce new social and economic relations in the process of reproduction. But these new practices of reproduction are made invisible at the same time by renaturalizing rhetorics of 'blood ties' and the right to a 'child of one's own'.

noscientific practices predominates an understanding of the body as plastic and dynamic body, of a tool box that can be shaped, enhanced, reconfigured. These developments supported – willingly or not – the denaturalization of sex (Stone 1993; Stryker 2000). Reconstructive surgery and hormone therapy, sex with their technoscientific possibilities of sex change made sex – at least for some mostly rich, white, western people – an open, free-floating category. Thus the dual sex/gender system is destabilized by making it (at least theoretically) a matter of technological investigation and of individual choice and in Western societies – at least for those who can afford it and are willing to obey to the legal preconditions.

System, information and self-organization theory as well as the rise of molecular biology were the preconditions for the new understanding of the body as an assembly of functions, organs, cells, molecules, genes and other small parts that can be dis- and reassembled. Here lies – at least partly – the offspring of the postmodern idea of fluid, flexible bodies.

Therefore it is important for feminist technoscience studies to rethink the close parallels of some of the ontological and epistemological assumptions of recent feminist theory and contemporary technosciences. Do these affinities point toward similar frames of thought? Are the concepts of flexibility, fluidity, etc. used in the same way and do they transport the same meanings in feminist theories and the discourses and practices of technosciences? We shouldn't take substantial differences for granted before we haven't investigated these questions further. Let's rethink the denaturalization of gender and the body in feminist theory AND technoscience. For sure, the motivation for this reconfigurations were and are different – but what about their outcomes? And what are the consequences of these similarities and affinities and how do they affect the development of a critical concept of sex and gender? These questions need further elaboration. But I will stop here and go on to my last topic concerning (the lack of) military/surveillance/security studies in feminist technoscience studies.

Feminist Technoscience Studies after 9/11

At the beginning of my essay I mentioned some recent applications of security and surveillance technologies in a global context: Afghanistan refugees getting their irises scanned along the Pakistan border or every asylum seekers registered in the European database Eurodac with their fingerprints. Lately, some (German) politicians and police administrators claimed access to Eurodac in order to use it for crime prevention¹². At the same time, European and US passports and ID

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cards get equipped with RFID-stored biometric data. At airports such as Amsterdam or New York people get scanned with terahertz detection systems ('naked machines'). More and more countries introduce passports with RFID chips containing biometrical data. We can watch a growing demand for the technological verification of identities and the storage of these data in international data bases. In the course of these developments, the body becomes a prime base for identity – a movement of renaturalization that I have mentioned above.

We do not only experience a rapid spread of so-called security architectures that are closely linked to a limitation of civil and human rights, but also a tremendous investigation in military technology since 9/11 and the before unthinkable use of torture in the western 'wars on terror'. At the same time, security and military applications seem to be closely intertwined. For example, unmanned aerial vehicles (UAV or drones) used by the US Homeland Security Department to monitor the US-Mexican border and which are supposed to be also soon used in Europe by the EU agency Frontex – were developed for the US 'war on terror' in Afghanistan and Iraq. These drones – uninhabited aerial combat vehicles – are controlled from US military bases in Nevada, where US soldiers fire missiles on insurgents – and many civilians – in Afghanistan, Pakistan or Iraq with a 7000 km distance to the battlefield. Later in the evening, these soldiers will go home to have dinner with their family. These new developments and especially the role of security and military technologies needs close analysis from a critical and feminist perspective – not only with regard to the limitation of human and civil rights in general but also as sign of a new technobiopower and its importance for standardization, social categorizing, mechanisms of in- and exclusion, in which the body is used as a essential to 'secure' one's identity – or to exclude poor immigrants from vital services and help.

Rethinking feminist technoscience studies in the course of the invention resp. expansion of military and security technologies architectures reminded me of the beginning of the feminist critique of science & technology in the early 1970s: Central topics at that time were the military-industry complex, the technologies of life and death (nuclear power, reproductive technologies, Artificial Intelligence, etc.) with their euphemistic description and omnipotent visions, the exclusion of women from science & technology, the essentialism and dualism of western science, the intertwinement of technology, masculinity and power and the impact of nuclear power, military technologies, ICT and reproductive technologies on society. In some aspects, this critique might have been too simplistic in its technophobia and quick identification of masculinity and technoscience, nevertheless, it is striking how much of these and related issues are still (or again) relevant after more than thirty years later.

Feminist technoscience studies shifted their focus from questions of gender structures to those of gender symbols and identities, from macro to micro, from the concept of technology as (huge and top-down organized) technological systems to individual technologies of everyday life. With this shift, the perspective of (individual) participation, inclusion and empowerment (and ‘other Others’) became increasingly important – especially in the field of information technologies. While military technology was one of the main concerns of feminism in its beginnings, recently there is only little work done on military technology in feminist technoscience studies – and we find a similar situation in the field of surveillance studies. But I think we need to address these questions which are closely linked to mechanisms of social sorting (‘who is allowed to enter Europe and who is not?’), to the increasing reduction of human and civil rights and the re-militarization but also a re-masculinization of society. Feminist theory in general has pointed to the close nexus of hegemonic masculinity and the military, therefore a close analysis of technoscience, globalization and the military-industry resp. security-industry complex (for example in ICT, biometrics, robotics, nanotechnology, pharmacy, brain-machine interfaces) and its impact on society are highly needed which is up to now only done by a few STS researchers (Ball 2005; Blackmore 2005; Franko Aas 2006; Masters 2005; van der Ploeg; Weber 2009).

In contrast to feminist surveillance/military studies, feminist security studies with its focus on policy, human rights, etc. is a growing and lively field while the mainstream of feminist STS mostly disregards the issues of military/security, technology and gender. For example, the ‘Encyclopedia of Gender and Information technology’ (Trauth 2006) with its two big volumes and more than 1400 pages shows only twice the term ‘military’ in its index. Obviously, participation, inclusion and (E-)empowerment are in the centre of today’s ICT & gender research while the majority of contributions on military and gender today focuses on the integration of women into western military.

The new forms of militarized (and essentialized) forms of technobiopower, the increasing ‘securization’ and militarization of civil society can’t be ignored by feminist theory and gender studies. We need to discuss these new forms of surveillance, technological forms of identity production as well as militarized forms of technobiopower – without repeating the mistake of a demonology of technology.

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Innovative changes in biomedicine: integration of sex and gender aspects in research and clinical practice

Ineke Klinge

1 Introduction

Which innovation and why?

In the past ten years my research has concentrated on the innovation of biomedical research practices in terms of paying attention to sex and gender aspects. This article will address the newly gained insights and the innovative knowledge that has been produced.

The innovation of 'traditional' biomedicine started with the women's health movement and the feminist critique of science in the 1980-s. Involvement with life sciences and biomedical research is visible in publications as early as Alice through the Microscope by the Brighton Women and Science group in 1980 which focused on science and women's *lives* and where Alice discovered an amazingly gendered world of science! (Curran & Brighton Women and Science Group, 1980) A patriarchal science was unveiled that neglected or stereotyped women's bodies, health and lives. Soon after, pioneering feminist biologists like Lynda Birke and Anne Fausto-Sterling started *academic* critiques of biomedicine, addressing biology and medicine in the first place (Birke/Vines 1987; Fausto-Sterling 1985). The strategies they employed were directed towards the biomedical method itself. Both authors could demonstrate that the scientific method was not as objective as it was believed to be; instead, effects of gender were visible in the production of biomedical knowledge. The claim that processes of gender had an influence on the production of biomedical knowledge at the same time opened up possibilities for change. Much knowledge that was regarded by feminists as 'biology is destiny', turned out to be far from deterministic. If taken account of the influence of gender on biomedical knowledge production, many myths about women and women's roles could become dismantled. Although it is a biological fact that only women can give birth to a child, in no way this is a blueprint for who (mother or father) should be charged with caretaking during the consecutive years. Within the scope of this article a detailed historical account of those twenty nine (29) years of innovation is impos-

sible and I can only refer to Londa Schiebinger who has twice produced an overview of the feminist involvement with science in her books *Has Feminism changed Science* and *Gendered Innovations in Science and Engineering* (Schiebinger, 1999, 2008). She has described the various fields in which a lot has been accomplished in those years including biomedicine. Gender Medicine marks the latest strand of innovative biomedical research: it focuses on gender and health, and addresses women's and men's health issues in research and clinical practice.

End of the one size fits all era

The most concise conclusion of the recent wealth of research into sex and gender in relation to health and disease is that it signals the end of the 'one size fits all era' in which the 'male norm' in biomedicine was not even questioned. Sex and the newly introduced concept of gender have now been recognised as determinants of health and disease (Bird/Rieker, 1999; Doyal, 2001; Krieger, 2003; Phillips, 2005; Pinn, 2003). For a good understanding of the impact of both sex and gender it is necessary to introduce the conceptual distinction between the two (Health Canada, 2000; Klinge/Bosch, 2005; WHO-Europe, 2001; Wize-mann/Pardue, 2001). *Sex* refers to biological differences between men and women such as chromosomes (XX or XY), internal and external sex organs (ovaries, testes) and hormonal profiles (of estrogens and androgens). Biological sex differences are often viewed as dichotomous, either male or female, although actually biological variability can be large (Fausto-Sterling, 2000).

Gender refers to the socially constructed roles and relations, personality traits, attitudes and behaviours and values that are ascribed to the two sexes in a differential manner. While sex is a biological fact that is the same in all cultures, what that sex means in terms of gender roles can be quite different across cultures. To illustrate this Susan Phillips uses the example of menstruation: all women in the world will at a certain moment in time stop menstruating. The value attached to menopause and post-menopause however shows a large cross cultural variation (Health Canada, Gender & Health Collaborative Curriculum Project). The WHO further elaborates *gender roles*: they determine differences in opportunities and resources available to women and men and differences in their abilities to make decisions and exercise their human rights including those related to protecting health and seeking care in case of ill health.

As gender processes are at work on several levels, each with implications for health and disease, the following examples serve to illustrate the health impacts on the respective levels.

Gender effects at the *individual* level: male and female gender roles can influence health behaviours and as a consequence individual health. It is well known that men delay the seeking of help from a general practitioner because the stereotypical male gender role prescribes to be strong, not to show weakness and to 'tough it out' (Branney/White, 2008; White, 2001). The presentation of health complaints by women reflects their socialization and communication patterns between doctors and patients are influenced by gender stereotypes (Meeuwesen/Bensing/van den Brink-Muinen, 2002; Roter/Hall/Aoki, 2002). Gender role behaviour plays a role in compliance with a treatment (see the example of teenagers and living with asthma and diabetes later on) and in risk perception, where men and women express different levels of concern about the same risks and attribute a different meaning to those risks. This applies to men and women's perception and fear of disease (Gustafson, 1998).

Gender effects at the *institutional* level: job segregation along the lines of sex can lead to differential exposure rates for men and women to different occupational hazards like toxic chemicals, different ergonomic demands, risk of accidents and psychosocial stressors (Messing/Mager Stellman, 2006).

Gender effects at the *symbolic* level: Metaphors used in biomedical textbooks have been demonstrated to reflect stereotypical gender images. The romantic love between Rambo Sperm and the Sleeping Beauty (the egg) has been criticized by Emily Martin, and has induced alternative narratives (Martin, 1991). To portray female biological processes like menstruation as 'failed production' and menopause as 'the breakdown of nervous control' has serious implications for how women experience these processes.

Although conceptually distinct it is of pivotal importance to be aware of the *interaction* between sex and gender (see examples later). Within the scope of this article I will focus on innovations in terms of attention to sex and gender, yet another important insight in biomedical and public health research is that of interaction between sex, gender and other dimensions of difference: age, ethnicity, socio-economic status, sexual orientation (Schulz/Mullings, 2006).

2 Gender knowledge in biomedicine; the example of the EU research policy

Insights into the relevance of sex and gender for health and disease have had far-reaching consequences for research practices in biomedicine and public health. Because of concern about the lack of attention paid to sex differences and ethnicity in clinical research, inclusion rules for women and ethnic minorities in clinical research were implemented by the National Institutes of Health (NIH) in the USA in 1994 (NIH, 1994). However monitoring studies in 2000 and 2001 re-

vealed that progress had been made in the recruitment of women but that data analysis by sex was often absent from the reports (Marrocco/Stewart, 2001; Roth, 2000; Vidaver/Lafleur/Tong/Bradshaw/Marts, 2000).

In Europe, a window of opportunity for innovation of biomedical practices from a gender perspective was created when the EU Gender Equality Policy, enshrined in consecutive treaties, was translated to research. The 'gender and science' issue had been seriously put on the agenda by the European Commission in their *Communication Women and Science: Mobilising Women to enrich European Research* (European Commission, 1999). The communication acknowledged the severe underrepresentation of women in science and, more importantly, defined the policy task of promoting gender equality in terms of three dimensions seen as characteristic of the relationship between gender and science: science *by, for and about* women.

In 2000 the Gender Impact Assessment Studies were launched and the *by, for and about* motto guided the analysis. Seven teams were charged with an assessment of the implementation of the Fifth Framework Programme for Research (FP5). We ourselves conducted the assessment of the research programme for the Life Sciences (*Quality of Life and Management of Living Resources*) containing large parts of biomedical and health research (Klinge/Bosch, 2001). The analysis should investigate the participation of women in FP5 research at all levels and analyse whether the research themes, methods and issues prioritized in FP5 affect women and men differently.

In executing that study we could mobilize all insights that had been produced by gender studies scholars and other actors in the preceding years on current biomedical practices. Using international literature as a resource database, we could demonstrate that the attention paid to sex and gender in the work programmes and, as a consequence of this, in the funded research turned out to be fairly limited. Targeted recommendations were developed for the next Framework Programme, FP6. No surprise that our key message was that sex and gender do matter when studying health and disease and that they should be addressed when relevant. Or framed differently: it can not be taken for granted that sex and gender do not matter. Our recommendations became the basis for the new guidelines for applicants in FP6 in the fields of health.

With FP6 the *by, for and about* motto of the EU gender equality policy was changed into the 'formula' $GE=WP+GD$. The idea expressed in this formula is that the promotion of gender equality (GE) concerns two issues: The stimulation of women's participation in research at all levels (WP) and the consideration of the gender dimension of the research content (GD)(European Commission, 2003). For the domain of biomedicine and health it was obvious that the 'gender dimension' should be understood as considering the impact of biological sex

differences and the possible effects of gender in biomedical and health research. It became a leading principle for biomedical and health research under FP6.

The work programme for the FP6 Thematic Priorities 'Life Sciences, Genomics and Biotechnology for Health' and 'Food Quality and Safety' contained specific formulations on the relevance of sex and gender. "Sex and gender aspects in research have a particular relevance to this Theme as risk factors, biological mechanisms, cause, clinical manifestation, consequences and treatment of disease and disorders often differ between men and women. The possibility of gender and sex differences must therefore be considered in all areas of health research where appropriate".

Furthermore, large collaborative projects (Integrated Projects and Networks of Excellence) had to write a so-called Gender Action Plan (GAP), as part of the proposal, describing the measures the consortium would take to pay attention to WP and how to consider sex and gender aspects in research (GD) (European Commission, 2004).

Issuing (top-down) guidelines is one thing, but what would you have to do if you were at the laboratory bench, working with the usual technical possibilities of basic science, animal experiments, clinical testing?? It was not difficult to imagine that researchers would face a number of challenges (conceptual, methodological, practical or ethical) to integrate sex and gender into their research and that they might need practical tools and relevant examples. This caused us to formulate the GenderBasic project, which was funded by the EC in 2005. Aim of the project was to develop practical tools for the research community. The project consisted of various activities (see www.GenderBasic.nl):

First running FP6 projects were interviewed on problems or challenges encountered in executing the (compulsory) gender action plan. Secondly, knowledgeable researchers at high-level life sciences research institutes (such as Inserm, Charité and Karolinska Institute) were interviewed on (possibly) existing institutional policies regarding integration of sex and gender aspects in research. This part of the project aimed at finding out how institutes outside the realm of EU research policy would practice integration of sex and gender. A major activity of the project was the commission of review articles on the various *methodological* aspects of integrating sex and gender in various types of biomedical and health research (basic, translational, clinical and public health). Next to that reviews were commissioned on *health conditions* that were in urgent need of addressing sex and gender aspects (asthma, metabolic syndrome, nutrigenomics, osteoporosis, anxiety disorders, work-related health). High-level scientists were invited to write these reviews offering a state-of-the-art and solutions for methodological challenges. Comments on these review articles were solicited from peers. Finally authors, referees and selected stakeholders met during a two-day

expert meeting in January 2007 in Maastricht during which reviews and referee comments were discussed among the participants. We hosted scientists from a wide range of backgrounds – basic and clinical researchers, epidemiologists, social scientists and gender experts – who displayed a great enthusiasm and a real exchange of views took place. For biomedically oriented researchers the examples on the relevance and explanatory power of gender was an eye-opener. Precisely the conceptual distinction from biological sex was welcomed, where the majority of them had become ‘socialized’ in the confusing habit in the biomedical literature to use the terms interchangeably. Although many efforts by important actors – Institute of Medicine, WHO and Health Canada – have been made to ‘educate’ basic and biomedical researchers on this distinction, it was apparent that it had not become standard practice and that we can only continue to spread the word (Fishman, Wick, & Koenig, 1999; Lorber, 2001). After the expert meeting and publication of the proceedings containing a systematic overview of the contents of the discussion, all review articles were rewritten for publication in the Journal *Gender Medicine*. The final result was a special volume *GenderBasic: Promoting Integration of Sex and Gender Aspects in Biomedical and Health-related Research* containing the ten (10) reviews on the relevance of sex and gender ranging from new methodologies for the basic molecular level of gene polymorphisms to the field of health behaviours in public health and addressing six conditions of major relevance in healthcare. The achievements of *GenderBasic* were threefold: 1) it stimulated research into sex differences; 2) it stimulated research into the workings, mechanisms and effects of gender in particular for understanding masculinity and male gender roles and effects on individual health behaviour and 3) it stimulated research into the interaction of sex and gender (Klinge, 2007).

3 Remapping the knowledge field of biomedicine

The innovation, the new way of doing research by taking account of sex and gender aspects promises a better understanding of health and disease, more evidence based and precise knowledge, more effective therapies, and better health outcomes for women and men.

Some of the most telling examples from the *GenderBasic* project will be described below. First an example from animal research: Anita Holdcroft suggested to question the relevance of present-day laboratory models to design methods to best represent the age-related, co morbidity and variations experienced by each sex in clinical medicine (Holdcroft, 2007). She called for a determination as accurately as possible of the ovarian cycle phase of female animals because of

varying hormone levels. This is important for detecting small differences which can have additive effects and which otherwise would be missed.

A second example comes from research on asthma a chronic inflammatory airway disease. A well known fact is that asthma has a higher prevalence in boys than in girls before puberty and a higher prevalence in women than in men in adulthood (Postma, 2007). Asthma is a complex disease and the relative influence of genetic, hormonal, social and cultural factors remains to be studied. The review demonstrated that biological sex factors play a role in fetal lung development. Another study on therapy compliance has described how gender role behaviour prevents adolescent boys to use their asthma inhalation in the presence of their peers, in contrast to girls who build their illness into their social life, which enables them to comply with their treatment regime (Williams, 2000).

The review on osteoporosis offered a good example of how a 'female disease' has led to a considerable neglect and under diagnosis of the disease in men (Geusens/Dinant, 2007; White, 2008). It represents the reverse of the case of cardiovascular disease, seen as a 'male disease' leading to under diagnosis of the disease in women. The latter phenomenon is called the Yentl syndrome referring to the fact that a woman has to masquerade as a man to receive the same treatment (Healy, 1991).

Gender Medicine as an innovation of biomedical and health research has ethical and social implications. Increasing the quality and quantity of evidence that sex and gender have on health outcomes and health care will add to a better targeting of medical care at an individual level. Socially, to ensure gender equity, sex and gender need to be considered in health care policy (Annandale/Hunt, 2001; Doyal, 2000).

Some critical comments

From the perspective of wanting to abolish the 'white male norm' in *biomedical research* attention to sex differences is a good thing to do. There really has emerged a 'sexy' wave of interest into studying sex differences (which often are still published using the term gender differences!). However critical points have been put forward too. Looking from the broader perspective of *public health*, Steven Epstein in his book *Inclusion. The politics of difference in medical research* has argued that a focus on sex differences may lead to dangerously inaccurate understandings of the causes of health disparities (Epstein, 2007). He believes that the direct relationship between social class and health status can be obscured by a focus on bodily differences. He further points to the limits of biological explanations for health disparities between men and women, with longev-

ity (higher in women) as important example. It is not biology but social factors that constitute the biggest influence for the difference between men and women. The aim of public health policies is to target health inequalities. Epstein identifies two styles/genres: *talking about disparities*, which implies talking about social injustice and a call for elimination and *talking about differences* which implies a more neutral understanding; differences should be recognized, addressed etc. He warns for the risk of interpreting disparities as differences and illustrates this by an example from molecular genetic research in toxicology. Causes for ill health used to be looked for and found in the environment, in living conditions, for example living in neighbourhoods close to polluting industry. Nowadays causes are looked for in genetic susceptibility. The danger is that the individual gets blamed and that genes are made responsible. The attention to environmental factors disappears and living in a polluted area is made your own responsibility.

In my view, integration of sex and gender aspects into biomedical research is a sensible thing to do. I myself like to address ‘what lies beneath’, i.e. biological processes. Next to that, taking account of *gender* effects has a big potential if only in explaining epidemiological patterns of for instance depression or for explaining under diagnosis of women regarding coronary heart disease or under diagnosis of men regarding osteoporosis (Branney & White, 2008). Finally differences per se are not that interesting, more important is to study how differences develop and how sex and gender are involved. Both biomedical and public health research can contribute to redress gender inequities in health and health care (see Lawrence & Rieder, 2007; Sen & Ostlin, 2008).

Feminists and the biological body – uneasy companions?

“What lies beneath” can serve as catchword for a discussion on the neglect of biology in feminist theory on the body. I borrowed this subtitle from the movie, probably known to many of you (in German: Schatten der Wahrheit) because it fits the contents of an intriguing issue: the relationship between gender research and biology. It will not go into details of this discussion, but I will give an evaluation of the lack of addressing ‘what lies beneath’ in much feminist theory. The early feminist disgust of biology because of the abuse made of biology to legitimize social gender roles (“biology is destiny”) is understandable. But it implied that biology was left to the traditional disciplinary approaches and that was not a good thing to do.

In 2002 Kuhlmann and Babitsch wrote an article on the neglect of attention for biological processes in the work of feminist theoreticians but also in much work of women and health researchers (Kuhlmann & Babitsch, 2002). The first

group writes about the body but does not address biological materialities and the second group has invested more in studying socioeconomic determinants of health. The feminist pioneers Birke and Fausto-Sterling which I introduced in the beginning, seem to agree with this lack of attention to the biological that Kuhlmann & Babitsch identified, and that is visible in their work. Birke boldly states in her book *Feminism and the biological body* that “feminist theory is only skin deep” and calls for interactive models of causality (Birke, 1999). For Fausto-Sterling biology cannot be neglected and she found a new approach in the so-called developmental systems approach: the challenge is to develop an interactive model of how genes and environment come together in the production of human capabilities (Fausto-Sterling, 2003).

Doing so we can learn to understand how biology and environment work together in producing strong bones, relevant to osteoporosis research (Fausto-Sterling, 2005). Analysis from a gender perspective of different types and intensity of exercise in boys and girls can give clues to differences in bone strength. We can learn to see how genetically determined differences between men and women but also among women, together with environmental factors like gender and lifestyle determine the outcome of dietary advice in the case of obesitas (Ordovas, 2007). It emphasises once more the relevance of studying the sex-gender interaction and to acknowledge how *embodiment* merges nature and culture.

This volume brings together *Gender Changes in Academia* and this article illustrated the changes in biomedicine. In the last couple of years, sex and gender sensitive research has expanded enormously worldwide but also in Europe. Specialized centres have been founded in Berlin, Stockholm and many more are emerging, societies have come into being, yearly congresses are held and initiatives have been taken to create a joint European Curriculum in Gender Medicine, attractive to both biomedical and medical students. The Universitätsmedizin Göttingen actively supported a Maria-Goeppert-Mayer guest professorship in Gender Medicine in the Winter Semester 2008-2009. Summarized: the field of Sex and Gender in (Bio) Medicine is booming and will only grow in the coming decades.

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Gender Studies as a Profession¹

Gabriele Griffin

The good news is that Gender Studies is bucking the trend. The trend I refer to here is the one outlined in the 2006 OECD report *Women in Scientific Careers: Unleashing the Potential*. That report is full of the woes of women's under-representation in academe, their under-representation in absolute terms, in specific disciplines, in senior positions, in decision-making bodies, among PhD students – everywhere. Well, as was evident at the *GenderChange in Academia: Re-mapping the fields of work, knowledge, and politics from a gender perspective* conference held at the Georg-August-University of Göttingen in February 2009, the same cannot be said for Women's and Gender Studies where, on the contrary, one might say, women are in fact over-represented.² Women's or Gender Studies is in that respect one of the true success stories of higher education. But, of course, this success is also regarded by some as its Achilles' heel since the absence of men in the discipline has, arguably, led to Women's Studies preaching its messages to the converted rather than converting the unconvinced, that is men – and, of course, some women – of the need to promote the rights of women across all spheres of activity. Well, I shall not pursue this argument here but I want to hang on to the notion of Gender Studies as a success story in higher education because I think we often lose sight of that in the dailiness of our labours.

For in many ways Gender Studies remains the embattled discipline it was at its inception in the 1970s. Indeed in the UK in the early spring of 2008, fuelled by the impending demise of the undergraduate Women's Studies programme at London Metropolitan University,³ a series of public statements appeared about 'the death' of Women's or Gender Studies. Esther Oxford started the ball rolling in *The Times Higher Education Supplement* with an article entitled 'Last women

1 A previous version of this paper was published as Griffin (2009).

2 Thus it indicates that women account for 25-35% of researchers in most OECD countries except Japan and Korea (12% each) whilst in Women's and Gender Studies between 80-100% of researchers are female. Similarly, whilst only 14.55 of university faculty in the European Union, Australia and Korea are women, over 90% of faculty in Women's/Gender Studies in the European Union, Australia and Korea are women. The report also suggests that less than 20% of senior academic staff in the European union are women whilst almost 100% of senior Gender Studies staff across the European Union are female.

3 The programme closed at the end of the academic year 2007-8.

standing'⁴. In it Oxford quoted mostly women academics whose courses had either been closed, or were about to be closed, women who had actually moved out of the discipline, or women with strongly anti-feminist views such as Christina Hoff Summers. This fuelled an extended debate, and in a subsequent article in the *Independent* entitled 'Women's Studies Alive and Well'⁵, courses and Women's or Gender Studies centres such as those at Ruskin College or York University were discussed in an effort to show that, and I quote, 'While the popularity of the subject has undoubtedly declined at undergraduate level since its heyday in the Seventies, it is still viewed as a thriving postgraduate discipline at many institutions across the country.' One feminist academic, Louise Livesey, was quoted as saying: 'I was very surprised that courses that are still running were rendered invisible, purely because it's a better story if you can proclaim the subject dead rather than just struggling.' Just so.⁶ Bad news is certainly always more newsworthy than good news which, on the whole, is no news. Livesey argued that those currently teaching within Women's/Gender Studies were effectively 'being written out of history.' Well, I am currently teaching in Gender Studies and have been for many years and so, in this paper, I therefore want to discuss the ways in which Gender Studies can be regarded as a success story and how this has impacted and continues to impact on Gender Studies as a profession.

The first thing to say here is that Gender Studies has been a tremendous success story in terms of its institutionalization in higher education which is one of the ways in which Gender Studies as a profession operates. This is the case irrespective of whether it is mainstreamed – that is, taught as part of other, more traditional disciplines – or whether it exists, as in the case of the UK and a number of other European countries, as a discipline in its own right with degree-awarding powers.⁷ This successful institutionalization takes many, and many different, forms, but importantly it has resulted in most social sciences, humanities and arts disciplines across western Europe, Australia, Canada, the USA, but also in some African countries, some Latin-American countries, and some insti-

4 Esther Oxford, 'Last Women Standing,' *The Times Higher Education Supplement*, 31 January 2008, n.p., at www.timeshighereducation.co.uk/story?asp?sectioncode=26&storycode=400363, accessed 06/05/2008.

5 Chris Green, 'Women's Studies Alive and Well,' *The Independent*, 17 April 2008, n.p., at www.independent.co.uk/news/education/higher/womens-studies-are-alve-and-..., accessed 29/04/2008.

6 The death of the female subject as a necessary correlate to the persistence of (masculinised) culture has, of course, been the object of much feminist critique including Hélène Cixous and Cathérine Clément's (1986) famous analysis of the death of the staged woman in *The Newly Born Woman* and Elizabeth Bronfen's (1992) analysis in *Over Her Dead Body: Death, Femininity and the Aesthetic*.

7 See www.hull.ac.uk/ewsi for reports on Women's/Gender Studies' institutionalization across Europe. See also Blimlinger and Gerstenaue (2005).

tutions in countries such as India, Taiwan, China, Japan, Korea, the Pacific rim, having women academics teaching feminist work.⁸ It means that in many disciplines gender-based specialisms are useful in terms of pursuing an academic career. That, I would argue, is quite an achievement for a discipline that is barely middle-aged, i.e. around 40 years old.

Secondly, in a European study we undertook between 2001 and 2003 on women's studies training and women's professionalization we found that women who took Gender Studies as a discipline in academe tended to want to work in one of three areas (see Griffin 2004):

- a. Academe
- b. Feminist research
- c. The voluntary sector, that is NGOs (non-governmental organizations) with women's or gender-centred agendas

Women taking Gender Studies at undergraduate level – in disproportionately high numbers compared to other social sciences, humanities and arts disciplines – wanted to continue in academe or research, thus bucking the trend of the under-representation of women at postgraduate level. The possibilities for doing so, i.e. for becoming postgraduates in Gender Studies, however, continue to vary significantly across the European countries. In many European countries it is possible to work on a gender-related PhD topic within a traditional discipline and that is what gender-interested students do (see Griffin 2005). In Britain in many prestigious universities it is possible to become a PhD student directly in Gender Studies and the requirements for entry are 1) that one has a good academic history of achievement and a viable project, and 2) that one has funding – since students have to pay fees in the UK.⁹ In contrast, in Sweden, for example, only some universities such as Umeå and Linköping but not Stockholm, for instance, offer the possibility of getting a PhD in Gender Studies,¹⁰ and to become a PhD student, more generally, you have to have a scholarship. It is not possible, as it is

8 See, for example, Flessner and Potts (2002) for accounts of this.

9 Having funding does not mean that potential students have to have official research funding or scholarships. They can fund themselves, and PhD students in the UK are regarded as students rather than as employees of the university, as is the case in other European countries such as Sweden, for example.

10 This does not imply that the PhD is in Women's or Gender Studies. In Umeå, for example, PhD students graduate in a 'traditional' discipline, with a specialism in Gender Studies. As we found in the EU-funded project we conducted in 2001-3 (see www.hull.ac.uk/ewsi for details), fully articulated postgraduate degrees with awards that are named 'Women's Studies' or 'Gender Studies' continue to be rare in many European countries, a testimony to these countries' conservatism and to inflexible university systems.

in the UK, to pay for yourself. This means, as I know since in our Women's Studies Centre at York University we have Swedish students every year, that some very good Swedish gender students do not get the opportunity to pursue the possibility of an academic career because without a scholarship (and thus employment at a university) – and there are very few of these and they are highly competitive – they cannot do a PhD. In countries such as Spain which have a national register for disciplines on which Gender Studies does not even appear, it is impossible for students to take Gender Studies directly. Nonetheless, as in other countries, PhD students do work on gender-related topics, albeit in traditional disciplines.

What happens to these students professionally? Well, their professional trajectories are highly diverse but in the study I mentioned above we found that Gender Studies students relative to other, comparable social sciences and humanities disciplines (see Griffin 2004):

- a. Found employment as quickly or more quickly
- b. Tended to rise more quickly in their professions
- c. Tended to choose more unconventional and divergent career paths (ie setting up their own companies, working in new professions etc)
- d. Tended to act as change agents in their workplace

Let me give you a concrete example from that project: in it we had as a junior researcher a Spanish woman who at the time was doing her PhD on gender and rock music, in itself already a highly unconventional choice of PhD topic in musicology, particularly in a conservative academic environment such as Spain represents. Well, in the course of working on the project she became more and more interested in and knowledgeable about equality issues, and was increasingly asked to give talks and provide training on equality by regional governments in Spain. Today she has become what I would describe as a gender entrepreneur: with a woman friend she set up an independent company providing training on equality and gender issues, and today she employs six other women in the same field.¹¹ I know that one swallow does not make a spring, as they say, but in our study she was not the exception but, in fact, the rule, and this very much bucked the trend or doubting disposition often produced in the question Gender Studies students are frequently asked: 'So what are you going to do with that, then?'

In fact, feminism and the women's liberation movement – if I dare mention these – spawned a whole slew of new employment opportunities, even as these were established partly in response to western governments' increasing with-

11 See <http://www.espora.es/>, this student's company website, for further information.

drawal from certain kinds of service provision, or, as is the case in many overseas countries, in response to international funding agencies' demands for the increased participation of women in the public sphere. Thus today from Dehli to Düsseldorf, we have women's officers, equality officers, rape crisis centres, women's refuges, women's helplines, women's NGOs of various kinds – all of which were unthinkable thirty or forty years ago. At the University of York in the Centre for Women's Studies 70% of our PhD students are from overseas and for the most part they return to their countries of origin in order to take up jobs in the public and voluntary sectors as academics and/or women's officers of various kinds. Not all of these new employment opportunities are staffed just by women¹² – though, in the interests of women's participation in the labour market and in the public sphere more generally, I still think that we should support women into these jobs.

What then of Gender Studies as an academic profession? Well, on the success side, I would argue that two out of three key Women's or Gender Studies components – a) its content; b) its pedagogical practices; and c) its politics – have become thoroughly mainstreamed. These two components are:

- a. Its undergraduate and some postgraduate content – in other words, Women's and Gender Studies type modules have become *de rigueur* in many social sciences and humanities degree courses, albeit often with a loss of their interdisciplinary dimension as co-teaching across disciplines, for instance, becomes reduced.
- b. Some of the pedagogical innovations and practices pioneered by Women's Studies such as greater degrees of participative learning and the emphasis on coursework as opposed to exams have been mainstreamed in many countries.

However, it is also the case that little of the politics of the discipline has migrated into mainstream higher education which is now governed by a management and audit culture that is thoroughly masculinised and, in the UK especially, higher education is increasingly driven by the profit motive and a probably unsustainable expansion rhetoric.

Despite this, and here I come to more good news, we see that gender research is rampant across social sciences and humanities disciplines – so much so, in fact, that we can no longer assume, as it was still possible in the 1980s, for example, that all those working in Women's or Gender Studies share knowledge of the same publications and literature. From a situation where feminists across

12 In countries in which Muslim cultures dominate such as Pakistan and Bangladesh, for instance, such jobs are frequently staffed by men as women's participation in the public sphere and employment is severely restricted.

Britain, and I bet in Germany and other countries too, had bookshelves with identical volumes, we have now moved to a position where specialization is much more common, and we no longer constitute a single reading community. This is testimony to the sheer amount of gender research now conducted across many disciplinary fields.

Further, it is also relatively easy, in so far as getting competitive research funding can ever be said to be easy, to get research funding and find publication outlets for gender research. Most national and international research funders have gender agendas as part of their funding policies, and gender specialists among their peer reviewers and evaluators. Women's/Gender Studies on a world-wide scale has an extremely well established international and national research infrastructure, with associations, masses of conferences, journals by the hundreds if not by the thousands; we all know that we could spend our entire professional time just attending Gender Studies events such as the Goettingen conference, in fact. As a discipline with a global, complex, well established and fully embedded research infrastructure, Gender Studies is the envy of other, newly emerging¹³ research fields such as HCI (human-computer-interaction),¹⁴ for example. When interviewing people who conduct interdisciplinary research in this field in 2005-6, we found that they struggled to find places to publish their work, to get research support funding and many other things that Gender Studies scholars can take for granted.¹⁵ I therefore think that the incredibly rapid building of our research and disciplinary infrastructure is one of the greatest achievements of Gender Studies as a discipline to date, and one of its truly successful elements.

As part of this proliferation of research in Women's/Gender Studies we also have at postgraduate level, centres for Women's and Gender Studies with very different orientations regarding their research and teaching focus, such that some centres are particularly focussed on feminist science studies, or on gender and media, or on gender and development. Much of the research underpinning these specializations is cutting-edge and recognized as such by peer reviewers. Across Europe this has increasingly led to Centres for Women's/Gender Studies – from the Cornelia Goethe Zentrum at Frankfurt University to the Centres for Women's/Gender Studies at Umeå and Linköping in Sweden – being awarded excellence status by their national research councils or equivalents, with all that goes with this in terms of funding for research and studentships. Gender Studies as a result attracts postgraduate students – even if they sometimes want to, or in

13 Here defined as having arisen in the past 20-40 years.

14 HCI is interdisciplinary work between designers, mathematicians and engineers, for example, to develop things such as intelligent fabrics. See www.bcs-hci.org.uk for further details.

15 See www.york.ac.uk/research/researchintegration for relevant reports.

many European countries have to, be located in a so-called ‘traditional’ discipline in order to safeguard their career prospects as academics.¹⁶

Gender studies as a profession is a different animal now from what it was twenty or so years ago. On the one hand we have seen the rapid and extensive professionalization of Gender Studies through the establishment of professional associations, so-called benchmark statements about the discipline, ethics committees associated with the conduct of research, whole cadres of researchers operating at different levels of the academic career etc etc. One might describe that process, particularly in certain countries, as a move from a pioneer mentality to a professionalized status. This is, in fact, the case across the range of gender-driven employment sectors that were inaugurated through the women’s and other liberation movements. Volunteers have given way to paid employees, with all that that implies.

But, and this is an important point to bear in mind, much of the change that we have seen in the exercise of Gender Studies as a profession has little to do with Gender Studies *per se* and everything to do with changes that have occurred both in the conceptualization and operations of higher education and research institutions, on the one hand, and changes in intellectual preoccupations more widely, on the other. The former – changes in the conceptualization and operations of higher education and research institutions, on the one hand – are the result of the rise of the audit and accountability culture of which we are increasingly objects (see Strathern 2000). The bureaucratization of higher education as part of the new quality assurance regimes has increasingly begun to take up intellectual and activist space as we spend time filling in forms and attending related meetings – time and effort that once might have gone into political activity. I spend significant amounts of my time now on annual programme reviews, annual performance reviews, periodic reviews, transparency reviews, module monitoring, revision of programme specifications etc. I am not alone in this, and it is not particular to Gender Studies. It is also a significant set of activities that is invisible to most postgraduates and non-academics and is, indeed, in terms of career advancement not valued in academe, even as it is considered necessary. In the UK now we have at postgraduate level quite extensive so-called ‘transferable and professional skills’ training and as part of this we attempt to convey to our postgraduates the extent to which the aspect of our work that occupies us for a significant of our time – administration – is effectively both the least visible and the least valued of what we have to do.

16 This is particularly the case in southern European countries where national registers of disciplines exist, and where Women’s/Gender Studies is not well established in academe, but is also the case to some extent in the Nordic countries where there are few academic positions, particularly in Denmark, for Women’s/Gender Studies academics.

More positively, issues of gender have become significantly more prominent over time in a whole range of subject arenas as these have gained intellectual prominence. The rise of feminist science studies (see the Association of American Colleges and Universities (1999); Mayberry et al. (2001)) for example, an extremely interesting development, has gone hand in hand with the recognition that knowledge management, for instance through what is known as ‘the public understanding of science’, has to change to meet the demands of an increasingly scientized and technologized neoliberal culture. Similarly, the whole debate about women’s rights as human rights is not thinkable without the history of the recent wars of the late 20th and early 21st century on the one hand, and changes in biotechnology on the other. One important advantage of Gender Studies has been, and continues to be, that its recent history as an academic discipline and its basis in an identity category mean that its curricula are not as entrenched as those of many other disciplines. It thus has the intellectual flexibility that acts as a guarantor for the intellectual excitement it (still) can provoke. That too, in my view, is one of its successes.

At the same time, and by way of a final comment, I would also say that I am not blind to the fact that being a Gender Studies professional remains being marginal within the institution, working with small staff numbers, and, especially at undergraduate level, often struggling for student numbers in an increasingly marketized academic climate. But tangentiality is not in and of itself a bad thing. As Bourdieu (1988) famously showed in *Homo Academicus*, a certain distance to institutionalized power is liberating to thought, and speaking truth to power remains the most important task of Gender Studies as a profession.

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Promoting Women in Post-Graduate Studies: Chances and Challenges of PhD Reforms in Germany

Karin Gottschall

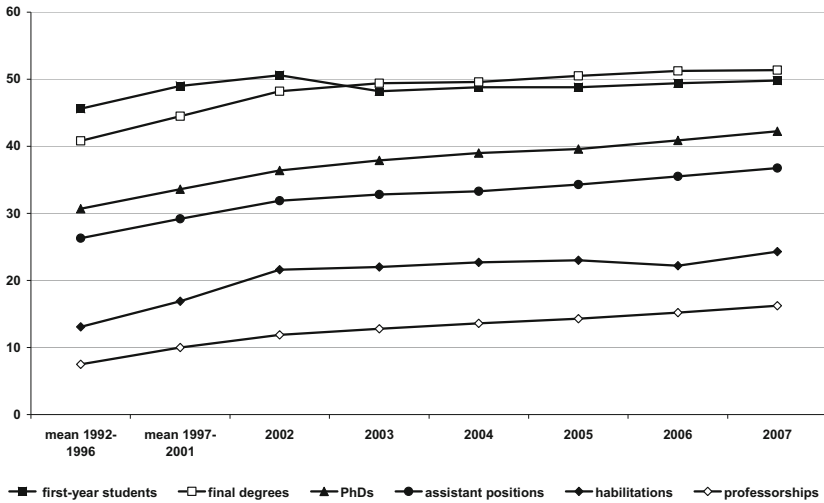
Over the past two decades women have made remarkable inroads in German academia, as indicated by their fifty percent representation in graduate studies and rising shares on the postgraduate level. However, women remain underrepresented in tenured positions within the broader scientific community and top level positions in the university and research institute administrations. At the same time, a remarkable reorganization and rationalization of the university increasingly differentiates and to some extent even devalues academic careers. Against this background women would seem to be heading for an academic career of “winners among losers” (Zimmer et al. 2006). While it is indeed difficult to completely dismiss this view, the analysis in this chapter will question whether there is a coercive and one-dimensional interrelationship between a rising female presence and a restructuring of the academic field. Rather than focusing on women, I will draw attention to the way institutional frameworks and orientations shape academic careers, arguing that the role and structure of postgraduate education in Germany is crucial for both the level of gender equality and the quality and reputation of academic careers in times of internationalization and marketization of academia.

This chapter focuses on Social Sciences as a disciplinary field where women make up more than half of the student body and which is less gendered than either the Humanities or the Sciences and Engineering. The first section looks at the winning and losing sides of rising female participation in academia and is followed by a discussion of the deficiencies in doctoral education afflicting the German university system. The third section addresses changes within the Bologna process and rising competitiveness of academic labor markets. Within this process a reoriented science policy promotes new models of pursuing a doctorate characterized by a more structured education. Drawing on my experience with the Bremen International Graduate School of Social Sciences (BIGSSS), in the fourth section I highlight significant features and the gender impact of this new educational model. Finally, in a concluding section I turn to the ambivalence of current restructuring of the academic landscape, emphasizing persistent challenges to degendering high quality academic career paths.

Women in academia in Germany: winners or losers?

Looking at the volume and structure of female participation in higher education and academic labor markets in unified Germany over the last fifteen years (1992-2007) reveals an ambivalent picture. The winning side is represented by the fact that women nowadays make up 50% of the successful graduates and more than 40% of the successful PhD holders. Women’s share of higher academic careers, including assistant professorships, researcher positions, successful habilitations¹, and full professorships, has increased, and accounts for more than one-third of the intermediate positions, close to 25% of the habilitation level and more than 15% of full professorships (see figure1).

Figure 1: Share of women in academia in Germany (1992-2007)

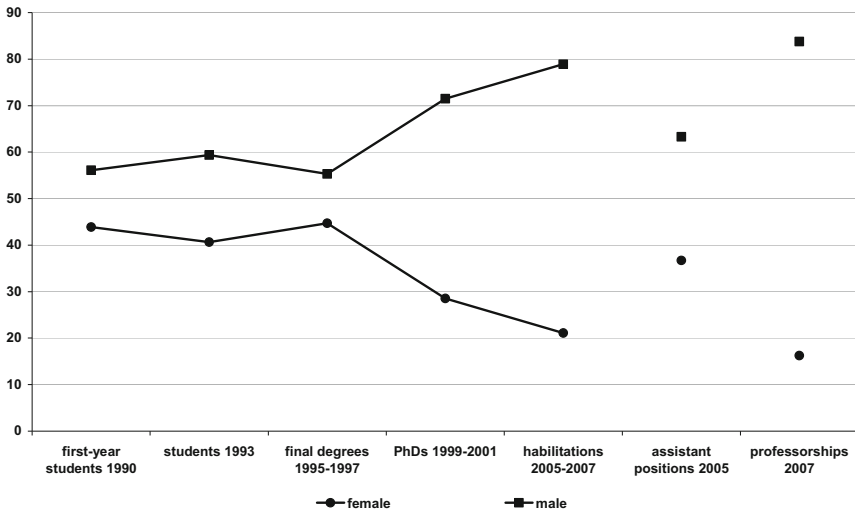


Source: German Federal Statistical Office; Bildung und Kultur, Fachserie 11, Reihe 4.4, Personal an Hochschulen (figures are taken from different statistical sources and based on my own calculation)

1 In Germany until 2002 a successful completion of the habilitation, consisting of a second larger thesis, an oral defense and trial lecture, was the indispensable prerequisite when applying for a tenured professorship. This long-winding road of post doctoral qualification was partly set off in 2002 when a fix-term assistant professorship opened an alternative way to a professorship. The so-called ‘Juniorprofessor’ allows for a second book or a series of excellent articles as equivalent to the former habilitation requirement and installed an independent status for post docs heading for a university career (Berning 2004: 162).

While this upward trend marks some progress compared to the relatively low level of female representation at the beginning of the 1990s, the results are still below participation levels of comparable OECD and European countries. Germany with 12% share ranks amongst the lowest countries compared to the average among the EU 27 with 20% female share in top level academic positions (EC 2008, 2009). Although Germany has one of the highest post-graduation rates (measured as share of PhD holders per 1000 inhabitants aged 25-34 years), female participation of 39% is below the EU 27 average of 43.4% (BuWiN 2008: table 2 and table 7, pp. 48).

Figure 2: Graduates and share of academic positions by gender (1990-2007)

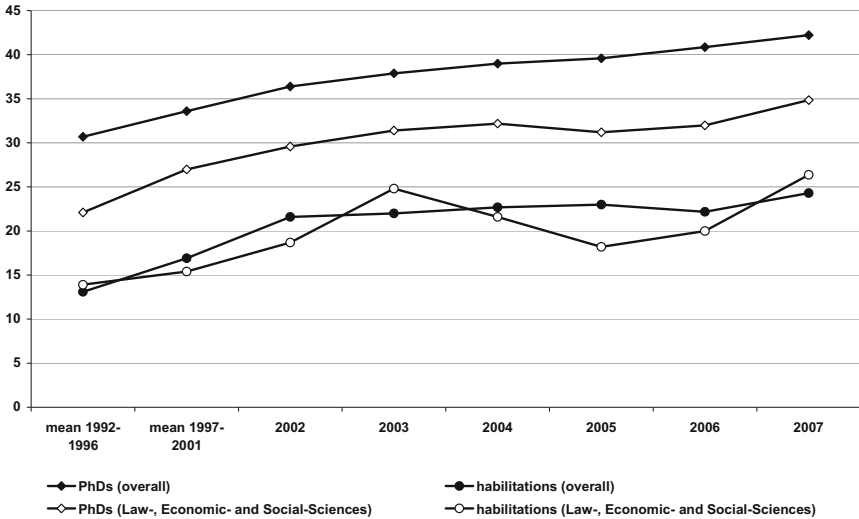


Source: German Federal Statistical Office; Bildung und Kultur, Fachserie 11, Reihe 4.4, Personal an Hochschulen (different volumes, own calculation)

A closer look at career dynamics and distribution by disciplines reveals the other side of the coin: academic careers in Germany still are a leaky pipeline for women, especially in fields where they are highly represented. As indicated in figure 2 by the virtual ‘retrospective academic life course’ of those who obtained a final degree during the 1990s, academic careers are still highly gendered. The probability of transforming a final degree to a successful PhD, then later to a habilitation and finally to a full professorship has been far higher for male than for female students. While men increased their share on each step of the aca-

ademic career ladder (with the exception of the intermediate assistant positions), women were losing ground from the final degree level onwards, with the exception of assistant positions. Female under-representation in academia thus gets more pronounced on the higher rungs of the academic career ladder.

Figure 3: Female share in post-graduation and habilitation in Social Sciences (1992-2007)



Source: German Federal Statistical Office; Bildung und Kultur, Fachserie 11, Reihe 4.4, Personal an Hochschulen (different volumes, own calculation)

Given the highly gendered distribution of male and female students by subject, one might assume that chances of women succeeding in an academic career are higher in Humanities and Social Sciences where their presence has a longer tradition than in Sciences and Engineering where men dominate and a male culture still prevails. However, the contrary is the case. While women received an overwhelming 70% of Humanities degrees between 1994-1996, their share of doctoral degrees fell below 50% in the period of 1998-2000 and sank further at the habilitation level from 2004 to 2006 and professorship level in 2005, where men dominated with over 60% and 70% respectively (BLK 2007: 20). In Social Sciences and allied disciplines such as Law and Economics, female participation has been rising continuously during the past two decades and now accounts for more than half of the successful graduates. But here again female shares in post-

graduation from the middle of the 1990s onwards are consistently below the overall average figures (35% compared to 43% in 2007). It is only in recent years that women have been able to catch up at the habilitation level, now slightly exceeding the average share of 24% (see figure 3).

All in all, this indicates that so far even an equal share in graduate studies does not sufficiently translate into representation on the doctoral level and further academic careers. Thus, one might well doubt whether gender equality in academia is a question of time and critical mass. At the same time, higher academic degrees are getting more important for advancement not only in academia but also in business, and in the public and the non profit sectors, which have supplied jobs for more than half of the Social Science doctoral degree holders in Germany (Enders and Bornmann 2001: 91pp).

When being bright is not enough: Problems of traditional doctoral education

A closer look at the institutional setting of doctoral education in Germany helps to explain why this status passage might be less accessible and attractive to women than to men. Part of the widely acclaimed basic Humboldtian idea and structure of the German university system has been the master-apprentice model of doctoral education, implying that access decisions are the right of a professor as part of his academic freedom; that there are neither rules for supervision nor prescriptions for training; that a professor has no obligations for funding the doctoral candidate; and that the candidate often is obliged to provide services and teaching for the professor. This system lacks proper supervision and quality control, accords unclear status and frequent financial insecurity to doctoral students, involves a long time for completion of the degree, and results in high drop out rates, although the latter are difficult to track since no formal student enrolment requirement exists (THESIS 2004; Kehm 2005).

Research on gender effects in doctoral education in Germany indicates that level of access and informal procedures, i.e., homo-social hiring practices, tend to favor male more than female graduate students. While women in general are equally successful as men completing a PhD, they seem to be more often funded by stipends² and own resources than by employment linked to the chair holder's

2 While a fellowship or stipend usually marks a highly prized asset as compared to a temporary employment contract as research or teaching assistant in the highly competitive and more marketized Anglo-American academia, stipends are easier to secure in Germany. Individual stipend holders, other than members of Research Training Groups funded by the National Science Foundation or young researchers pursuing a PhD within a research project or holding an assistant position allocated to a Chair, often suffer from a loose institutional affiliation to chairs and departments. In Social Sciences in the past, more than 40% of doctoral students relied on

research, which might indicate less integration in the respective scientific community. Additionally, female graduate students are less likely than their male counterparts to present papers at conferences (BuWin 2008: 82). Further, qualitative research on women's academic careers suggests that women might be more defensive in self assessment of their performance and invest less in systematic career planning. Finally, traditional expectations and practices with respect to career motivation, marriage and care responsibilities might contribute to less promotion by professors as well as less self-promotion by women themselves (Lind and Löther 2007; Lind 2007).

In sum, while key organizational features of the traditional German post-graduate system such as the master-apprentice paradigm and the chair or project affiliation, are being criticized by male and female doctoral students alike, lower female participation rates on this and subsequent levels of academic careers might be attributed to the fact that informal access procedures, individualized promotion, non-transparent qualification requirements and insecure career prospects tend to discourage women more than men.

A changed context for doctoral education: Challenges and new models

Widespread dissatisfaction with traditional forms of doctoral education abounds not only in Germany, but also in Europe and North America (Kupfer and Moes 2004; Kehm 2007). Although the more structured Anglo-American type of doctoral education combining master and doctoral training in a three-to-five year period in Continental Europe often is perceived to be a more effective model, reality of doctoral training in the US, too is characterized by high drop out rates, extended time to finish degrees and a perceived mismatch of labor market demands and skills of young academics (Nerad 2004; Sadlak 2004).

This general criticism gained political attention only against the background of an increased competition for best talents in global markets and a rising demand for an academic workforce in a knowledge-based society. In Europe the Bologna Process integrating doctoral education as a third cycle of studies and the Lisbon Strategy aimed at making Europe 'the most competitive and dynamic knowledge-based economy in the world' have paved the way for substantial restructuring of university education and governance of academic institutions. Following Kehm this implies a paradigmatic shift from the institutional logic to the systems logic, dismissing the idea of the unique and singular 'Humboldtian university' in favor of a broader and more general focus on the structure of the higher education sys-

their own or other external resources, about one third were employed at the university or research institutions while the rest was funded by stipends (Enders and Bornmann 2001: 53).

tem as well as a shift from the chair-holder logic to the institutional logic in which academic work not only becomes more closely controlled and monitored, but also more embedded into the new corporate identity of the institution. In this process, doctoral education increasingly has become an object of institutional management and strategic policymaking due to the perceived need of a larger and better educated academic workforce both inside and outside academia and the competitive advantage attributed to academic institutions which provide high quality and well regarded doctoral training (Kehm 2007: 118).

In Germany already from the 1990s, the German Rectors' Conference, the German Science Foundation (DFG) and the German Council of Science and Humanities (Wissenschaftsrat), an advisory body to the Federal Government and the state (Länder) governments, had launched political recommendations for reforming the training of young researchers. Central features of the traditional system such as a highly individualized training and dependency on one supervisor were no longer seen as conducive to success but rather as symbols of inefficiency (HRK 2003; WR 1997, 2002). The German Research Council since the early 1990s started to counteract the personal dependency and lack of training by introducing Doctoral Research Training Groups (Graduierertenkollegs), providing scholarships and allowing for joint supervision. Regular evaluations shedding light on the quality and outcome of this more structured type of training are part of the program (DFG 2003; DFG 2004). However, these programs cover only a small number of doctoral students (7% of the new PhD holders were participants of Research Training Groups in 2003/4; DFG 2003) while the traditional system more or less has persisted unchanged.

The introduction of the tiered structure of study systems in the course of the Bologna Process from 2000 onwards and the German Excellence Initiative established in 2005 contributed to more substantive change, triggering a broader implementation of new governance and a new structure for doctoral education. Drawing on the experience of research-oriented doctoral education in Anglo-American countries, the Excellence Initiative Program of 2006/07 promoted more structured doctoral education by reserving one line of funding for Graduate Schools and allowing for research training groups as part of the research cluster line of funding. As a result of the competition, 39 Graduate Schools and 37 Research Clusters with training modules were set up, but with a relative low share going to Social Sciences and Humanities (17 Graduate Schools and 13 Research Clusters) (Sondermann et al. 2008: 17). Despite a more general critique of defining excellence in science by this type of competition and of differentiating the so far quite homogeneous university landscape in Germany (Münch 2007), the impulse to reform doctoral education has been taken up widely. Meanwhile most German universities are setting up new structures either by discipline, research fields or the university as a

whole. However, these new structures co-exist alongside rather than replace the traditional master-apprentice model of doctoral education.

Parallel to the promotion of a reform of doctoral education, the issue of gender equality in science has gained more importance in Germany. While in the past the EU claims of promoting women (EC 2000, 2004) had been met by lip service rather than action, it seems that the Excellence Initiative has made a difference. The international review boards not only criticized German universities for the obvious under-representation of women in faculty and research bodies, but also paid attention to the gender equality criteria which were part of the excellence evaluation agenda. Making use of this momentum the German Council of Science and Humanities and the German Science Foundation in turn claimed that more ‘hard law’ action is needed to equalize gender relations in science (WR 2007a). The German Science Foundation then generalized the criteria first applied in the Excellence Initiative by issuing research-oriented gender equality standards as part of compulsory evaluation criteria for research funding. While universities are allowed some leeway in setting individual goals and timelines for reaching gender equality, they will be evaluated on the basis of these standards in the future (DFG 2008). Positive effects are already noticeable. More transparency on female representation in German universities and research institutions provided by continuous monitoring and a gender equality ranking first set up in 2003 by the publicly funded Center of Excellence for Women in Science (CEWS) affect the prestige of German science institutions (CEWS 2007); similar effects can be attributed to the comparative ‘She Figures’ reports issued by the European Commission (EC 2006, 2009).

What makes for a good doctoral education?

Political context and institutional frameworks for promoting women in PhD studies nowadays seem to be more favorable than in the past. But do the new pathways really meet the reform claims? The research-oriented Bremen International Graduate School of Social Sciences BIGSSS, funded by the Excellence Initiative since 2007, will serve as an example for a detailed discussion of new features enhancing quality and success in doctoral education and their impact on gender equality.

As mentioned above, the ongoing reforms of doctoral education at German universities have not led to one standardized new model, but rather a variety of more or less innovative and comprehensive solutions can be observed. They range from the creation of graduate schools on the university level which serve as an umbrella institution, more specialized graduate schools by field and focused research training groups to the mere introduction of single elements such as a “doctoral contract”. In this broader field, BIGSSS represents an international (English

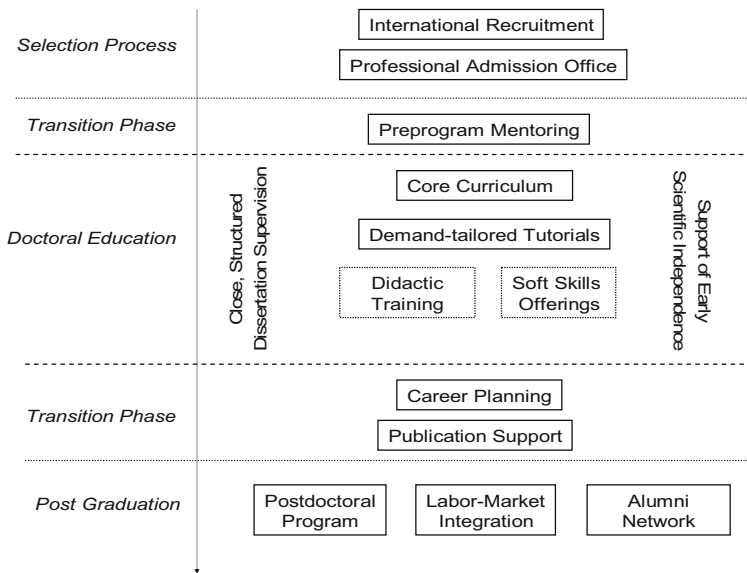
language based) research-oriented, multidisciplinary school with a topical focus on "The future of social and political integration." As an interuniversity institution, BIGSSS builds on the experience and structure of the first Graduate School of Social Sciences (GSSS) set up at the University of Bremen and funded by the Volkswagen Foundation since 2002 and the multidisciplinary social science graduate programs at the Jacobs University Bremen, a private university founded in 2003. BIGSSS integrates the core disciplines of political science, sociology and psychology, supported by a solid foundation in social science methods. The school is based on the collaboration of a number of outstanding research institutions at both universities facilitating the early integration of doctoral students in a cutting-edge research environment. Today the school has about 90 fellows: doctoral students (stipend funded), young researchers and post-docs. BIGSSS' faculty encompasses 70 professors, researchers and senior faculty, whose teaching in the doctoral program is credited towards the members' teaching load. A central feature of BIGSSS is that the school not only maintains its own infrastructure (school building with office and teaching space), professional staff (administration and director of studies), but also supports an in-house faculty of five junior professors and post-docs providing a dedicated mentoring of the different fellow cohorts and individual dissertation projects (see www.bigsss.uni-bremen.de).

Further noteworthy characteristics include the educational program and the supervisory concept, which effectively overcome the training and supervision deficiencies of the traditional model (Mau and Gottschall 2008). Close supervision and mutual responsibilities are secured by a doctoral "contract" set up in the first year, a dissertation committee composed of three supervisors, including one external and preferably international member, and annual progress assessment colloquia prepared by the doctoral candidate and collectively evaluated by committee members and the candidate. The three year training program consists of a core curriculum by thematic field in the first year and hands-on support in drafting a prospectus and designing the study, followed by both substantive and methods tutorials tailored to each student in the second year. Additional elements such as didactic training and mentoring for teaching one's own course aim at a comprehensive scientific education. Doctoral colloquia and faculty workshops throughout the three years allow for presenting one's own work as well as participating in the discussion of faculty research and guest lectures. At the same time, early scientific independence is fostered by funding research visits abroad eased by BIGSSS' cooperation with distinguished social science graduate programs at leading research universities in Europe and the US, by supporting networking among doctoral students and encouraging paper presentations at national and international conferences.

The comprehensive perspective on doctoral education prevalent in this school concept may be illustrated with the idea of a life course of a PhD program

(see table 1), which starts with the selection process, allows for a gradual accommodation of different starting levels by pre-program mentoring (including fast-track students) and provides for a smooth transition to the post-doc phase by career planning and publication support at the end of the program. An evaluation by output and outcome indicators demonstrates the strength of this concept. Not only are attrition rates in GSSS/BIGSSS comparatively low (less than 5% in the period 2003-2008), labor market placement turns out to be very successful as well. Although the three year time to degree period obviously is not sufficient to turn a very good dissertation into an English language book, more and more fellows find jobs as researchers and junior professors or in leading positions outside academia even before finalizing the dissertation.

Table 1. The Life Course of a PhD program



A closer look at the *gender impact* of this structured type of doctoral education also shows positive results. Following the above mentioned life course perspective of the doctoral program, accessing the program already seems to be quite favorable for women. Women make up more than 50% of the students in BIGSSS and other structured social science doctoral programs (see table 2), a

share substantially higher than the overall average of 35% documented in figure 3. It is noteworthy that this share finally matches women's participation rates in the respective master programs. From an internal evaluation of BIGSSS we find that transparency of admission criteria and a non-gender-biased selection process (both reinforced by international recruitment) are contributing to this positive effect. Other features conducive to successful work and completion for women are the above mentioned structured training program, chances for peer group learning, promotion of early scientific independence, reliable structures of supervision and a comprehensive educational approach including career training.

Table 2: Female participation in structured social sciences PhD programs in Germany (2008/2009)

	<i>PhD-Students</i>		
	male	female	share of women
<i>Graduate Schools (Excellence Initiative)</i>	163	216	57
Graduate School of North American Studies (Berlin)	4	11	73
Muslim Cultures and Societies: Unity and Diversity (Berlin)	5	8	62
Berlin Graduate School of Social Sciences (Berlin)	24	33	58
Bielefeld Graduate School in History and Sociology (Bielefeld)	44	54	55
Bremen International Graduate School of Social Science (Bremen)	28	32	53
International Graduate Centre for the Study of Culture (Gießen)	42	62	60
Empirical and Quantitative Methods in the Economic and Social Sciences (Mannheim)	16	16	50
<i>Doctoral Research Groups</i>			
DFG Graduate Colleges (63 Colleges in Social Sciences)	-	-	41
Heinrich-Böll-Foundation (since 2000)	13	46	78
Hans-Böckler-Foundation	24	48	67
International Max Planck Research Schools (IMPRS) (total)	1140	760	40
IMPRS for Demography (Rostock)	12	39	76
IMPRS on the Social and Political Constitution of the Economy (Cologne)	15	6	29

Source: Own evaluation based on programme websites, telephone or email enquiry (as of July 2009)

Gender specific policies, such as equal representation of female fellows in the school's self-governing bodies, a faculty actively supporting a non-gender biased work culture and able to provide female role models, also play a positive role.³ Parenthood turned out to be a crucial biographical issue both for male and female fellows, and induced the school to set up regulations for pregnancy, parental care and sick leave allowing for a flexible time design of the PhD phase without risking non-completion. Furthermore, in order to bridge the post-doctoral gender gap, BIGSSS pursues a gender-balanced recruitment at post-doc and higher levels targeting at least 40% of the respective awards towards women.

Concluding remarks

To sum up, central principles of this reform type of doctoral education include transparency of admission criteria, structured training, reliability of supervision, and evaluation of progress that redefines the so-called third cycle of higher education (based on BA and MA studies) as an institutionalized educational phase in its own right based on a participatory face-to-face relationship between student and supervisors. As shown above drawing on the BIGSSS example, the same features overcoming the deficiencies of traditional PhD training generate a more gender-balanced outcome. In this sense, we can conclude that in Germany the ongoing process of improving the quality of PhD education at the same time enhances gender equality. Given that holding a PhD will become more important for labor market success of academics in the future and that the production of PhD holders already is expanding, women might indeed seem winners or at least be able to increase their chances for rewarding academic careers. However, the broader picture of the ongoing changes in higher education, research and science generates a somewhat less optimistic view and indicates the need for more substantial reforms. Three aspects seem important here.

First, a rising pool of female degree holders *per se* does not guarantee better chances for women in higher academic positions. In a time of a generally rising demand for a well trained workforce, the pool might also serve to fill the lower stratum of academic positions. As we know from the past experience of continuous increase of women's cultural capital, it takes more than investment in train-

3 Women faculty members were central to the development and subsequent submission of the BIGSSS' proposal to the Excellence Initiative: seven out of 25 Principal Investigators and the coordinator were women. Furthermore, the Graduate School from the beginning has scored high in female leadership with a female dean in the period 2004-2006 and again from 2009 onwards.

ing to equalize female and male success in the labor market and combat the glass ceiling effect. To make academic careers accessible and attractive for junior female scientists, higher academic positions such as tenured professorships, research group leaders, leading executives in science management need to be filled by open advertisement rather than closed procedures. Also the gender bias in peer reviews, scientific board memberships and other gate-keeping positions have to be challenged (EC 2004). Finally, dual career and work life policies in academia should apply to the whole career process starting in early career phases which usually are marked by crucial biographical decisions regarding marriage and parenthood, and in Germany more than in other countries induce women to resign from or interrupt academic careers (Rusconi and Solga 2007).

Second, the general catch up process of women on the doctoral degree and habilitation level in social sciences as shown in figure 3, should not be overstated when viewed against the background that increased competitiveness in science and economy and a resurgence of national and supranational political management of science and research tend to privilege science, life sciences and engineering. So for example, 24 out of 37 Research Clusters funded in the Excellence Initiative in Germany came from these disciplines, while social sciences and humanities where female students concentrate and which represent more than two thirds of the overall student body were underrepresented (Sondermann et al. 2008: 19). It remains to be seen whether the controversial debate triggered by this biased result will lead to more subject-sensitive regulations in the follow-up round of the Excellence Initiative in 2010/11 and provide better chances for increasing representation of women in leading research positions. A gender sensitive evaluation of the last competition (as of 2008) revealed that women were underrepresented on the level of principal investigators as compared to their share in tenured professorships (13.8% compared to 15.2%) and that the proposed programs promoting women often were not based on subject specific analysis of female underrepresentation (Engels et al. 2008; see also Zuber in this volume).

Finally, the restructuring of higher education in Germany has produced both gains and challenges. It has promoted excellent research, enhanced the quality of doctoral education and emphasized the quality of teaching on the Master and Bachelor level. At the same time, it has not met the overarching goal of increasing the comparatively low share of high school leavers attending higher education in Germany (OECD 2008: 59) because of insufficient resources for the universities. Despite differences in state policies affecting revenue streams and funding levels, the federal government has under-resourced higher education overall for more than a decade (OECD 2008: 254, 257). Additionally, employment reforms aimed at labor market flexibility and more competitiveness in the public academic workforce partly imply a downgrading of academic careers. For

example, the reform of the academic pay scale for tenured positions introduced in 2002 (Professorenbesoldungsreformgesetz) not only installed performance-based elements, but also established a substantial decrease of the guaranteed basic income as compared to the previous seniority-based income regulations. As a result, life-long income prospects in academic careers have declined for the majority of new entrants to universities.

As the analysis has shown, the current reorganization of the academic landscape in Germany turns out to be ambivalent, implying a downgrading and differentiation of academic careers and disciplines as well as an expansion of the academic labor market and an upgrading of doctoral education. While the latter indeed entails new chances for women, transforming this potential for promotion into a practice of degendering high quality academic career paths remains a challenge for the near future.

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From Feminist Social Work Projects to Gender and Diversity Modules? Gender in Social Work BA and MA Curricula at Universities of Applied Sciences

Gudrun Ehlert

1 Introduction

The majority of social work practitioners are women and there are specific gender hierarchies in the profession. Conceptions of social problems, the strategies to cope with complex and problematic situations as well as social work practice are all determined by gender perceptions and by the construction of gender differences (Gruber/Fröschel 2001: 13). How do these findings correspond with social work course contents at universities respectively at universities of applied sciences, where in Germany the majority of social workers are educated? In this paper I will outline a discussion about the relevance of gender perspectives in social work curricula, starting with the influence of women's projects and feminist social work on the Diploma programmes. Two developments in European policy could the process of integrating gender perspectives and "Gender Studies" into Social Work Education get moving: The Amsterdam treaty (1997) which made the concept of Gender Mainstreaming binding to all EU-Member States, and the Bologna-Declaration (1999) and following Communiqués, which bind member states to adapt their systems of higher education and to create a European space for Higher Education. The article focuses the question if and how the Bologna process and the reform of the course programmes are seen as a chance for implementing gender topics into the courses of study on the basis of two surveys undertaken in 2004 and 2008.

2 Women's projects and feminist social work

It was the merit of the women's movement of the 1970s and 1980s to challenge the discrimination and oppression of women and to make male dominance in history, science and society a subject of discussion in West Germany. Women's projects in social work practice have been established – women supporting women on the basis of common experiences and common discrimination – with

the aim of supporting women and girls in self-determination and autonomy (Banéz/Ehlert 2007). Many projects developed as a matter of course in social work. Feminist approaches became focussed on three principal areas: social work as a female activity; violence against women and girls; social work with young girls and women in youth work and welfare services for the young (Friebertshäuser et al 1997).

The foundation of women's projects went along with the implementation of seminars about women and social work at Fachhochschulen and universities. In the beginning of the 1980s the first project studies "Social work with girls and women" have been established: students were participating in feminist social work practice projects. Several Fachhochschulen set up professorships with a focus on women and social work (Simmel-Joachim/Schäfer 2005). Women specific seminars have been offered at West German social work courses since the end of the 1970s and they have been more or less implemented in the curricula.

3 Gender and Social Work

Since the 1990s gender issues have been taught in the diploma social work courses, mostly by women who have been committed to the ideas of the feminist movement. In contrast to this success gender has never been treated as a particularly relevant category in relation to social work, not regarded as something to be implemented systematically within social work practice, theory, social work education and curricula. You can say that in Germany we still have the situation of parallel discourses. On the one hand, Social Work and Social Pedagogy mainstream theory building does not integrate gender, on the other hand, the theoretical debates of gender in social sciences do not much refer to social work (Ehlert/Funk 2008). But nevertheless, there are publications, projects, seminars and conferences which are bridging these parallel discourses and underline that there are many fields of social work where gender is regarded as being of great relevance to both, the understanding of social problems and the suitability of professional support (Gruber/Fröschl 2001; Göttert/Walser 2002; Hasenjürgen/Rohleder 2005; Zander et al 2006).

4 The first survey about the integration of Gender in Social Work Curricula in 2004

After the ministers signed the Bologna-Declaration (1999) and the following Communiqués concerning European Higher Education – for Social Work Educa-

tion in Germany the year 2003 was significant. Here the discussion about changing the diploma into BA and MA courses started in the national meeting of all departments of social work. This was the reason why my colleague Brigitte Hasenjürgen and I decided to carry out a survey in 2004 at Fachhochschulen and Universities (Ehlert/Hasenjürgen 2005). Our starting point was the question if and how, the Bologna process could be an opportunity to reform curriculum design and developments in Social Work Education. And we asked whether the Bologna process is perceived as to offer a new chance to integrate gender into social work education. Are gender aspects integrated into learning outcomes? Are there special modules which highlight gender aspects? A questionnaire including 20 questions was sent online, with a responding rate of 70%.

In 2004 many of the respondents still have been teaching in the diploma courses and have just been in the beginning of the planning of the new BA and MA social work courses. 61% answered that Gender issues have been established in the Diploma-Courses. But: these positive results are in contrast to the answers about the acceptance or acknowledgement of gender issues among the colleagues. The responses also show the heterogeneous landscape of courses within the diploma curricula where gender-oriented seminars are often part of an optional offer in the first or second year of the course. Although the seminar names/headlines vary from “Women’s work“ to “Social work with women and girls“ and “Gender balanced social work“, the roots from the women’s movement are visible. However, these results do not mean that the integration of gender topics can be taken for granted and that gender is part of the mainstream social work agenda in Germany. Only one quarter of the interviewed persons affirms a good implementation of gender in the Diploma-curriculum and the acceptance of such by their colleagues. Another quarter responded that there is no interest in gender issues, colleagues are either ignorant of the topic or are reluctant to this issue. The majority describes ambivalence in the situation. There is the impression of a polarisation between a few colleagues who are specialised in gender topics and “the others“. Gender is seen as a “specialised topic“ which is somehow accepted or which is seen as a “necessary evil“ and gender issues are mostly delegated to women.

From this background in 2004 one third of the respondents answered that the Bologna process is a chance to implement gender in social work curricula, while one third didn’t see the coming reform as a chance and another third of the respondents didn’t expect any changes within in the implantation of gender in the social work curricula. What was obvious, that in the planning process of bachelor and master courses, the responds indicate the marginalized position of gender perspectives in social work education: in the competition with all topics, in the debates about the new structure of modules in a lot of departments, gender topics

seem to be not relevant to the majority of colleagues. Gender perspectives are not necessarily seen as part of expert knowledge and social competences of social workers, gender doesn't have a systematic place in the curriculum and >if it is necessary, we can cut gender out<. Ehlert and Hasenjürgen (2005) had suggested four different options for the curricular changes in Germany: Gender as a cross-sectional topic in all modules, Gender competence as a generic competence, a specific Gender module, and a Diversity module. In the planning of the modules only 16% answered there will be a "Gender module" in the new bachelor courses, 21% responded that a "Diversity module" is planned. Most of the boxes (30%) have been ticked for "Gender as a cross-sectional topic in all modules".

As most of these answers were given at the beginning of planning processes, I wanted to gather data on the realisation of the implementation of Gender topics in Social Work Curricula. With the aim to specify the experiences of the integration of Gender a second survey was undertaken in 2008.

5 The second survey with regard to the integration of Gender in Social Work Curricula in 2008

61 questionnaires were sent online to universities of applied sciences, including 7 universities in the end of 2008. The questionnaire was similar to the one constructed in 2004, but in a revised version, which tried to take into consideration the experiences of the modularisation process and teaching in the new structured courses. This time the responding rate was 72%, 44 replies including 4 universities. There have been another three additional responses via e-mail: two universities don't offer BA/MA courses in Social Work/Social Pedagogy and one of the universities of applied sciences reported, that they will start a Bachelor Programme at 2009/10 without a Gender Module.

The 44 respondents, 36 female and 8 male colleagues, are representing 44 departments. The questionnaire has been sent to colleagues from a working group „Gender and social work“ which is related to the Fachbereichstag Soziale Arbeit in Germany, to heads of departments and course coordinators, some of them delegated the questionnaire to 'Gender experts' among the staff. Finally about 2/3 of the respondents reported that they offer Gender courses regularly: this survey, similar to the first one, is based on Gender expertise in departments or faculties of Social Work in Germany.

Taking into consideration that in April 2003 the Fachbereichstag Soziale Arbeit (the union of all social work faculties/departments of universities of applied sciences represented by their deans) organized the first conference about the change of the Diploma Courses into Bachelor and Masterprogrammes (Klüsche 2003), there has been an immense pace of change.

Figure 1: Since when do you offer a Bachelor Course of Studies in Social Work/Social Pedagogy?

Since...	2005 and earlier	2006	2007	2008	2009	planned	blanks	Totally
Frequency	6	13	12	6	3	1	3	44

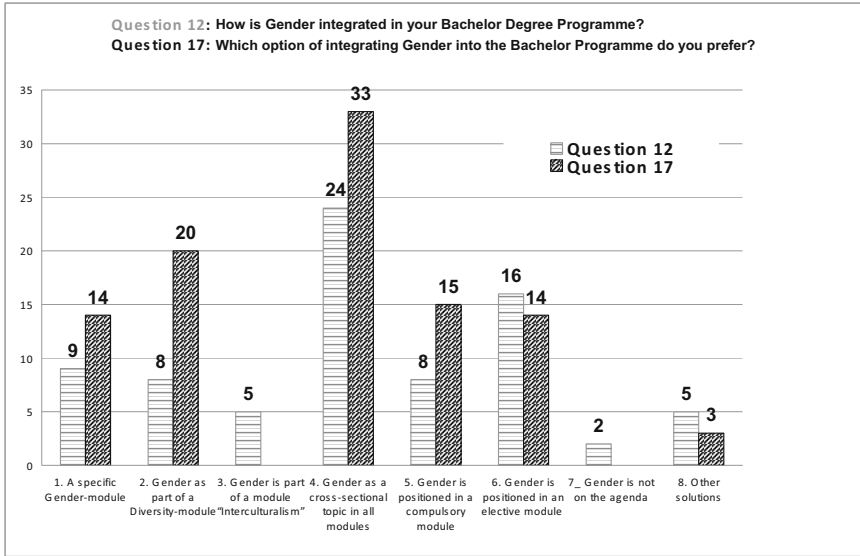
In the end of the year 2008, the majority of experts from universities of applied sciences have been able to report about their experiences with the new course structures. One important fact of the new structure is the length of the programmes. The Diploma Course in Social Work (full time) before was based on 8 semesters which contained at least one year practice either integrated or at the end of the course. Now two third (66%) of the Bachelor programmes are structured into 6 semester, where one third of the departments have developed a 7 semester programme, both related to a full-time course of study. Corresponding to this there are full-time master courses with either a length of 4 or 3 semester.

6 The integration of Gender within the Bachelor Social Work programmes

If and how gender is integrated into social work curricula is a result of the discussions and decisions in each department or faculty. In 2003, the Fachbereichstag Soziale Arbeit has worked out a recommendation including 20 basic modules where one of them was called “Gender Studies” (Ehlert/Hasenjürgen 2005), but this recommendation was not binding and did not put the departments under an obligation. A qualification framework was worked out in 2006 (Bartosch et. al. 2006). In this document general objectives for Bachelor and Master courses have been formulated under six different headlines: gender has not been mentioned at all, although the working group “Gender and social work” gave the feedback and made proposals. At least the >freedom< of designing curricula has its boundaries in the accreditation of the courses by accreditation agencies. They have since 2005 the obligation to check gender balances in the programmes, when gender issues were introduced into the guidelines issued by the Accreditation Council (Netzwerk Frauenforschung NRW 2009).

In our survey we asked for different options and different regulations related to the integration of gender, of which the following figure shows exemplary findings.

Figure 2: The Integration of Gender in Bachelor Degree Programmes



The implementation of gender into the modules of social work curricula could be summarised like the following. The survey shows a very heterogeneous landscape, there are huge differences in modules, courses and course contents as well as in ECTS, teaching hours (SWS) and the standards and procedures of examines. The most chosen option is to integrate gender as a cross-sectional topic into all modules. A specific Gender module has been designed in 9 BA and 2 MA programmes. The Master courses contain less gender perspectives than the Bachelor courses and in both programmes there are more optional than compulsory modules with gender issues. Finally there are high discrepancies in the realisation of gender implementation in the programmes and the requests or desires of the respondents.

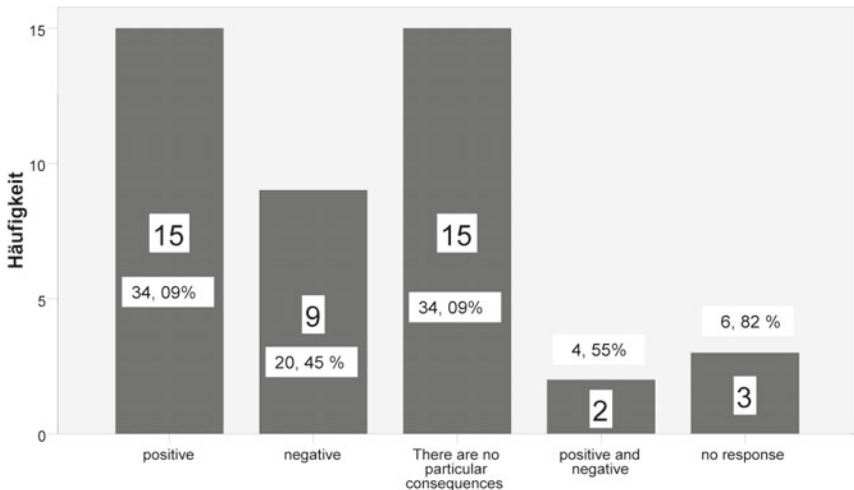
7 Judgements on the implementation of Gender in BA (MA) programmes

About one third of the respondents are convinced that the reform of the social work curricula has a positive impact on the integration of gender subjects. They see the new structure as a chance for securing and the embodiment of gender in course programmes. The debates among colleagues and the modularisation make

gender visible, students get in touch with gender issues. Finally, some answers refer to the Bologna process as a background supporting their interests, when they say that the internationalisation makes the relevance of gender obvious. A second third of the respondents marked “There are no particular consequences”, which could be interpreted like, there has been no relevant changes in the integration of gender issues in comparison to the diploma programmes. Here it is difficult to say, which level is referred to. A comment like “Gender seminars are still dependent on the personal commitment of colleagues” does not reveal a positive judgement of the changes. Explicitly negative consequences for the course programmes and gender issues have been marked by about 20% of the experts. Some comments of them show the competition between subjects which have been integrated or cut out in the new courses: “in comparison to the diploma there are less optional seminars related to gender issues”. Some others mention that there is less time in general, which is also negatively judged.

Figure 3: Judgement of the consequences of the Bologna-Process with regard to the implementation of gender topics social work programmes

How do you judge the consequences of the Bologna-Process related to the implementation of gender topics in your social work programme?



8 Teaching Gender in social work programmes

With the last question of the survey the respondents were asked about how they see the development in teaching gender subjects in social work programmes. There have been a lot of different answers which are summarized in the following three groups: a) Gender as a category, gender theories and knowledge, b) curriculum and teaching staff, c) how the students are regarded.

a) *Gender as a category, gender theories and knowledge*

Some of the experts point out the *complexity* of gender as a category. Here it is said that this complexity is difficult to teach on the one hand, on the other hand there is the perception of a *reduction* of the term gender into a container without content. In addition to this there is still the experience about *lack of knowledge*, a lack of awareness and of recognition of gender expertise and research which goes together with simple reductions to gender roles, gender socialisation, and highlighting gender differences. In a similar direction goes the answer of another respondent who stresses a *decline* of teaching gender as a category, based on theories about society, social inequality etc., instead of teaching gender in this context there has been the decision of implementing gender as part of a module ‚Schlüsselqualifikationen‘ which could be translated with generic or key competences. This perception which includes a sort of polarisation leads to a general discussion about the terms qualifications, competences, knowledge and reflection linked with gender issues.

b) *Curriculum and teaching staff*

Some of the answers bear out the results from the first survey, in saying that the relevance of gender within social work curricula is not taken for granted at all. They confirm the competition of gender with all topics in designing the new curricula and in competition about resources. Some respondents are again talking about the differences within the team of the teaching staff, where they experience the distinction between a few colleagues who are ‘specialised’ in gender topics and ‘the others’, who are not. This distinction in some departments still goes together with the missing acceptance and acknowledgement of gender expertise. In contrary to this there are also voices pointing out that integrating gender issues into teaching is getting ‘normal’. They talk about a ‘change of generations’, where it is obvious for new younger colleagues to integrate gender perspectives.

c) *How the students are regarded*

Some of the respondents experience a lack of interest among students up to opposition against gender issues, especially among female young students that are

summarized in comments like ‘everything has changed’, and they don’t like ,old feminism debates’. There is the observation of less interest in social work with girls in comparison to the rising interest in male subjects: i.e. boys at school. Finally, some of the respondents make clear that the teaching staff works hard in motivating students to reflect on gender perspectives in social work.

9 Summary

The second survey verifies the results and tendencies which have been obvious already in 2004 and shows now how heterogenous gender perspectives are integrated in social work curricula in Germany. However, the surveys also make clear that there are a lot of topics for future discussions. The most chosen option in both surveys is to integrate gender as a cross-sectional topic in all modules. This is an optimistic perspective which needs gender expertise and theoretical work in all fields of social work. But there is still a lack of research and publications; and there is still a lack of knowledge on the impact of gender issues in social work practice. There are several lecturers and professors teaching social work who don’t have the qualification and in a lot of departments there are only a few gender-experts. They won’t be able to integrate gender issues in all modules. The findings show that there is a need for professorships with gender specialisations as well as professorships where gender expertise is one part of the qualification.

As far as the implementation of a specific gender module is concerned there are lots of issues to be discussed of which the relevance of gender in social work has top priority. Moreover, problems relating to the competition of topics of modules where gender is one topic among many others have to be on the agenda of the faculties and departments. The questions if to construct a specific gender module and if such a module should be compulsory or not are also to be solved.

From my point of view, a compulsory module introducing into the basics of gender research is absolutely necessary. The complexity of gender should be obvious to each female and male student of social work: gender as an analytical category in terms of social inequality (in combination with the race, class and gender debate and intersectionality), the knowledge on the social construction of gender and gender as a conflict category in term of identities (Bereswill/Ehlert 2009). Following this, all other perspectives in social work could be reflected from this background. Furthermore, the results show that it is necessary to work on questions about gender competences and qualifications in the context of a general qualification framework. Questions of knowledge bases, reflection and capabilities in social work have to be linked with gender perspectives. It is obvious that the Bologna process is just the trigger for another phase in an ongoing discussion about the relevance and the implementation of gender in social work.

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Gender Studies in Entrepreneurial Universities: The Case of Inter- and Transdisciplinarity

Sabine Hark & Angelika Wetterer

Gender Studies today find themselves in a paradoxical situation. They developed ‘bottom-up’ out of a social movement – that is the feminist movement – yet in many ways they turned into a ‘top-down’ project featured by university presidents and science foundations alike. This can best be illustrated with the concepts ‘inter’- and ‘transdisciplinarity’. For more than a decade, these concepts have operated as buzzwords in the abundant debates about the changing nature of knowledge, science, society, and their mutual relations. At least rhetorically they play an integral part in the restructuring of the modern western university as they serve as criteria of excellence in research assessment and teaching evaluation and as a rhetorical resource in the global competition of universities for prestige and funding as well as students and faculty.¹ Interdisciplinarity, sociologists of knowledge Peter Weingart and Nico Stehr (2000) observe, has indeed “become a label almost synonymous with creativity and progress, signaling reform and modernization in science and scientific institutions” (Weingart/Stehr 2000: 1). Disciplinarity and academic disciplines, in contrast, are often portrait as static, rigid, immobile, backward, and resistant against (necessary) reforms. Universities, the advocates of transdisciplinarity thus argue, will only be suitable actors in future knowledge production if they overcome their discipline-based structural conservatism and recognize the emergence of a new type of knowledge that is transdisciplinary knowledge. This, scholars like Basarab Nicolescu (1997) suggest, would imply a multi-dimensional opening of the university: towards the civil society, towards other places of knowledge production, towards the cyberspace-time, towards the aim of universality, and towards a redefinition of values governing its own existence.

1 To give just one example for this rhetoric, an excerpt from the mission statement of the private Zeppelin-University” in Friedrichshafen/Germany: “Zeppelin University: a multidisciplinary university for tomorrow's decision-makers. Zeppelin University is a state-recognised private institution of higher education bridging Business, Culture and Politics. Zeppelin University defines itself as an individualised, international, and interdisciplinary educator of well-rounded decision makers and creative innovators in the fields of business, culture and politics, as well as a multi-disciplinary research institution exploring issues relevant to society.” (http://www.zeppelin-university.de/index_eng.php; retrieved 2009-03-13)

Nicolescu's plea for transdisciplinarity is but one example for a rhetoric in which disciplines have indeed become the emblem for the supposed immobility of universities, their supposed inability to change and to adapt to new challenges. In the European Union measures to transform Higher Education, called "Bologna-process", for example, concepts of interdisciplinarity seem the perfect match for the goal to reorganize study programs in terms of tradable modules. For interdisciplinarity promises the kind of mobility and flexibility that is needed in a system that organizes Higher Education consistently in terms of a market-oriented consumerist model.

Contrary to these phenomena, inter- and transdisciplinarity also figure as prominent emblems of knowledge formations that understand themselves as critical, transformative, and transgressive of modern science, knowledge, and the order of academic disciplines such as Women's Studies, Queer Studies, and Postcolonial Studies. Indeed, one could argue that it is Women's and Gender Studies that most strongly appreciate inter- and transdisciplinarity in the academic universe.² For it is the interdisciplinary nature of Women's Studies and its positioning vis-à-vis universities and their supposedly problematic disciplinary order, many believe, that makes Women's Studies distinct within the academy.

Hence, one could argue that inter- and transdisciplinarity function like "magical signs" (Katie King 1994), that is, as empty signifiers meaning whatever their users want them to mean. Maybe more than any other feature to describe knowledge formations they are enormously flexible and elastic concepts with the capacity to emblemize even contradictory ideas. Interchangeably, as we have seen, they seem to be able to signify effectiveness, innovation, connectivity, applicability, marketability as well as radical critique and transformation of gendered, heteronormative, sexist, and racialized knowledge. They hold the promise to be able to overcome disciplinary turf wars, hence the promise of the unity of science, the dream of a common language so often evoked in Women's Studies, as much as they are a sign of critical excess, heterogeneity, hybridity, dialogue, and rescue from disciplinary parochialism.

Gender Studies with its interdisciplinary self-understanding in turn, seem thus to be able to both fit into models of neoliberal market- and management-oriented reforms of Higher Education and at the same time be able to preserve a self-understanding as a radical, transformative, and critical knowledge enterprise. This inconsistent positioning of Gender Studies and the claiming of inter- and transdisciplinarity in and for both neoliberal reforms of Higher Education and

2 For the debates in Feminist and/or Gender Studies in Germany, see Sabine Hark (2005): *Dissidente Partizipation. Eine Diskursgeschichte des Feminismus*, Frankfurt a. M.: Suhrkamp, 335-389 and Heike Kahlert/Barbara Thiessen/Ines Weller (eds.) (2005): *Quer denken – Strukturen verändern. Gender Studies zwischen Disziplinen*. Wiesbaden: VS Verlag

transformative knowledge endeavors suggests we would like to argue, that debates on the future development of Gender Studies have to take into account several political issues such as the 'nature' of knowledge formations as well as politically induced transformations of Higher Education. We also cannot leave out the phantasmatic dimensions such as ideas about the transgressive potential of knowledge or the role of feminist knowledge producers as change-agents. We therefore cannot easily assume that inter- and transdisciplinarity function *per se* as transformative methodology in Gender Studies if we do not examine both these political issues at stake as well as the function of inter- or transdisciplinarity as a multi-faceted magical sign. This is even truer at a time when a similar logic of interdisciplinary boundary crossing as engaged by feminist scholars informs Higher Education policies and the economic logic of academic capitalism more generally.

Moreover, it is even truer in light of the fact that concepts of inter- and transdisciplinarity seem to be the most seriously underthought critical, pedagogical, and institutional concepts in the modern academy. Most scholars, Peter Weingart (1997) claims, seem to avoid enquiry into the history of discourses and debates about interdisciplinarity. For this would make clear that although since the late 1960s interdisciplinarity is proclaimed, demanded and hailed as the panacea of reforms of Higher Education this has not lead to substantial institutionalization of interdisciplinary research and teaching structures let alone sophisticated transdisciplinary research methodologies. Quite to the contrary, Weingart insists, while interdisciplinary rhetoric proliferates differentiation and specialization in science goes on unhampered. Science historian Julie Thompson Klein (1990) shares Weingarts view. Discussion of interdisciplinarity, she observes, is becoming both broader and deeper. Institutional obstacles to interdisciplinary programs, however, remain formidable.

Though Klein diagnosed this almost two decades ago, it holds true today. While the rhetoric of both scholars and science policy makers towards interdisciplinary or more recently transdisciplinary work is enormously open and supportive, it is *de facto* difficult to submit work that covers a range of disciplines or tries to transcend disciplinary-bound perspectives. One could describe the present situation as a paradoxical juxtaposition of "rhetorical modernization and structural perseverance" (Angelika Wetterer 2003). The discourse is widening and there is a heightened sense of urgency about the need for interdisciplinarity whereas at the same time interdisciplinary programs struggle for legitimacy, resources, and recognition and disciplines become in effect ever more specialized and sealed off. This is in large part due to the fact that despite the call for interdisciplinary work articulated by research foundations and inter/national science programs evaluation processes are organized along disciplinary lines and criteria of validation defined by disciplinary standards.

Insights of sociologists of knowledge Robert Merton (1973) and Uwe Schimank (1994) might be helpful to understand this paradox. The prevailing strategy in knowledge production, Merton argues, is to look for niches in uncharted territory, not yet occupied by disciplines – one could call this uncharted territory the domain of interdisciplinarity. In the following, however, it is necessary to avoid contradicting knowledge by insisting on disciplinary competence and its boundaries, to denounce knowledge that does not fall into this realm as ‘undisciplined’. Thus, in the process of research, scholars and scientists constantly create new and ever finer structures. This is the very essence of the innovation process, but this process follows the logic of disciplinarity that is the logic of differentiation. One could describe the role of inter- or transdisciplinarity in that process as that of an intermediate buffer zone. That is a zone providing space for knowledge that has not yet been accommodated by a discipline. Uwe Schimank (1994) speaks of a “functional antagonism” in this regard. Following Luhmann’s social differentiation theory, he argues that the successful logic of the scientific system is disciplinary differentiation. Interdisciplinarity in this view is the functional counterpart to ease the tensions that arise from specialization. In addition, the inter- or transdisciplinary crossing and deconstructing of boundaries serves to reconstruct and maintain disciplines rather than to deconstruct them. Metaphorically speaking, interdisciplinarity is the lubricant that keeps the disciplinary machinery running. In Deleuzian terms: interdisciplinarity is part of the post-disciplinary formation. This, however, does not mean the end of disciplinary power but its release throughout the social field.

The meaning of interdisciplinarity also changes over time. And we will give just a few examples for this. Whereas, as Steve Fuller (2003) pointed out, “interdisciplinarians of an earlier era” promoted “critical reflexivity” as the core idea of interdisciplinarity, the “goal of interdisciplinary collaboration today tends to be less the fundamental transformation of intellectual orientation – a realignment of disciplinary boundaries – than the fostering of good communication skills so that no vital information is lost in the pursuit of a common research project.” Thus, “obstacles in interdisciplinarity”, Fuller continues, “that in the past would have been interpreted as based in disciplinary considerations are now demoted to local problems of project management that need to be overcome as expediently as possible, for purposes of grant renewal and securing the employability of the project members”.

Another time-related change in concepts of interdisciplinarity is the fairly recent transition from interdisciplinarity to transdisciplinarity. Although, as both Helga Nowotny (2003) and Julie Klein (1993) point out, “transdisciplinarity is a theme which resurfaces time and again” it has recently taken some striking turns. Klein dates the term to the international OECD-conference on interdisciplinarity, held in Paris in 1970. The conference organizers defined transdisciplinarity as

“framework that transcends the narrow scope of disciplinary frameworks through a comprehensive and overarching synthesis”³. Other definitions emerged in the ensuing decades, including a new structure of unity informed by the worldview of complexity in science, a new mode of knowledge production that fosters synthetic reconfiguration and recontextualization around problems of application, and collaborative partnerships involving public and private sectors in research on problems of sustainability.

The most prominent definition to date and widely discussed not only in Gender Studies contexts is certainly the one proposed by Helga Nowotny, Peter Scott and Michael Gibbons first in their book *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies* (1994) and again in *Re-Thinking Science: Knowledge and the Public in an Age of Uncertainty* (2001). Nowotny, Gibbons, and Scott situate transdisciplinarity clearly outside the framework of traditional academic disciplines and focus the border between academic science and non academic-science. An alternative approach proposed by German science philosopher Jürgen Mittelstraß (1998) and also widely discussed in Gender Studies in Germany, Austria, and Switzerland, conceptualizes transdisciplinarity in a quasi post-colonial critical mode as discipline-oriented. In discipline-oriented approaches of transdisciplinarity ‘trans’ refers to a kind of border traffic between disciplines that is characterized by critical reflexivity. Unlike concepts of interdisciplinarity that leave disciplines intact reflexive transdisciplinarity transcends disciplinary divisions within the historical context of the constitution of disciplines. It reminds disciplines of their historicity and the epistemological contingency of their respective perspectives. It is in this sense that one could speak of transdisciplinarity as operating in a post-colonial mode of critique. And it is this definition of transdisciplinarity that recently appears increasingly as a label for new knowledge formations rooted in cultural critique such as Women’s Studies and Gender Studies.

To summarize: What we hope has become clear thus far is, *first*, interdisciplinary and transdisciplinary practices are as little as disciplinary practices neutral practices. They have histories, and they take place in particular places and in specific times. They can support either hegemonic projects or critical ones. The emergence of interdisciplinary or transdisciplinary programs and methods as well as the programs and methods themselves have thus to be understood as much in relation to the history of knowledge production and institutional politics as in relation to the emergence of disciplines and their programs and methods.

Secondly, disciplines have created dominant consensus through the creation of boundaries between different kinds of subjects and bodies of knowledge so that the boundaries themselves become reified and legitimated, and they have

3 Quoted in Klein (2003).

produced their own subjects and reproduced their own practices. Yet, simply to charge disciplines with inadequacy elides questions of the relationship between knowledge production and institutional histories, because almost as soon as disciplines establish credibility through discourses of coherence and rigor, they tend to fall into crisis. Against the assertion of distinctive purity, it is thus possible to conceive disciplines as always already hybrid and constantly changing. Moreover, interdisciplinary projects have also often sought disciplinary-like status in the process of institutionalization and thus have fallen into similar dynamics.

Now why has interdisciplinarity been crucial to Women's Studies? There are several characteristics attributed to interdisciplinarity that made it of significant interest to Women's Studies in the first place. *Foremost*, interdisciplinarity offered a framework to conceptualize a "space" between the disciplines – Merton's uncharted territory –, a space necessary in order to intervene in knowledge production. Feminist scholars figured this space as a gap between the perspectives of women on the one hand and the assumptions, models, theories, canons, and questions the so-called traditional disciplines had developed on women on the other hand. Feminist scholarship has in fact more than adequately demonstrated the existence of this gap during the past 30 years of research and teaching. As a consequence, some disciplines opened their borders to include previously excluded research questions, while others revised their methodology to make room for the recognition of gender as a research variable, if not a category of analysis. Interdisciplinarity, *secondly*, offered feminist scholars a language that enabled them to combine the insights of two or more fields of study. This knowledge, many feminist scholars argued, would be unassimilable by the disciplines. For both in content and in form, and by virtue of its very production, they believed, such knowledge stands already as an implicit critique of the disciplinary organization of knowledge. *Third*, while interdisciplinarity incorporates disciplinary approaches to knowledge when they are useful, while it borrows and incorporates, it does not feel constrained by disciplinary methods and rules for the uses of such approaches. Interdisciplinarity, thus, holds the promise of disobedience, unruliness, and rebelliousness (not only) against disciplinary regimes: features with high currency in Women's Studies contexts. Often, for example, Women's Studies is thus described as 'crossing (out) the disciplines'. This phrase captures the revolutionary promise that is inherent in interdisciplinarity, namely, that in crossing, it will cross out the disciplines. Additionally, it holds the promise of a fundamental epistemic challenge that, in producing new knowledge that does not "fit" the disciplinary structure, feminist interdisciplinarity will somehow undermine the very legitimacy of the disciplines themselves. It is that kind of promises that make up the phantasmatic dimension of knowledge production. They enable feminists to imagine themselves as change agents and feminist theory as a transformative power.

The language of interdisciplinarity, we would thus argue, provided feminist scholars foremost with a means to draw a distinction, to differentiate and distinguish their project from already established disciplines. Interdisciplinarity provided the space necessary to articulate feminist ideas and accommodate these ideas within academe, it was and maybe still is a vehicle to articulate and establish feminist knowledge and not the goal.

This becomes even more evident when we consider that different Women's Studies programs conceptualize and practice inter- and transdisciplinarity in many different ways. What is called interdisciplinarity in one institution might not be recognized as such or could be called multi- or transdisciplinarity in another. In addition, it may also be the case that government agencies, university presidents or reformers of Higher Education who endorse inter- or transdisciplinarity understand interdisciplinarity quite differently from what feminist scholars have in mind when they try to set up inter- or transdisciplinary programs and structures. As a consequence, feminist academics may possibly find themselves in a situation in which they are forced to frame their projects in terms not of their own making, yet might not have the institutional and intellectual resources to work through the effects this will have on their ideas, concepts, and projects.

Against this backdrop, one could argue that in Women's Studies interdisciplinarity is as much a seriously underthought critical, pedagogical, and institutional concept as everywhere else in the academic universe. As feminist scholar Marjorie Pryse argues for the U.S. context: "For 30 years Women's Studies has lived with casual and unexamined understandings of interdisciplinarity" (Pryse 2000: 106). Pryse is extremely critical of Women's Studies failure to develop a critical interdisciplinary methodology. "Gender, race, class, and sexuality as vectors of analysis", she argues, "have served as place-holders for some methodology that we have yet to design" (ibid.). We have failed to understand, she continues, that these vectors "do not in themselves constitute methodology even though they do define both our political and intellectual commitments" (ibid.). In a similar vein, feminist scholar Bonnie Zimmerman (2002:x) urges to consider the question whether Women's Studies did indeed move beyond disciplines to new ways of thinking about women and gender. 30 years after the beginning of Women's Studies, she argues, "the way in which we frame our research and teaching continues to be grounded in traditional disciplines" (Zimmerman 2002). Although, Zimmerman continues, "feminist theory is the key to the interdisciplinary practices of Women's Studies", it has not pushed far enough beyond the disciplinary divisions, because "theories and methodologies draw so tenaciously upon their disciplinary families of origin" (ibid.). Also, Women's Studies has barely addressed the assumptions and methodologies of the natural sciences or intellectually incorporated the arts sufficiently, let alone begun to think about theory and methodology outside Western structures and traditions.

This is for the most part related to the fact that despite their efforts to the contrary Women's Studies are still deeply implicated in the conventional structure of disciplines. Moreover, the skills that faculty bring to the programs are thoroughly informed by their own disciplinary training. The actual study programs are thus often structured along the disciplinary lines familiar to the faculty teaching in the program instead of along interdisciplinary-framed research questions or problems. Given that most Women and Gender Studies scholars come from the humanities and the social sciences this can – among other challenges – in practice lead to a further distancing from the sciences, medicine, and technical fields. In addition, because of the institutional history of Gender Studies as primarily occurring in faculties of humanities and the social sciences, as well as its being subjected to a legacy of underfunding and marginalization, Women's Studies often lacked time and resources to fully articulate its ideas on interdisciplinarity. And last but not least, patterns, practices and traditions of professionalization within fields will have a great deal to do with the possibility of interdisciplinarity.

Against this backdrop, we would finally argue, it is necessary that Gender Studies question not only what is left out when inter- or transdisciplinarity becomes the norm but also how we can guarantee that all disciplinary perspectives will be heard in contexts that organize knowledge along hierarchically ordered disciplinary lines. We also need to consider if there are disciplinary hierarchies already in place in the field of Women's Studies. And if that is so how can we take into account the contingent and uneven development of feminist knowledge in various disciplines that is the different 'feminist ages' of disciplines, without assuming or even claiming an *avant-garde* role for some disciplines. There are also political questions to be asked such as the question if Women's Studies interdisciplinarity functions primarily as a mark of distinction in order to differentiate itself from the so-called "traditional" disciplines. And maybe most important what are the ways in which we will be able to govern our own intellectual development in contexts in which government policies sometimes favor the humanities, sometimes the social science, and most often the sciences? What if it is precisely the logic of interdisciplinary boundary crossing that universities now find it in their own interest to support – that is, what if the precondition for institutionalization is no longer disciplinary formation and departmentalization but instead a willingness to bypass existing departments? And finally given the extensive praise of features like connectivity, applicability, and boundary crossing attributed to interdisciplinarity, is the critical impulse 'we' associate with interdisciplinarity in danger of being assimilated to what Masao Miyoshi (2000) has defined as the new norm for transnational corporate elites: the ability to translate across the boundaries of cultural differences? Is interdisciplinarity thus becoming a stage in the production of the new transnational professional-managerial class and ceases to be an emblem of critique?

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Building Two-Way Streets to Implement -Policies that Work for Gender and Science

Sue V. Rosser

In *Gendered Innovations in Science and Engineering*, Londa Schiebinger (2008) gives a succinct and insightful analysis of three levels at which policies in federal agencies have impacted gender and science: (1) research support to increase the participation of women in science; (2) transformation of the structures of institutions to make them more accessible and friendly to women scientists; and (3) reconceptualization of research to include women and gender in its focus and analysis of results. She points out that most agencies, including the National Science Foundation (NSF) and the National Institutes of Health (NIH) have done quite well at level 1, and that NIH and some of the international agencies, such as the European Union (EU) have begun to focus on level 3, with explicit policies requiring gender and sex differences in focus and analyses (Schiebinger, 2008). In contrast, NSF has done little with level 3, but has begun, particularly through its ADVANCE initiative to work on level 2. Building two-way streets that allow cross-talk and sharing of policies between NSF and NIH might permit each to learn from the other about policies that work for gender and science in the area in which each has done pioneering work. Here, I will provide a brief history of women's programs at NSF, which documents the shift in NSF policies over time from a focus on level 1 to level 2.

Level 1: Women's Programs at NSF in the 1980s

In 1945, Dr. Vannevar Bush's report – “Science: The Endless Frontier” – became the blueprint for the long-term U.S. national investment in scientific research and education through research universities, industry, and government that led to the establishment of the National Science Foundation. Almost four decades later, the Science and Technology Equal Opportunities Act of 1980 mandated that NSF collect and analyze data and report the status of women and minorities in the science and engineering professions to Congress on a biennial basis. In 1982, NSF published the first congressionally mandated reports documenting trends in the participation of women and minorities in science and engineering. These

biennial reports on Women and Minorities in Science and Engineering, to which persons with disabilities were added in 1984 (NSF 2000, xii), provided data documenting that science and engineering have lower representations of men of color and of women compared to their respective proportions in the U.S. population overall.

These reports laid the statistical foundation for NSF officials to plan initiatives to address these underrepresentations. Programs such as Research Opportunities for Women and Visiting Professorships for Women (VPW) exemplify these initiatives. As Mary Clutter, assistant director of the NSF in charge of biological sciences, recounted in the evaluation of Professional Opportunities for Women in Research and Education (POWRE) Conference in 1998, the director of NSF established a Task Force on Programs for Women in the spring of 1989 with the charge of ascertaining the barriers to women's full participation in science and engineering and recommending changes in the foundation's existing programs to promote full participation (Clutter 1998, Appendix B).

The task force concluded the following:

1. Significant progress has been made in increasing the representation of women in the sciences.
2. Serious problems remain, preventing the recruitment, retention, and advancement of women in science and engineering.
3. These problems are more severe in some fields than in others, although advancement to senior ranks is a problem in all fields. (Clutter 1998, Appendix B)

The task force also made several specific recommendations, including expanding the level of effort in some existing programs at intervention points along the pipeline and establishing two new programs: one designed to enhance the graduate environment in academic institutions; the second designed to recognize and advance outstanding women faculty to the senior ranks (Clutter 1998, Appendix B).

NSF funded several initiatives targeting various segments of the science and engineering pipeline. Graduate fellowships for women provided an incentive for women graduate students to remain in graduate school and complete their PhD. These fellowships provided support for individual women and their research in science and engineering.

Career Advancement Awards (CAA), initiated in 1986, were superseded by Professional Opportunities for Women in Research and Education (POWRE) in fiscal year 1998. As the CAA name suggests, the award focused on advancing the careers of individual women by providing them funds to pursue their own research agenda. By targeting junior women, CAA used a combination of release from teaching and recognition of potential to make a significant research contri-

bution, to place these women on a fast track to academic success in science or engineering research.

The task force also recommended that the NSF “incorporate the existing Research Opportunities for Women programs into Division-level strategic plans, but retain the Visiting Professorship as a Foundation-wide program” (Clutter 1998, Appendix B). Many of the divisions used a segment of the Research Planning Grant funds as discretionary add-ons, often called Research Planning Grants for Women. These grants targeted women scientists or engineers who had never held an NSF grant or who sought reentry after a career interruption.

Visiting Professorships for Women (VPW), established in late 1982, stood as the primary, foundation-wide initiative for women until POWRE succeeded it in 1997. VPW sought to retain women who already had faculty appointments in science and engineering by providing them with new equipment and supporting them at different, generally more prestigious institutions, where they had an opportunity to develop new research methodologies and collaborations. A 1994 evaluation of VPW documented the success of VPW, stating Policies that Work for Gender and Science that an award often came “at a critical time for keeping the recipient active in research as opposed to other academic, non-research responsibilities” (SRI International 1994,13).

Although support of research of individual women scientists and engineers served as the predominant focus for the VPW during most of its fourteen-year history, each VPW recipient was required to spend approximately 30 percent of her time and effort to attract and retain Women scientists and engineers at the institutions she was visiting (SRI International 1994). As part of her “interactive activities that involve teaching, mentoring, and other student contacts” (SRI International 1994, 1), each awardee engaged in activities such as forming a Society of Women Engineers (SWE) chapter, establishing mentor networks among Women graduate students, and teaching women in science Courses jointly with women's studies programs. This division of 70 percent support for individual research and 30 percent to improve institutional infrastructure to attract and retain women in science and engineering signaled recognition that support of individual research alone might not be sufficient to increase the numbers of women scientists and engineers. The 30 percent underlined the dawning realization that steps needed to be taken at the institutional, as well as individual, level.

Level 2: Women's Programs in the Early 1990s

Although Faculty Awards for Women (FAW) held only one program solicitation, in 1990, FAW attempted to address a systemic problem—the dearth of women scientists and engineers in senior positions that the Task Force Report

had identified. The initiative used the traditional approach of supporting the research projects of individual women faculty for a period of five years at the level of \$50,000 per year, in its attempt to solve the systemic problem. Almost all of the hundred awardees achieved the primary stated goal of the program of achieving tenure. The controversy within the peer review panel surrounding the criteria for selection of the FAW awardees (reviewers could not come to consensus over whether individuals who showed potential, but appeared to need a boost, or those whose records indicated they were very likely to receive tenure even without the award, should receive higher priority) contributed to the termination of the program after one year. It was difficult to judge the efficacy of this program of support for research of individual investigators as an approach to systemic change, given that there was only one cohort of awardees.

Recognizing that a focus on efforts to target individuals in groups such as minorities and white women would not work as long as the system remained unchanged, the Directorate of Education and Human Resources at NSF began to focus on systemic initiatives. In addition to Statewide Systemic Initiatives (SSI), Urban Systemic Initiatives (USI), and Rural Systemic Initiatives (RSI), NSF established the Program for Women and Girls (PWG) in 1993 to explore comprehensive factors and climate issues that may systematically deter women from science and engineering. In addition to Dissemination Projects, PWG included two other initiatives for women and girls: Model Projects for Women and Girls (MPWG) encouraged “the design, implementation, evaluation and dissemination of innovative, short-term highly focused activities which will improve the access to and/or retention of females in SEM(science, engineering, and mathematics) education and careers” (NSF1993, 7). Experimental Projects for Women and Girls (EPWG) encompassed large-scale projects requiring a consortial effort with multiple target populations. They aimed “to create positive and permanent changes in academic, social, and scientific climates (for classrooms, laboratories, departments, institutions/organizations) in order to allow the interest and aptitude women and girls display in SEM to flourish; and to add to the knowledge base about interactions between gender and the infrastructure of SEM which can provide direction for future efforts” (NSF1993, 7).

The only individual research projects supported under the Program for Women and Girls were those where the research and evaluation of a curricular change, cocurricular program, or faculty development initiative fit the individual researcher's agenda. Although K-12 always constituted the centrepiece of PWG, undergraduates, graduate students, and even faculty served as primary targets of several projects at the beginning of PWG. After 1995-96, and particularly after VPW was incorporated into PWG in late 1995, eventually to be succeeded by the cross-directorate POWRE, PWG centered on K-16 exclusively. Transitioning

through reincarnations as the Program for Gender Equity in Science, Mathematics, Engineering and Technology (PGE), and Gender Diversity in STEM Education (GDSE), the current program is called Research on Gender in Science and Engineering (GSE). GSE “seeks to broaden the participation of girls and women in all fields of science, technology, engineering, and mathematics (STEM) education by supporting research, dissemination of research, and extension services in education that will lead to a larger and more diverse domestic science and engineering workforce” (accessed June 23, 2005 from <http://www.nsf.gov/funding/pgm/ehr>).

Temporary Return to Level 1: Initiatives in the Late 1990s: Origins of POWRE

After the 1996 VPW solicitation, NSF replaced VPW with Professional Opportunities for Women in Research and Education (POWRE), giving the first POWRE awards in fiscal year 1997. POWRE was conceived in the wake of the November 1994 Republican sweep of Congress where 62 percent of white males voted Republican (Edsall 1995). This resulted in cuts in federal spending, with programs that had gender or race as their central focus under particular scrutiny.

In response to statements suggesting that Republican lawmakers were studying whether federal affirmative action requirements should be dropped on the grounds that they discriminate against white men made by Senate Majority Leader Robert Dole on NBC's *Meet the Press* on February 5, 1995, President Clinton initiated his own review of affirmative action programs (Swoboda 1995, A1). In June 1995, the U.S. Supreme Court ruled in the *Adarand Constructors, Inc. v Pena* decision that “federal affirmative action programs that use racial and ethnic criteria as a basis for decision making are subject to strict judicial scrutiny” (in Kole 1995, 1). On July 19, after holding a press conference to reaffirm his commitment to affirmative action, President Clinton issued a memorandum for heads of executive departments and agencies to bring them in line with the Supreme Court decision. On July 20, 1995, the University of California Board of Regents voted to end special admissions programs; that decision was confirmed a year later by a citizen referendum. In 1996, a Texas circuit court ruling banned affirmative action in admissions and financial awards. In 1998, in a referendum, the citizens of the State of Washington prohibited any “preferential treatment on the basis of race, gender, national origin, or ethnicity.” In July 2000, an administrative judge upheld Governor Jeb Bush's plan to end the consideration of race and gender in admissions in state colleges in Florida (Lauer 2000).

Although the NSF initiatives challenged in court focused on minority programs, specifically the Summer Science Camps and the Graduate Minority Fel-

lowships, programs targeted exclusively for women principal investigators such as VPW, FAW, and CAA were thought to be in jeopardy. Since the MPWG and EPWG had some men as PIs and did not exclude boys and men from projects, while targeting girls and women, PWG was considered safe, with the exception of VPW. Since VPW had moved to PWG only in 1995, POWRE replaced it after the 1996 solicitation; CAA and RPG were subsumed by POWRE in fiscal year 1998.

Rather than being housed in Education and Human Resources where PWG, VPW, FAW, and CAA had been housed, POWRE became a cross-directorate program, with objectives of providing visibility for, encouraging, and providing opportunities for further career advancement, professional growth, and increased prominence of women in engineering and in the disciplines of science supported by NSF (NSF 1997, 1). Despite threats against affirmative action, the approach to achieving these objectives came through individual research grants to support science and engineering research of individual women researchers. POWRE did not retain from VPW the concept of committing 30 percent of time devoted to infrastructure to attract and retain women in science and engineering.

NSF became aware of several factors that might mitigate against POWRE and its effectiveness almost immediately:

1. The request for proposals for POWRE had been put together very rapidly.
2. POWRE had been removed from the former site of VPW (HER and HRD) because PWG was focusing increasingly on K-12; this meant that program officers from the research directorates, rather than from the Program for Women and Girls, were overseeing POWRE.

Table 1 Timeline of initiatives for women at NSF

1945:	Vannevar Bush's Report: <i>Science: The Endless Frontier</i>
1950:	NSF established
1980:	Women in Science and Technology Equal Opportunity Act mandates that NSF collect and analyze data on the status of women and minorities in the engineering professions
1982:	First publication of <i>Women and Minorities in Science and Engineering</i> (beginning in 1984, <i>Persons with Disabilities</i> were included)
1982-1997:	Visiting Professorships for Women (VPW)
1986-1998:	Career Advancement Awards (CAA)
1990:	Faculty Awards for Women (FAW)
1993-present:	Program for Women and Girls (PWG)
1997-2000:	Professional Opportunities for Women in Research and Education (POWRE)
2001:	ADVANCE initiated

3. Moving POWRE to the research directorates, coupled with having 100 percent of the time and support going to the science and engineering research of individual investigators, went against a growing sentiment that support for institutional and systemic approaches, rather than support of the research of individual women scientists, would be required to increase the percentage of women at all levels in science and engineering.

As part of the background research for a workshop that NSF asked me to organize in 1998 between NSF program officers and scientists and engineers from the community to consider POWRE and successor programs, I posed the following four questions via email to the FY1997 POWRE awardees:

1. What are the most significant issues, challenges, opportunities facing women scientists today as they plan their careers?
2. How does the laboratory climate (or its equivalent in your subdiscipline) impact on the careers of women scientists?
3. What do you like least or find most problematic about POWRE?
4. What do you like best or find most useful about POWRE?

The responses of the awardees proved so useful and interesting that I continued to pose the same four questions to the next three years (FY 1998, FY1999, FY 2000) of POWRE awardees. Responses were obtained from the complete four-year cohort of POWRE awardees before POWRE was succeeded by ADVANCE in 2001 (NSF 2001b).

A thorough analysis of all questions, including the methodology, broader context, and details surrounding response rates to the email questionnaire, was published in *The Science Glass Ceiling* (Rosser 2004). "Balancing work with family responsibilities" stands out overwhelmingly as the major issue for women from all directorates and for awardees for all years in response to question 1. Although many women did not mention problems in either their laboratory or work environment related to gender issues, the largest number of responses to question 2 did suggest that to some degree their gender led to their being perceived as a problem, anomaly, or deviant in the laboratory/work environment. The findings about questions 3 and 4, along with the earlier findings on the other two questions offer insights about the historical context of the NSF funding outlined earlier and the new direction of the ADVANCE program considered later in this chapter.

The responses to question 3: What do you like least or find most problematic about POWRE? fell under three broad categories: (a) gender related, (b) content or parameters of POWRE itself, and (c) NSF administration of the pro-

gram. Gender related includes responses where awardees indicated that targeting POWRE for women only was especially positive or negative. The greatest dissatisfaction, almost double that for category A and almost quadruple that for category C, centered on the content or parameters of POWRE itself, although a substantial percentage (17-24 percent) of respondents all four years found “no problems” with POWRE. Category B referred to conditions such as limits placed on time, funds, and site of research imposed in the program solicitation by NSF. Awardees expressed only minor dissatisfactions with NSF administration processes of review, bureaucracy, and information surrounding POWRE.

The responses to question 4: What do you like best or find most useful about POWRE? provided not only the mirror image responses to question 3, but they also revealed considerable information about the strengths of POWRE. Gender-related responses were positive and reflected opposite opinions from those who felt uncomfortable that POWRE was for women only. Despite the negative to ambivalent feelings expressed in response to question 3 about POWRE being “less prestigious” and “for women only,” many respondents to question 4 liked the fact that POWRE “helps women who have had career interruptions.” NSF administration of the program registered the lowest response; this may reflect a smoothly running bureaucracy, since when programs are administered well, the administration appears relatively invisible.

In contrast, the positive response to the content or parameters of POWRE itself reflected in response to question 4 was lower than the negative response to question 3. This may suggest that NSF's decision to terminate POWRE, and have ADVANCE succeed it, reflected an appropriate response to negative reactions to the content or parameters of POWRE itself. Many respondents indicated an appreciation because POWRE “opens the door for advancement/research opportunities,” especially for difficult to fund “non-traditional research.” Grouping responses 1 and 2 with “getting funding for various needs” and “foot in the door for other funding” illustrates the pressure POWRE awardees felt to obtain funding to support their research in times of tight resource constraints.

Some awardees expressed frustration with supporting research of individual investigators as a way to solve the problem of too few women scientists. They noted the importance of institutional approaches:

I'm not sure how much sense it makes to try to foster women's participation in science and engineering through project-oriented programs. Probably, the lives of a few individual women (i.e., the grant recipients) will be made somewhat easier but it's hard to see how this significantly benefits women in the S&E professions in general. The development of networks among women scientists and engineers and programs to increase the visibility of women scientists and engineers within the S&E profession (such as the Research Professorship for Women program) would probably be of more

general benefit than project-oriented awards. As far as I am aware, the POWRE program does not incorporate even the simplest attempt at networking, such as circulating a list of POWRE awardees. In addition, the limiting of project-oriented awards to any sub-group tends to carry the “second-class” taint. (Respondent 58)

The recommendation to take an institutional approach also emerged from the 1998 workshop of NSF program directors and scientists and engineers from the community:

In keeping with its combined focus on research and education, NSF should develop long-term strategies to encourage institutional transformation regarding the culture of science and to increase gender and ethnic diversity among scientists for both faculty and students; targeted programs such as POWRE do not have sufficient resources to bring about institutional change, which must also be encouraged by all programs in each directorate. The short-term individual strategies, through POWRE, should facilitate women to participate fully in all of NSF's programs, with an aim of developing institutions into places where women scientists and engineers can succeed as well as men. Grants to individuals or to groups of investigators should be made with this goal in mind, as well as the goal of helping the grant recipients' careers. (Rosserand and Zieseniss 1998, 9)

Level 2: Systemic Approaches Through ADVANCE

In fiscal year 2001, NSF launched the ADVANCE initiative to succeed POWRE. Initially funded at the level of \$17 million, ADVANCE has two categories to include institutional, rather than individual, solutions to empower women to participate fully in science and technology. NSF encouraged institutional solutions, in addition to the individual solution permitted under the category of Fellows Awards, because of “increasing recognition that the lack of women's full participation at the senior level of academe is often a systemic consequence of academic culture” (NSF 2001a, 2). Under ADVANCE, Institutional Transformation Awards, ranging up to \$750,000 per year for up to five years, promote the increased participation and advancement of women; Leadership Awards recognize the work of outstanding organizations of individuals and enable them to sustain, intensify, and initiate new activity (NSF 2001a).

In October 2001, the first eight institutions receiving ADVANCE awards were announced (NSF 2001b): Georgia Tech, New Mexico State, University of California, Irvine, University of Colorado-Boulder, University of Michigan, University of Puerto Rico, University of Washington, and University of Wisconsin-Madison. Hunter College joined the first round of ADVANCE awardee institutions in early 2002.

In 2003, NSF announced ten second-round institutional transformation grants: Case Western Reserve, Columbia University, Kansas State University, University of Alabama-Birmingham, University of Maryland-Baltimore County, University of Montana, University of Rhode Island, University of Texas-El Paso, Utah State, and Virginia Tech. Late in 2006, NSF announced thirteen third round institutions: Brown, Cal Poly-Pomona, Cornell, Duke, Iowa State, Marshall University, New Jersey Institute of Technology, Rensselaer Polytechnic Institute, Rice, University of Arizona, University of Illinois-Chicago, University of Maryland-Eastern Shore, and University of North Carolina-Charlotte. ADVANCE promises to go beyond individual research projects of women scientists and engineers that initiatives such as POWRE, FAW, CAA, and VPW supported to solve problems with broader systemic and institutional roots such as balancing career and family.

To initiate the institutional transformation necessary to advance women to senior ranks and leadership positions, Georgia Tech's ADVANCE project included five major threads. These threads also exemplify the characteristics of many ADVANCE institutional projects.

1. Termed professorships to form a mentoring network:

One tenured woman full professor in each of four colleges with disciplines funded by NSF became the designated ADVANCE professor. The title and the funds of \$60,000 per year for five years associated with the ADVANCE Professorship conferred the prestige and funds equivalent to those accrued by other endowed chairs at the institution. This sum also meant that \$1.2 million of the \$3.7 million grant went directly to support the ADVANCE professors in keeping with the NSF notion that the ADVANCE grants should be substantial to recognize the importance of activities to build workforce infrastructure. Because Georgia Tech is a research university, the PIs of the grant particularly recognized the necessity for ADVANCE professors to sustain their research productivity while undertaking this mentoring role. ADVANCE professors often used funds to pay for graduate students or post docs to support their research.

Each ADVANCE professor developed and nurtured mentoring networks for the women faculty in her college. The focus of the mentoring activities varied among the colleges, depending on the numbers, ranks, and needs of the women. In the College of Engineering, a large college with about 42 women out of 400 tenure-track faculty, isolation constituted a primary issue in many departments. The lunches arranged by the ADVANCE professor with women faculty from the college provided an opportunity for them to meet women in other departments and develop social and professional networks. A popular professional networking opportunity included evaluation of the curriculum vitae of junior faculty by senior colleagues to assess their readiness for promotion and tenure or gaps that must be addressed for successful promotion to the higher rank.

The ADVANCE professor often helps to explain and mediate problematic issues in some schools with the chair and dean. In the smaller College of Computing, with eight of sixty women as tenure-track faculty, many of the women had young children, so many of the lunches and activities focused on explication of family-friendly policies and strategies to balance career and family. In the College of Science, lunches and activities centered on grant-writing workshops and other means to establish successful laboratory research. In Ivan Allen College, where 40 percent of the tenure-track faculty are women, the ADVANCE professor chose luncheon themes on publication and scholarly productivity. Although all four ADVANCE professors held luncheons and mentored individual women faculty, each focused the initial activities on those issues she perceived as most problematic or critical for achieving tenure, promotion, and advancement to career success for the women in her particular college. By the fourth year of the grant, the professors evolved more cross-college activities, expanding programs and initiatives particularly successful in one college to women from all colleges on campus.

2. Collection of MIT- Report-like data indicators:

To assess whether advancement of women really occurs during and after the institutional transformation undertaken through ADVANCE, data must be collected on indicators for comparison with baseline data on grant initiation for several indicators. Georgia Tech proposed in its grant to collect data on eleven of the following twelve indicators that NSF eventually required all ADVANCE institutions to collect by gender: faculty appointment type; rank; tenure; promotion; years in rank; time at institution; administrative positions; professorships and chairs; tenure and promotion committee members; salaries; space; and start-up packages. At the time of the Clayman Institute for Gender Research conference, data from only the initial three years of the five-year grant were available. These preliminary results suggest positive although modest gains in all indicator measures.

3. Family friendly policies and practices:

Recent studies document that balancing career and family constitutes the major difficulty for tenure-track women faculty in general (Mason and Goulden 2004) and women science and engineering faculty in particular (Xie and Shauman 2003; Rosser 2004). Competition between the biological clock and the tenure clock becomes a significant obstacle for women faculty who have delayed child-bearing until they receive a tenure-track position. For women faculty in science and engineering, significant time away from their research makes it less likely they can successfully achieve tenure in a research institution. The dual-career situation becomes an additional complicating factor for women scientists and

engineers, 62 percent of whom are married to men scientists and engineers (Sonert and Holton 1995). Given the dearth of women scientists and engineers, the reverse situation does not hold since that would mean few men scientists and engineers would be married. To facilitate the balancing of career and family, perceived overwhelmingly by women scientists and engineers (Rosser 2004), particularly those of younger ages, as the major issues, Georgia Tech instituted the following family-friendly policies and practices: stop the tenure clock, active service, modified duties, lactation stations, and day care. The specific details of these policies can be accessed under Family and Work Policies at <http://www.advance.gatech.edu> (accessed August 20, 2007).

4. Mini-retreats to facilitate access to decision makers and provide informal conversations and discussion on topics important to women faculty:

Research has demonstrated that women faculty tend to have less access and opportunities than their male colleagues to speak with the decision makers and institutional leaders (Rosser 2004). Often this unintended discrimination and lack of access result from women's absence from informal and social gatherings. To ensure access of tenure-track women faculty to the senior leadership of chairs, deans, provost, vice presidents, and president, the Georgia Tech ADVANCE grant organized two-day mini-retreats during each year of the grant. Focused on topics of interest and concern to all faculty, such as case studies of promotion and tenure, training to remove subtle gender and racial bias in promotion and tenure decisions, and effective strategies in hiring dual career couples, these retreats have provided opportunities for the tenure-track women faculty to interact with the institutional leadership and express their opinions and views on matters of mutual interest.

5. Removal of subtle gender, racial, and other biases in promotion and tenure:

In my role as dean, my close involvement with the promotion and tenure process provided insight into subtle ways in which unintended subtle biases might influence decisions on promotion and tenure. For example, I observed that in some cases when the tenure clock had stopped for a year for a valid reason such as childbirth, the clock appeared not to stop in the heads of colleagues, as they considered the individual for promotion and tenure. They seemed simply to expect an additional year's worth of papers, talks, and productivity to be added.

To address this issue, the principal investigator who was the provost appointed a Promotion and Tenure ADVANCE Committee (PTAC) to assess existing promotion and tenure processes, explore potential forms of bias, provide recommendations to mitigate against them, and to elevate awareness of both candidates and committees for expectations and best practices in tenure and

promotion. After one year of studying the research documenting possible biases due to gender, race/ethnicity, ability status, as well as interdisciplinarity, the committee developed nine case studies with accompanying sample curriculum vitae. Each illustrated one or more issues or areas where possible bias might impact the promotion and tenure decision. After discussion of these case studies at a mini-retreat, the refined versions served as the basis for an interactive web-based instrument, Awareness of Decision in Evaluation of Promotion and Tenure (ADEPT), designed by colleagues in the College of Computing. Individuals can use ADEPT to participate in a virtual promotion and tenure meeting, where depending on their response, the meeting takes different directions and generates different outcomes in promotion and tenure. The web-based instrument, along with best practices from PTAC, and resources on bias can be accessed at <http://www.adept.gatech.edu/index.htm> (accessed August 20, 2007).

Each ADVANCE institution has evolved programs and policies to address similar issues on its campus. Most have at least one program that is unique, which if successful, might serve as a model for other institutions. Virginia Tech hosts the ADVANCE portal website for all ADVANCE institutional transformation awardees; it can be accessed at <http://www.advance.vt.edu> (accessed August 20, 2007).

Conclusion

As the brief summary of the history of women's programs at NSF suggests, NSF has years of success in providing support to individual women scientists to support their research, thereby retaining them in science (level 1). Beginning with VPW and especially now with ADVANCE, NSF has poured considerable resources into initiatives to transform institutional structures (level 2). Except for the Research on Gender in Science and Engineering (GSE), focused mostly at the K-12 level, NSF has not focused on reconceptualizing research to center on women and girls (level 3).

In contrast, NIH has also focused on level 1, but since the 2000 Government Accountability Office (GAO) Report concluding that NIH had "made less progress in implementing the requirement that certain clinical trials be designated and carried out to permit valid analysis by sex, which could reveal whether intervention affects women differently from men" (U.S. Department of Health and Human Services and National Institutes of Health 2000), NIH put into effect new guidelines for Phase III clinical trials covering both the inclusion of women and sex-based analysis for reviewers and scientific review administrators. In April 2001, the Institute of Medicine published *Exploring the Biological Contributions*

to Human Health: Does Sex Matter? (Wizemann and Pardue 2001). The agenda validated the study of basic biologic and molecular bases for sex and gender differences in disease, including “sex-based biology as an integral part” of research conducted by the institutes (level 3). The evident policy recommendation that emerges suggests that NIH and NSF might learn from each other. Based on NSF's experience, NIH must not interpret the increase in women medical students and entry-level physicians, particularly in the clinical track, as necessarily translating to women in decision-making positions impacting research. Level 2 institutional transformation will be necessary to ensure this impact. Simultaneously, NSF must begin to focus on level 3, to reconceptualize research in science to focus on women and gender. This reconceptualization constitutes a more difficult proposition in basic research than it does in the applications of clinical medicine where gender is obvious. However, sharing best practices and cross-talk between the agencies should facilitate the mutual learning and evolution beneficial for both agencies as they strive for women's full participation at all three levels.

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Gender Discourses and Organisational Change. The Economisation of Gender Politics in Germany

Michael Meuser

1 Gender Mainstreaming and Managing Diversity

With regard to gender and equal opportunities, two concepts have gained prominence and raised debates in Germany during the last ten years: Gender Mainstreaming and Managing Diversity. Both approaches changed gender discourses within the field of gender politics. Gender Mainstreaming originated in the fourth world women's conference of the United Nations in Beijing in 1995. With the Amsterdam treaty of 1997 it became obligatory for the member states of the European Union (Frey 2004; Klein 2006). As the Council of Europe defined it, gender mainstreaming means „the (re)organisation, improvement, development and evaluation of policy processes, so that a gender equality perspective is incorporated in all policies at all levels and at all stages, by the actors normally involved in policy-making.“ (Council of Europe 1998: 15) According to this definition, gender mainstreaming is understood as a cross-sectional task. It has a) a personnel-related dimension – all members of an organisation are involved, b) a subject-related dimension – all programmes and decisions have to be checked with respect to gender equality, and c) a formal dimension – all levels of an organisation's hierarchy are involved. Thereby the focus of gender politics is widened, including men as well as women as stakeholders and as addressees (Döge 2002). According to Mieke Verloo (2001: 6) “gender mainstreaming appears as a strategy that can get gender equality out of the ghetto of ‘women's projects’.”

The concept of Managing Diversity is rooted in the human rights movement in the U.S.A. In Germany, it is widely stripped off of this context of origin. It entered primarily as an approach of human resource management in the late 1990s (Bruchhagen et al. 2009). The German Association of Diversity Management defines diversity as the “key-issue of management”; it “increases the profit of the company by increasing productivity and strengthening the company's position on the market”.¹ According to Michael Stuber (2004: 20), the “definite economic orientation of diversity” is in contrast to equality concerns. Different

1 <http://www.diversity-gesellschaft.de/> (6/2/2009)

to Gender Mainstreaming, there is no corpus of legislation prescribing the implementation of Managing Diversity. Due to the different contexts of origin, Gender Mainstreaming is more related to the public administration and Managing Diversity to private enterprises.

Regarding how these approaches are implemented, it becomes obvious that both contribute to gender becoming part of human resource management, Managing Diversity more than Gender Mainstreaming. In contrast to programs of women's politics that tends to become replaced by Gender Mainstreaming and Managing Diversity, both are compatible with the logic of organisational self-monitoring (Meuser 2004). Were gender political initiatives before carried out by protagonists who stood in critical distance to the organisation's hierarchy and power structure (Kirsch-Auwärter 2002: 109), now the head of the organisation is requested to implement gender political issues in a top-down way. Gender political goals are transformed into organisational goals. Related to Gender Mainstreaming, but transferable to Managing Diversity, Verena Schmidt (2005: 70) argues: „This is one of the reasons why the language and expertise of gender mainstreaming officers can be totally different to that of equal opportunities officers and why gender mainstreaming is linked to special training.“

Although not being intended by the majority of the protagonists, Gender Mainstreaming as well as Managing Diversity allow for conceptualising gender independently from the semantics of social inequality. Both approaches are criticised for turning gender into a category that is stripped off of its political implications (Bereswill 2004; Wetterer 2002). In women's politics gender refers to social inequality of women. Women are addressed as a “specific problem group” (Bührmann 2005: 77); the politics aims at reducing disadvantages and discrimination. Factually and in contrast to women's politics, with Gender Mainstreaming and Managing Diversity a different semantics of gender is imported into gender politics: understanding social differences not (or not only) as sources of inequality, but as human resources that organisations could and should benefit from. Thus, the logic of economics enters gender politics. According to Andrea Bührmann (2005), even the public administration tends to rely more on Managing Diversity than on Gender Mainstreaming as frame of reference.

I cannot describe here in rich details how gender politics became economized. I will focus on how organisations might change when gender becomes a regular issue of organisational development. For doing this it is at first necessary to reconstruct the semantics of the new economic or managerial gender discourse.

2 Managerial Gender Discourse and Its Semantics

The core idea of Managing Diversity, understood as an organisational device, is to ask how organisational development can profit from and make use of the different social affiliations of its members. Besides class, race, ethnicity and others also gender is handled as human capital. In this view, gender is not so much a social category, but a feature of individuals they should bring into the organisation (Stiegler 2005). The economic or managerial gender discourse focuses on what, according to common stereotypes, is seen as typical female or typical male attributes. Within this discourse, a figure is revitalised that was prominent in (German) women's studies in the eighties, but later on criticised for its essentialist undertones: the figure of a gender-specific working capacity.² It is stated that, due to the division of labour, men and women have different competencies and that these differences should be utilised in favour of organisational development. Not utilising the differences would cause „opportunity costs“ (Stuber 2004: 136). The division of labour between women and men is seen as a resource that human resource management should rely on positively, whereas gender politics aims for reducing this division. The economic perspective sees the gendered division of labour, so to speak, as the „natural order“.

Looking closer at this discourse, a specific bias becomes obvious. The human capital that organisations should make use of is gendered in a specific sense: Only female human capital is at stake. If we look how gender resources are specified in the managerial literature, we only read of female resources. “The under-utilisation of female human resources [...] is a waste of resources for business management reasons as well as for national economic reasons.” (Osterloh/Folini 2002: 126) The same logic is referred to by management consultancy. “Accenture”, a leading international consulting firm, states: “In knowledge based economy with flat hierarchies and an increasing significance of global networks so called ‘female’ characteristics and competencies like empathy and team spirit seem to gain importance.” (Accenture 2002: 7) We are informed that ‘soft skills’ and ‘social competence’ become increasingly important for an organisation's success. Relying on common gender stereotypes, this competence is assumed to be found among women.

Thus, gender is (perhaps more implicitly than explicitly) understood as an individual resource of *women*. What is at stake is to absorb the so far not used female working capacity. Not absorbing this capacity is described as wasting

2 Elisabeth Beck-Gernsheim and Ilona Ostner (1978) argued that, due to the gender specific division of labour that delegates house- and family work to women, women develop specific working competencies asked for in care work, education and service jobs (for a critical view on this thesis cf. Gildemeister/Wetterer 1992).

important economic resources. Men are not mentioned as owners of gendered human capital or as possessing a gender-specific working capacity. For those who are familiar with gender history and gender theory this is not much surprising. The equation of gender with female, well known as a core feature of the bourgeois gender order (Frevert 1995; Meuser 1998), is echoed in a neo-liberal shape.

3 Managerial Gender Discourse and Organisational Change

But notwithstanding this continuity, such an up-valuation of the female could result in changing the organisation's gender structure. Sonja Bischoff (2001) prognoses that the competencies that are attributed to women generally will become the competencies par excellence for leading positions in management. Assumed at least for the moment that this prognosis is correct, and presumed that the up-valuation of the female will really take place, a growing inclusion of women not only into the labour market, but into occupational careers and management positions is to be expected. Women would lose the status of "tokens" (Kanter 1977), no more primarily perceived as members of a gender category, but evaluated only with respect to their individual achievement.

Following the line of this argument, the economist Birger Priddat (2004: 175) assumes that the growing presence of women in management positions will change the frames of decision makers and of colleagues: what formerly attracts attention or provoked defence would now be normalised. This is, so to speak, the logic of (big) number that also characterises Kanter's conceptualisation of gender relations in organisations. But Priddat (2004: 185) points to an important differentiation. "The femininity that is conceded to women is always a hint to their missing masculinity. [...] The former ascription of incompetence is replaced by an ascription of competence. But the new competence is related to a specific human capital, that is missing the generality which is seen as necessary for pure management functions and that men are expected to possess." Thus, the new managerial gender discourse that up-valuates the female remains within the universe of the established gender discourse. The human capital ascribed to women is gendered, the competence ascribed to men is perceived as gender-neutral. The gender-marked social competencies are not seen being on the same level as the "general" competencies, perceived as gender-neutral. Thereby, the discourse on gender as a human resource reproduces a basic motif of the hierarchically structured gender difference.

Nevertheless, one must concede that the managerial gender discourse opens new carrier paths to women. It is not surprising, that the reason for including women into organisations is presented in economic terms: discriminating against

women would weaken the enterprise's position competing with other enterprises. Insofar as gender politics adopt the managerial perspective on gender, it connects itself to the structural logic of organisations. Up to now we are missing empirical research comprising resilient information whether the view on gender being a category of social inequality can be preserved within the managerial gender discourse. Feminist protagonists of Gender Mainstreaming and those theorists of Managing Diversity who are positioned not only in human resource management, but also (or even more) in gender studies argue for this option (Frey 2004; Bruchhagen/Koall 2002; Stiegler 2005). Allison Woodward (2001, 2004) understands Gender Mainstreaming as a chance to employ organisational rationality for enforcing gender political goals. According to her optimistic view, Gender Mainstreaming can be a Trojan horse strategy, causing institutional innovation. Yvonne Billing and Elisabeth Sundin (2006) argue in a similar way concerning Managing Diversity. Verena Bruchhagen and Iris Koall (2007; cf. also Bruchhagen et al. 2009) bring the inequality issue into Managing Diversity by focussing on the notion of intersectionality. Relying on this notion, diversity is not only conceptualised as multiple resources, but also as the complex intersection of different positions of social inequality.

4 Organisation of Work in Knowledge Society

Notwithstanding the controversy concerning the significance of inequality in the managerial gender discourse, Gender Mainstreaming and Managing Diversity brought a fresh wind into the gender political discussion. Both contribute to revitalise it. Referring to modernisation theory, it is to ask in which sense re-focussing gender politics by framing it economically is part of an encompassing societal development: from industrial to knowledge society. Manuel Castells (1996) describes this as a change from industrialism to informationalism. The production and the transfer of knowledge become the central sources of productivity and power. Consequently, the demand for highly qualified personnel increases (Priddat 2004). In knowledge society staff is not only seen as a cost factor, but also, within the frame of personnel policy, as a human resource. According to the managerial perspective, human resources are the "most important strategic factor of success" (Krell 1998: 14). The change from industrial to knowledge society produces a structural pressure for exploring human resources. This is the background of detecting gender as a human resource or human capital and of capitalising the gender difference.

The fordist-taylorist organisation of work, typical for industrial society, is based on the separation of the person from his/her role in the labour process. In

knowledge society this separation breaks off, the organisation becomes interested in the whole person, its “creativity, spontaneity, emotionality, and sensuality” (Aulenbacher 2005: 37). As much as so called “soft skills” and “social competencies” are in demand on the labour market, the whole person becomes an integral part of organising work processes and of the normal course of operations. The person’s subjectivity, former being a source of irritation, changes into a highly demanded capability. Subjectivity becomes economically exploited (Kratzer et al. 2004). Discussing this topic, industrial sociology usually does not focus on gender. The person industrial sociology refers to is a ‘genderless’ person (Lohr/Nickel 2005). However, the gender bias that is implicit to the notion of gender as human capital let expect that mainly women’s subjectivity is demanded.

Referring to knowledge society, recent managerial literature extended the notion of career. A horizontal understanding of career was added to the traditional vertical model. Formerly, making career meant “becoming big through climbing the career ladder at the expense of other”; now it means “becoming big through a growing personal competence to the benefit of other” (Fuchs 1998b: 91). The horizontal career model refers to a person whose whole personality is demanded in terms of capital (Fuchs 1998a). Considering what is known about gender stereotypes, it suggests itself to relate the differentiation of old and new career patterns to gender. The qualifications needed for the new career type contains those competencies that are, according to popular gender stereotypes, more developed among women than among men. It is to expect that – if the horizontal career type gets the significance that is expected in managerial literature – female human capital can be converted in horizontal career success. Whereas the unspecific, but implicitly male connoted human capital remains the precondition for getting access to vertical careers.

The increasing adjustment of organisational operations to customers’ demands and needs is a further context in which the view on gender as human capital and capitalising the gender difference develop. Referring to the growing significance of customer orientation, it is argued that in future women will have better career chances than now. As Sonja Bischoff (2001: 33) states: “This is the chance for women! If women manage to convert their capabilities of initiating and maintaining interpersonal relations into efficient and effective customer management, success will – if gratification is related to achievement – not fail to appear.”

A core argument of the managerial gender discourse why organisations should invest into equal opportunities and should adopt the gender perspective also refers to the issue of customer orientation. Because of an expected increase of the rate of female customers equal opportunity politics would result in advantage in competition. Enterprises which take gender seriously would compete better than those which do not (Krell 1998). New strategies like gender market-

ing explicitly conceive of gender and diversity as market related issues. Product development, opening up of new markets, and communication with the customers would be improved by systematically keeping gender in mind. Also in this discourse gender is equated with female. "The customer is female" is the title of an advisory book (Jaffe 2005). Although gender marketing is defined as "marketing for women and men" (17) the book's main subject is "what *women* really want" (152; italics added).

5 Gendered organisation revisited?

How will organisations change when the new understanding of gender as a human resource becomes implemented? At least it is to be expected that the organisation's self observation will change. Gender would become a routine criterion in it. This opens interesting questions for the sociology of organisations. Following Weber and Luhmann, the mainstream of organisational theory conceive of organisations as gender-indifferent or gender-neutral formations (Ohlendieck 2003). If gender becomes a regular issue in organisational development the empirical reality traditional organisational theory is related to would change thoroughly. According to the notion of gendered organisation, gender is part of the organisation's substructure (Acker 1990, 1992). Becoming a regular issue of organisational development, gender moves from the backstage to the proscenium. It is controversially discussed in the literature on gender and organisation whether gender is an (implicitly) omni-relevant issue in organisations (Wilz 2004, 2008). If gender is absorbed or exploited as a human resource it becomes explicitly an omni-relevant issue, at least potentially. Supposed that organisations will move into this direction, gender theory and organisational theory are challenged to explore how the hidden gendered substructure and the new explicit focus on gender are related. I do not assume that the former will vanish. Instead, organisations will be gendered in a twofold way full of tensions. Organisations will observe themselves through the lenses of the managerial gender concept, but it is not to expect that thereby the gendered substructure will be detected. Not focussing on gender as a category of social inequality, the managerial gender discourse does not possess the adequate conceptual tools. On the one side organisations will become explicitly gendered in terms of individual human capital, on the other side they remain implicitly gendered concerning gender being a social category.

How far the managerial understanding of gender is already now implemented in organisations and how it does affect the gendered substructure is subjected to empirical research. The establishment of a market where public institu-

tions of education and vocational training as well as private consulting firms offer courses in gender training and gender competence let expect that gender will become increasingly a core parameter in organisational development (Meuser 2005, 2009). One thing is obvious by now. Due to economisation gender is subjected to a recoding. Within the managerial gender discourse social inequality and social conflicts tend to disappear from the agenda.

6 Conclusion: Gender Political Implications

Although *Managing Diversity* is foremost a managerial device, it is also discussed as an instrument of gender politics, sometimes related to the approach of Gender Mainstreaming (Bruchhagen et al. 2009; Döge 2004; Frey 2007; Bruchhagen/Koall 2002; Stiegler 2005). It is an important question for empirical research whether the gender political impetus can be preserved when gender becomes a managerial issue. Does ‘capitalising’ the gender difference mean more than radicalising the logic of a market related individualism? Or is the new economic gender discourse part of a politics of inequality that encompasses more than the field of gender politics? In social policy for instance, the “logic of the pure market” (Bourdieu 1998: 111) becomes increasingly relevant. According to Ilona Ostner (2005), social policy no longer aims at reducing the inequalities of incomes, but at re-distributing chances by activating people to create and accumulate human capital. Thus, the people’s “marketability“ must be strengthened (Seifert 2005). The notion of gender as a human resource fits perfectly into this market individualism.

But even if we do not trust in the “wisdom” of the market, it remains subjected to empirical research whether the economically motivated ‘utilisation’ of gender – paradoxically – result in more gender equality than older approaches in gender politics were able to realise. Certainly, established gender stereotypes will hardly be dissolved, but it is not improbable that the sex ratio of organisations will change in favour of women. However, probably not all women will benefit from capitalising the gender difference. Programmatically, *Managing Diversity* is a discourse of inclusion. But it seems that it is also a discourse of exclusion. Whose diversity is requested? Does *Managing Diversity* treat indistinctively all features of individuals as human resources, or does it address only those resources that are requested at the market? Claudia von Braunmühl (2009) states that organisations understand *Managing Diversity* as a measure only relevant for positions in management, not for the whole staff. Thus, *Managing Diversity* contributes to a development well known in the research on the relation of transformation of work and gender: enforcing social differences between dif-

ferent categories of women. Do only socially privileged women profit from Managing Diversity? This critical perspective on Managing Diversity is not restricted to gender. We can ask this question also for other dimensions of diversity. Concerning ethnicity, it seems that the well educated and highly qualified expatriate from UK, France or other well developed EU-member states is perceived in terms of a requested diversity whereas the unemployed Turkish migrant is seen as a member of an undesirable “parallel society”. In this sense the focus on diversity produces its own exclusions.

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What works and what doesn't: How to increase the representation of women in academia and business

Virginia Valian

To improve the numbers of women at every level of business and academia, we first need a good analysis of where the relative absence of women is most acute. This paper focuses on the United States, where there has been progress: men and women make roughly equal starting salaries in academia and business. This progress is not complete, however, since there continues to be evidence that women do not get the same returns on their qualifications as men do even for entry level positions in business and industry, for reasons that may be external to qualifications (for examples from a range of fields with a range of findings, see Black/Haviland/Sanders/Taylor 2008; Keaveny/Inderrieden/Toumanoff 2007; Orazem/Werbel/McElroy 2003; Weinberger 1998, 1999). And a persistent problem remains: advancement is slower for women than for men (Committee on Gender Differences in the Careers of Science, Engineering, and Mathematics Faculty, 2009; Long, 2001). Women are promoted more slowly than men. Women earn progressively less than men as careers continue, even when factors that might differentiate men and women are accounted for. Women are underpaid and underpromoted across the professions generally, including academia. The generality of the problem shows the necessity for a general, social-cognitive explanation.

Before I present that explanation, I would like to present examples of the sort of data that need explanation. In both everyday life and in laboratory settings, women get less credit for their achievements than men do for similar achievements. One example from 1995 is from Sweden. Women were 46% of the applicants for Swedish Medical Research Council postdoctoral fellowships, but they were only 20% of the recipients (Wennerås/Wold 1997). An analysis of the judgments made by the senior scientists on the panels showed that women received lower “scientific competence” scores than men did. The ratings of scientific competence largely determined, as one would expect, who received a fellowship. To determine what contributed to scientific competence, the investigators tried out several models. One model that worked well used a combination of the scientist's productivity and the prestige of the journals in which they had published. Wennerås and Wold correlated those “impact points” with the scien-

tific competence ratings. The model predicted scientific competence scores well for the young male applicants. But women had to receive 100 or more impact points in order to get the same rating from the judges than a man with 40 or fewer impact points got.

One encouraging result of this study was the apparent elimination of gender bias in determining who receives funding from the Medicine subdivision of the Swedish Medical Research Council (though an unfair boost for a connection to a committee member remained strong, Sandström/Hällsten 2008). Such results suggest that convincing evidence of an unwarranted gender gap results in more equitable judgments. The first suggestion we can offer, then, is to provide people with data that will persuade them that the system is not completely meritocratic, even though they intend for it to be. Web-based tutorials I have developed can be used for teaching purposes (see www.hunter.cuny.edu/gendertutorial).

Women in academic science in the United States fare worse than their male peers in achieving the rank of full professor, the highest standard rank. (There are also distinguished professorships and named chairs that generally indicate performance above the ordinary for full or associate professors.) In 2006, for full-time scientists less than 10 yrs post-PhD, about 3.3% of men were full professors, compared to 1.6% of women. Although the difference is small, there is already an indication that men will fare better than women. Between 10-19 yrs post-PhD, 41% of full-time men were full professors, compared to 26% of full-time women. And between 20-29 years post-PhD, 71% of men and 55% of women were full professors. Thirty or more years post-degree, 81% of men and 75% of women are full professors. Women never fully catch up among scientists as a whole. (Data are from NSF Table H-22, S&E doctorate holders employed in universities and 4-year colleges, by broad occupation, sex, years since doctorate, and faculty rank: 2006.)

In some subfields, such as biology and the life sciences, the disparities are smaller. Earlier than 10 years post-PhD, about 1% of men and less than 1% of women are full professors. But between 10-19 years out post-PhD, 31% of men and 23% of women are full professors. At 20-29 years post-degree, 73% of men and 55% of women are full professors. Thirty or more years post-degree, 79% of men and 78% of women in the biological and life sciences are full professors. (Data are from NSF Table H-22, S&E doctorate holders employed in universities and 4-year colleges, by broad occupation, sex, years since doctorate, and faculty rank: 2006.) Within biology, then, women do catch up to men in achieving full professor rank – 30 years post-PhD. That may or may not be considered heartening.

What is responsible for such gender disparities? Instead of flawed evaluations on the part of people who are doing the hiring and promoting, people some-

times propose two other explanations of women's lower rates of achievement. One popular explanation for the small number of women in the natural sciences, math, and engineering, for example, is that there are not enough women in the pipeline. It is true that there are not. But it is also true that the pipeline selectively leaks women and that the women who remain are not appropriately compensated and rewarded. Data from the National Science Foundation also show, for science fields, greater attrition of women than men from the bachelor's to the master's to the PhD level (Valian, 2008a). Finally, in fields where there are many women in the pipeline, such as psychology doctorates, lawyers, and physicians, women still do not reap the same rewards as men. Thus, the pipeline is only one part of the problem.

Another popular explanation is that the lack of child care facilities makes it too difficult for women – the presumed only caregivers – to have enough time for research. Child care facilities *are* lacking and, overall, working fathers do not perform an equal share of child care. But women with children do not publish less than women without children, once suitable controls are introduced (e.g., Sax/Hagedorn/Arredondo/Dicrisi 2002), although women with young children may publish less (Stack 2004) – so child care cannot be the sole explanation. In addition, women without children do not succeed at the same rate as men – so women's extra responsibilities with children cannot be the sole explanation for women's earning less money and being tenured and promoted less quickly. We need good child care facilities and we need to make parenting an equal-opportunity activity, but child care is only one part of the problem.

My explanation relies on two key concepts, gender schemas and the accumulation of advantage, to explain how inaccurate evaluations come into being, their effects in many small aspects of everyday professional life, and their long-term consequences. The cognitive representations responsible for our evaluations of men and women are gender schemas. Schemas are hypotheses that we use to interpret social events (Fiske/Taylor 1991). Schemas are similar to stereotypes but the term “schema” is more inclusive and more neutral, and a more appropriate term because it brings out the proto-scientific nature of our social hypotheses. We need schemas to make sense of our world: they help us have the right expectations of others, predict others' behavior, and orient our own behavior. Schemas are often nonconscious.

Gender schemas are hypotheses about what it means to be male or female, hypotheses that we all share, male and female alike. Schemas assign different psychological traits to males and females (Martin/Halverson 1987; Spence/Helmreich 1978). We think of males as capable of independent action, as oriented to the task at hand, and as doing things for a reason. We think of females as nurturant, expressive, and behaving communally. In brief: men act; women

feel and express their feelings. Further, our beliefs have support. In questionnaires, men endorse more “instrumental” characteristics and women endorse more “expressive” characteristics (Spence/Helmreich, 1978).

If we consider our schema of a competent professional, we can see that the schema for men meshes much better with the schema for professional jobs than does the schema for women. Are competent professionals capable of independent action, oriented to the task at hand, and doing things for a reason? Certainly. Are they nurturant and communal? Perhaps. But the qualities that we connect with women are not the core of the qualities we connect with competent scientists and businesspeople.

Statistical data can only take us so far in demonstrating gender disparities. With statistical data we can never control all the variables that might differentiate men and women. Statistical data leave open the possibility that men's and women's performance is different in a way that accounts for the difference in their achievement. Laboratory data allow control of all relevant variables so that the role of sex can be confidently assessed.

Laboratory data demonstrate that men and women – to the same degree – overvalue men and undervalue women in professional settings. Here is one example, by Heilman and her colleagues (Heilman/Wallen/Fuchs/Tamkins 2004). They investigated how males and females rated people who were described as being an Assistant Vice President in an aircraft company. The evaluators read background information about the person, the job, and the company. In half the cases, the person was described as about to have a performance review; thus, in this condition, evaluators didn't know how well the person was doing in the job. In the other half of the cases, the person was described as having been a stellar performer. The evaluators' job was to rate how competent the employees were and how likeable they were.

When evaluators had no information about how well people were doing in the job, they rated the man as more competent (7.11/9) than the woman (5.51/9), and rated them as equally likeable (6.79, 6.94). When the background information made clear that the individuals were extremely competent, evaluators rated the man and the woman as equally competent (8.21, 8.03), but they rated the woman as much less likeable (5.81) than the man (7.13). They also perceived the woman as considerably more hostile (3.99/9; here a low score indicates more hostile) than the man (5.29).

Thus, in evaluating a woman in a male-dominated field, observers see her as less competent than a similarly-described man unless there is clear information that she is competent. And in that case, they see her as less likeable than a comparable man. Notably, as is the case in almost all such experiments, there were no differences between male and female subjects.

Both males and females see competence as the norm for men and as something that has to be demonstrated unequivocally for women. Both males and females see competent men as likeable. Neither males nor females see competent women in male-dominated positions as likeable.

And likeability matters: in a follow-up experiment, the experimenters described targets as high or low in competence and high or low in likeability. People rated the targets who were high in likeability as better candidates for being placed on a fast track and as better candidates for a highly prestigious upper-level position. We cannot tell women just to be competent, because likeability can make the difference in whether or not people get rewards. Again, there are no male-female rater differences.

Another example (Norton/Vandello/Darley 2004) demonstrates that people shift their standards in order to justify a choice that seems a priori reasonable to them. In this experiment, gender schemas determine what seemed reasonable. The experiments asked male undergraduates to select a candidate for a job that required both a strong engineering background and experience in the construction industry. The evaluators rated 5 people, only 2 of whose resumé were competitive. One candidate had more education – both an engineering degree and certification from a concrete masonry association – than the other, who only had an engineering degree. The other candidate had more experience – 9 years – than the other, who only had 5 years.

In the control condition, the candidates were identified only by initials. Here, the evaluators chose the candidate with more education three-quarters of the time and education was the reason most often cited as important for their decision. In one of the experimental conditions, a male name was given to the resumé that had more education and a female name to the resumé that had more experience. Here, too, evaluators chose the candidate with more education three-quarters of the time and also rated education as very important. In the second experimental condition, a female name was given to the resumé with more education and a male name to the resumé with more experience. Now, less than half the evaluators picked the person with more education and few people cited education as the most important characteristic.

Men look more appropriate than women for the job of construction engineer, whether they have more education *or* more experience. The standards by which we judge people shift depending on our a priori judgments about their goodness of fit. Gender schemas help determine goodness of fit. When candidates are being evaluated for hiring or promotion, shifting standards can easily come into play. If a man has grant funding but few publications, he can be seen as the better candidate than a woman with no grant funding and publications, because those in favor of hiring him can point to the likelihood that his grant

funding will eventually result in publications. If the situation is reversed, and the man has more publications but less grant funding, those in favor of hiring him can say that he will eventually achieve grant funding because his papers are being published.

A third study addresses the question of a trade-off for women between competence and femininity (Phelan/Moss-Racusin/Rudman 2008). Observers heard fictitious interviews for a computer lab manager job; the interviews were conducted by actors who used exactly the same scripts. The observers were told that the job required strong technical skills as well as social skills because of the need to help students and faculty. In one condition, the interviewees adopted an assertive style emphasizing their competence; in the other they adopted a style that emphasized how communal they were. Observers rated the interviewees on their competence, their social skills, and how hireable they were.

To determine the relative weights of competence and social skills for hireability, the researchers conducted a regression analysis. That analysis showed that evaluators generally gave more weight to competence than social skills. The notable exception was women who were assertive. In that case observers gave more weight to social skills. Since assertive women were seen as not having social skills, they were also seen as less hireable than assertive men. There was no difference in judgments on the part of female *vs* male observers.

Women are thus in a difficult position. If they are not perceived as competent they will not get the job. But if they make their competence clear by behaving assertively, they will be seen as lacking social skills and will be downgraded for that reason. One solution for women is to combine agency with warm, communal behavior (Eagly/Carli 2003; Heilman/Okimoto 2007).

Even when they achieve leadership positions, women are less likely to be seen as leaders than men are. In the head-of-the-table experiment, college students saw pictures displaying 5 people seated around a table. The group was described as working together on a project. Two people sat at each side and one person sat at the head of the table. Sometimes all the people were male, sometimes they were all female, and sometimes the group included both males and females (Porter/Geis 1981). The students were asked to identify the leader of the group. In same-sex groups, the man or woman sitting at the head of the table was always identified as the leader. In mixed-sex groups, a man at the head of the table was always identified as the leader. But if a woman was at the head, she was not reliably labeled as the leader; a man seated elsewhere at the table was labeled as the leader about equally often.

There were no differences between male and female observers. Both made the same judgments. There was no intention to discriminate. Nevertheless, the female leader who is sitting at the head of a table loses out compared to the male

leader. The symbolic position of leadership carries less symbolic weight for a woman than a man. Women are less likely to obtain the automatic deference that marks of leadership confer for men. Women are objectively hurt in situations of that sort, even if observers intend no hurt. A woman has to work harder to demonstrate that her apparent position of leadership is a real position of leadership.

One might be tempted to dismiss concern about such imbalances as making a mountain out of a molehill. For example, women comment informally that in a meeting they might make a suggestion that is ignored, only to hear a male colleague make the same suggestion ten minutes later and be acclaimed for his good idea. A woman who comments on that might be told that it is not important and that she is being oversensitive.

But mountains *are* molehills, piled on top of one another over time. Small imbalances add up to disadvantage women. Success is largely the accumulation of advantage, exploiting small gains to get bigger ones (Merton 1968). A computer simulation (Martell/Lane/Emrich 1996) shows the importance of very small amounts of bias. The researchers simulated an 8-level hierarchical institution, with a pyramidal structure. They staffed this hypothetical institution with equal numbers of men and women. The model assumed a tiny bias in favor of promoting men, a bias accounting for only 1 % of the variability in promotion. After many iterations of promotions, the top level was 65% male. Even very small amounts of disadvantage accumulate.

Evaluations come into play at every point in a person's career. Some of the examples are small ones that happen on a frequent basis. Others are large ones that occur at the time of hire or promotion. People who are not consistently recognized as having good ideas and doing good work are people who are unlikely to be hired or promoted.

What is responsible for women's lack of progress in the professions and in academia is the gender schemas through which we all – male and female alike – perceive and evaluate women. The small but systematic undervaluation of women culminates in women's smaller salaries compared to men, and slower rates of promotion.

We would like to think that our genuinely held egalitarian and meritocratic beliefs and ideals would buffer us from the effects of gender schemas (Lerner 1975). But our evaluations and reactions occur unintentionally and outside awareness. Indeed, our belief in our own good will can make it difficult for us to see what we are doing. That does not mean that we cannot institute remedies. We can, but we need to understand that good intentions are not enough. We need to understand how gender schemas work and the importance of the small daily inequities in our treatment of our colleagues.

What, then, is to be done? The schema analysis has implications for remedies. Schemas resist change and their effects are ubiquitous. No single solution

will do. People will persistently make errors in evaluating others (and themselves), and need good procedures and policies that will buffer them from errors.

Helping people understand the basis for their errors of judgment is an important start. On the education front, everybody has to understand how gender schemas work, their persistence and ubiquity, and the limitations they set on our ability to judge others accurately. Everyone needs to know the data and know the theory, and to communicate the data and communicate the theory. Hiring and promotion committees particularly need to know where errors are likely to occur in their evaluations. No one is at fault, but everyone is responsible for improving the accuracy and fairness of evaluations.

The next step is to demonstrate that institutions can benefit from increasing diversity. For example, mixed sex groups appear to have more patent citations than single-sex groups (Ashcraft/Breitzman 2007). Diversity leads to more innovative solutions, under optimal conditions (Page 2007; Polzer/Milton/Swann 2002). Those optimal conditions include congruity between what a person thinks she has to offer a group and how that group sees her. If people do not feel valued and free to speak up, the value of diversity vanishes and, worse, strife and conflict occur.

The third step is to develop multiple remedies. There is no single remedy because the problem is multi-faceted. For a multi-faceted problem we need multiple remedies, carried out by multiple people, multiple times, in multiple places. We need remedies that people can carry out immediately as well as longer-term remedies.

An example of a remedy that people can carry out immediately is to look at lists of colloquium speakers or conference speakers. If the list does not have the same proportion of women as there are women in the field that is a reason to search harder for qualified women. We know that young women are negatively affected by viewing professional settings in which men are overrepresented and are discouraged from further participation (Murphy/Steele/Gross 2007).

A remedy that requires more effort is data collection, data analysis, and data publication – a set of benchmarks. For example: what percentage of new hires are women?, how long do women and men stay in a given rank?, how many women are present on powerful committees?, how are teaching responsibilities distributed by sex?, what differences are there in salary? Many of the US institutions that have received ADVANCE Institutional Transformation Awards from the National Science Foundation have developed methods for collecting and analyzing data. Those methods are on the institutions' websites. (See, for example, www.hunter.cuny.edu/genderequity.) Since inequity is likely to reappear because gender schemas are continually in action, it is necessary to check the benchmarks annually.

A roadmap of activities would contain the following suggestions, among others (Valian, 2008b):

- Develop policies for recruitment to minimize errors of evaluation and create a balanced short list
- Develop policies such as those developed by Georgia Tech for retention and promotion that ensure all members receive equal resources
- Provide individuals with information about how to be successful, such as the sponsorship program developed at Hunter College (Rabinowitz/Valian, 2007)
- Ensure institutional recognition of achievements
- Ensure accountability: chairs, deans, provost – everyone must be accountable
- Ensure visible, verbal, financial, and practical commitment on the part of leaders; leaders must say why diversity is important and demonstrate that it is a priority
- Create a diversity team or task force; in academia, the team should be composed of faculty who are respected and credible in their fields
- Develop policies to help dual-career couples
- Create child-care facilities or resources
- Ensure positions of power for women as well as men

A study by the RAND Corporation examined 8 companies taken from *Fortune's* 2003 list of the 50 best companies for minorities and compared them with 6 companies taken from the 2003 list of the 100 best companies to work for (Marquis/Lim/Scott/Harrell/Kavanagh 2008). The best diversity firms cited competitive advantage, consumer service, and improved work environment as motivations for diversity. In contrast, of the 6 best firms to work for, only half cited two or more reasons for diversity.

The firms also differed in their leadership practices. Seven of the 8 high-diversity firms used all of the best practices that the diversity literature suggests (leadership involvement, formal commitment, formal objectives or plan, organizational structure, communication), but only one of the best places to work for did. Three of the 6 best firms to work for pursued none of the practices.

Similarly, the diversity firms had a range of diversity initiatives, ranging from recruitment to development of social networks and awareness (recruiting, promotion, retention; professional development for minorities; workforce education; supplier and franchise diversity; educational and community outreach; social networks and awareness). The firms that were good to work for had many fewer initiatives.

Accountability for diversity was also greater in diverse firms than in firms that were good to work for.

In sum, then, what characterizes diverse firms is exactly what the diversity literature tells us should work: articulating why diversity is important (making the business case), having committed leaders, pursuing many initiatives, and maintaining accountability.

A large study of 829 companies over a 31-year period had somewhat similar results (Dobbin/Kalev/Kelly 2007). The companies had 100 or more employees. The two features that most helped increase the number of women and underrepresented minorities in management positions were having a diversity taskforce composed of individuals from different sections of the company and having a diversity manager. Mentoring programs were effective for most groups (but not white women). Network programs were not effective (except for white women), and diversity training was also not effective (except for Hispanic women). From this study, the main message is that teams that are in charge of ensuring diversity do work. Diversity training may be ineffective in companies because it happens infrequently and may not concentrate on providing useful data.

To sum up, it is possible, both in academia and in business, to motivate attention to diversity and to implement successful programs for change. Success comes not from a single bold stroke but from effort that involves many people at many levels across the institution, all of them with an eye on how to improve the representation of women and minorities and with an understanding of why there is a problem in the first place.

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Gender Politics: Behavior therapy for the two sexes or a structural critique of economic relations?

Tove Soiland

When I was first invited to this conference I was asked to talk about *Transforming gendered behaviour into an economic category*. Well, my first reaction was: to do this successfully one should not be trained as a philosopher but rather as an alchemist. – To put this in another way, we might say that economic change might result in some changes in gendered behaviour. At least that's what I am thinking. Now, what I see as the main aim of gender politics at the universities in German speaking countries, and as the aim of nearly all efforts to achieve gender equality today, is the attempt to influence individual or collective behaviour.¹ The reasons for this and the accompanying problems are what I want to explore in what follows.

With the shift to New Public Management, gender equality politics saw the chance to anchor its concerns deep in the structures and the culture of their particular organisation through the process of restructuring; not only at the universities, but throughout the entirety of public administration. In so doing, gender equality politics was able to compose its requirements, its 'accounts receivable', in the terminology of business management, in which the language was no longer that of domination and authority, but rather of a more useful 'human resource', or even a 'surplus value' of an effective equality (DFG 2008a: 1). The latter, no doubt, in order to illustrate how far removed one had become from the Marxist critic of Political Economy, using its concept now without hesitation... All this doesn't seem to me particularly problematic, as it happens primarily a result of tactical considerations.² All this doesn't seem to me particularly prob-

1 The following sources are used for this contribution: the equality program that was established for the female-professors-program in Germany (compiled at the website of BUKOF <http://www.bukof.de>); DFG 2008a+b; CEWS 2007 and various individual equality programs (Universities of Goettingen, Zurich, Hannover, Bochum, Frankfurt, Kiel and Freiburg i. Br.).

2 Here, though, it should be noted that the borders between strategic application and the conviction that equality can be easily implemented as a question of management are often fluid; cf. e.g. Kahlert (2005) and Bendl et al. (2004).

lematic, as it happens primarily as a result of tactical considerations.³ My concerns reside elsewhere. The fact that this commingling of politics, administration and business management was able to be consummated through equality with such ease, which can in fact baffle outsiders (Wetterer 2002: 129), has, I think, to do with a theoretical shift in the conceptualization of gender, which I consider to be the real problem in this development. That is to say, gender equality politics in German-speaking countries increasingly orients its notion of *gender* toward one that was originally developed in the field of Cultural Studies. I would add to this that we are dealing with a fundamental shift in the theoretical understanding of how to conceive gender relations, a shift, which has taken place in a silent and to a large extent unconscious manner. A very specific notion of gender construction has prevailed since the mid-1990s that is based in Gender Studies and enjoys an astonishingly broad consensus in German-speaking countries. In it, the so-called deconstruction of a dual-gender (female/male) order appears as the most radical political position. The accompanying focus on questions of gender normativity seems to have become an anchoring position around which equality politics in its entirety orients itself.

What I find problematic with this development is that gender *relations* appear primarily to be a question of gender *identities* – an effect of particular normative attributions, role-expectations, and the appropriation or integration of these by a process of (socio-ideological) interpellation. Whether it is the so-called concept of “doing gender,” which is based on an ethno-methodological approach, or the sort of “post-structural” approach Judith Butler has made popular, what they both have in common is the conviction that it is primarily the individual’s behaviour, although prescribed by society, that is responsible for the gendered position a person takes on in society.⁴ Within this framework that seeks to influence gender relations via a critique of these attributions, or in other words via a change in gender-specific behavioural patterns, I see a decisive applicability for neo-liberal modes of governing that also seek to negotiate social conflict primarily through the regulation of modes of behaviour. In both cases, gender relations appear to be something cultural, and have something to do with the mindsets, value systems, and even ‘postures’ that one accordingly approaches through education and training. It is for this reason that I am reluctant to address the matter as a mere strategic alignment with

3 Here, though, it should be noted that the borders between strategic application and the conviction that equality can be easily implemented as a question of management are often fluid; cf. e.g. Kahlert (2005) and Bendel et. al. (2004).

4 Compare, e.g. Wetterer 2008: 20: “If one understands not only the difference between men and women, but also the distinction between the two sexes as an result of a social act and a process of social construction, then one begins to understand that we are all perpetually involved in the processes of ‘doing gender’. We all contribute to making women and men different and distinct members of society.” (translated)

‘factual superiority’. Rather, I would address it as an applicability – to be sure neither intended nor reflected upon – or suitability of a *Cultural Studies* concept of gender for neo-liberal “rationalities” of government⁵ as expressed in contemporary management literature.⁶

In this regard, the relation between theory and practice under consideration here is not one in which one side, the practitioners, would prescribe two genders or sexes, while the others, the gender theorists, would rather see these deconstructed (Wetterer 2008: 12ff). Rather, it seems to me that what these two have in common is their redefining of social relations in terms of behaviour (performativity) and identity, thereby hiding the underlying economic framework of behavioural patterns.⁷ I think that this approach essentially misrecognizes the type of power we are now dealing with insofar as it addresses this power and exploitation simply as a problem of discrimination (Michaels 2008, 34). It seems to me that the problem with any socio-cultural analysis focusing on terms of discrimination is that, with such an approach, there is often the possibility of a conclusion that suggests discrimination can be done away with. The term ‘discrimination’ implies that the problem is one in which knowledge or understanding is lacking. With this, though, forms of economic exploitation, or subsumption under capitalist accumulation, no longer appear as exploitation, but rather as misconduct, which suggests that this is not necessary in the given framework of capitalist relations. Therefore, there is a danger of harmonious acceptance being generated under the “seal of equality and anti-discrimination” (Sauer 2007: 39). Constitutive for neoliberalism, harmonious acceptance purports that “there are no basic conflicts of interest between various social groups and classes” (Brand 2004: 114).⁸ At the same time, though, the basic economic restrictions that accompany the modes of production of late capitalism which are central to gender relations are minimized. The feminist economist Mascha Madörin points out that, in the course of women’s integration into the labour market, the now necessary transference from unpaid caretaking work to paid care work has led to a phenomenon that is designated as a problem of diverging productivities in the

5 For this notion I follow Michel Foucault’s Analysis in *Gouvernement*, see Gordon 1991.

6 For an example of such a connection, see Bendl (2004, particularly 171ff., 64f.) and a critique by Soiland (2008+2009).

7 Compare to the economic conditions in Winker (2008) and the following.

8 Cf. Klinger (2008: 58): “Instead of being subject to power relations, instead of being oppressed, exploited, marginalized or excluded, the oppressed, exploited, marginalized and excluded see themselves as confronted with the norm and normality of a society that is basically equitably designed and, for the most part, functions properly, in comparison to those who appear to have a specific problem, a type of ‘handicap’ – self inflicted or otherwise – that might be treated by means of the welfare-state and social technologies. That is, unless these conditions are attributed to and accepted as one’s fate.” (translated) For a critique of the idea of a win-win situation from the perspective of neoliberal equality cf. Soiland (2004).

general economy. With this, the central claim is that caretaking activities cannot be rationalized the same way the production of goods can. Therefore, care services become increasingly expensive in relation to the goods made available through the production of goods (Madörin 2006: 282ff.; Madörin 2007: 148ff.). What is usually referred to as the ‘explosion in healthcare costs’ in neo-liberal discourse leads, in addition to the circumstances indicated, to a structural pressure on wages in a sector that, along with education, has become the preferred field of experimentation for the New Public Management. The pressure to reduce wages in these sectors simply cannot be resolved within the framework of the contemporary regime of accumulation. Needless to say, this pressure to reduce wages affects precisely the sectors in which, for historical reasons, women are predominately active. I believe, therefore, that with the neo-liberal gender-regime, we are dealing with a regime that produces anew massive inequality between the sexes. Though I also believe that these hierarchies no longer operate through prejudice, i.e. the attribution of special features. I therefore believe that the politics of equality’s primary focus on prejudice can generate gender-segregating effects, as it misconceives an underlying dynamic and focuses on what I would somewhat polemically call a behavioral therapy for the two sexes by approaching a fundamental social conflict through the management of individuals.

Challenging the criteria of scientific qualification

One can, of course, argue that a university can do nothing other than position itself within the political requirements, that it can only act within the realm of the political given. Nevertheless, I think there is enough free play within the university for a structural positioning of equality politics. In the following, I’d like to illustrate this with two points. It has been repeatedly determined that the scientific curriculum, and thereby that which is seen as scientific qualifications, is still oriented toward a ‘masculine’ scientific career, essentially characterized by an “extensive release” from care-taking responsibilities (Lind 2006: 154/156). Despite this, hardly any measures have been taken to effectively challenge the implementation of the average male biography as the standard yardstick of scientific qualification.⁹ Rather, gender equality literature has stressed the notion that care-taking responsibilities present no real obstacle to outstanding scientific performance (Lind 2006: 168f; Lukoschat/Walter: 2006). And perhaps they don’t; but they’re definitely an obstacle within the current standards of scientific

9 An exception here would be the Swiss National Science Foundation, which has removed the age limit for female applicants for this reason.

qualifications relevant for employment, which are, let's say, themselves not a guaranty for outstanding scientific performance... Although it is well known that far fewer female professors have children than their male colleagues (Zimmer et. al. 2007: 148), that they more often live alone (*ibid.*), and that, in 66% of the cases, the children of male professors are cared for by their female partners, whereas this is not the case for female professors, gender equality politics nevertheless talk about care-taking responsibilities primarily as a problem of "negative performance expectations" (Lind 2006: 154). This simply redefines what is in fact a time and economical restriction as a problem of negative role-expectations, might it be that of the personnel manager or that of the university gatekeepers.¹⁰ But this does not solve the problems of actual time restrictions and lack of availability for people with care-taking responsibilities.

There may be much talk of combining work and family nowadays, but even with outstanding infrastructure, children require a level of time and energy that is hardly compatible with the 12 hour or more workday common to scientific and academic careers. If we want to work toward a serious and effective accord between profession and family, we would have to change the criteria for scientific qualifications. This would require, generally, allowing the often not very stringent biographies of women to become the norm and not the exception to having a career, and men would have to adapt themselves to this norm. To achieve this, care-taking work, for example, would have to be assessed as a qualification, positions outside the university would have to be valued just as highly as fellowships at foreign universities, long lists of publications would have to be set off by social and political engagement, because no one can seriously dispute the value of these things as qualifications for scientific and academic work. Equally, age should no longer play any role. However, the trend in gender equality politics is running in the exact opposite direction with little exception. Women are 'integrated' through consultation and training.¹¹ I must admit, I'm sent such programs regularly, and I find them outrageous. These programs shouldn't be thought of as a means by which 'credits' for equality ranking might be received, rather they deserve 'negative points' in the ranking! Where is the equality of demanding that women supplement the contents of their qualifications with all kinds of things in

10 Even at the level of the European Union, there is to be seen an increasing alignment of equality politics with a question of values and a lack of a awareness. Cf. Ludwig 2006: 55. Krüger stresses the point that values are no longer central to the effects of gender bias. For example, young couples have a liberal understanding of gender, and renewed segregation is carried out rather 'behind the backs' of those effected (2001: 64f; 2007: 183-187).

11 In most of the equality programs examined here, the budges for advising and coaching tends to be increasing considerably. For example, the budgeting is often higher than that intended for direct personal advancement. For the adjustment of equality through training and coaching, cf. Dahlhoff 2006 and Blome et. al. 2005: 111-139

order to make themselves compatible with the common male biography? This only further accredits the asymmetry in adaptation, rather than devaluing it. It furthermore displaces what is actually a structural problem with the question of individual manageability, thereby misallocating the responsibility to individual women. Such “emancipation guidance” (Kahlert 2005: 59) transforms gender equality not only into “a goal to be reached on an individual basis” (Hark 2007: 113f), but also a goal for which the individual is responsible.¹²

A simple corrective would be to replace the cascade system commonly used today with a quota of at least 50% for new recruits, making it a requirement for all employment and allocations of funds, so that a selection would be made from the pool of women actually available, and which would automatically valorize their qualifications as they now are. I find that the argument commonly used against quotas – that women would be selected ‘only’ because they are women – speaks in fact for the quota, because an actual reevaluation of qualifications can only happen in this manner. By contrast, I think that the cascade principle, in which the number of newly employed women is oriented toward the lower levels of qualification, does not really function in favour of gender justice. The mere 25% average that leads to more highly qualified jobs under this system might be considered a success of sorts, but this can hardly be considered equality. I don’t see any objective reason not to stipulate parity immediately, at least for the appointment of new staff. After all, there is no shortage of qualified women, particularly when, as is now the case with today’s competition-oriented market, positions are advertised not only within the universities, but also nationally and even internationally. With such exclusively process-oriented measures, in which the management of objectives are left to the individual institute and whose non-compliance or violations go without sanction, one cannot help thinking that the much attested to cultural change is only desired on paper.

Bologna process as a measure of structural adjustment

It is here that my second observation comes into play. In many equality programs, one hears about the implementation of *Gender Mainstreaming* again and again. I’m continually surprised to find how, as a matter of course, this is understood to be an instrument of employment policy or an instrument of organizational development. It seems that the knowledge of the original macro-economic, and thus system-critical, alignment of the concept is hardly available (Braunmühl 2009: 56). And I find it highly questionable that this knowledge is no longer imparted in the course of anchoring gender-modules in training. Rather *Gender*

12 Cf. for the strategy of this individualisation Bröckling 2002.

Mainstreaming is usually only taught together with the management-theory-based *Managing Diversity*.¹³ What's more, the current position of the universities displays important parallels to the very conditions under which *Gender Mainstreaming* originated. Anchored in the context of development politics, Gender Mainstreaming was once a lobby instrument developed by feminist NGOs to bring to the agenda the gender-hierarchical effects of macroeconomic goals such as the Structural Adjustment Programs of the IWF and the World Bank. In my opinion, the Bologna-process must also be understood in terms of such a Structural Adjustment (see for this development Zimmer et. al. 2007: 173-196). As a result of the transition to 'output-orientation', the universities have become more business oriented, and thus increasingly forced into the direction of become learning-factories (Zimmer et. al. 2007: 183). As such, they must primarily produce module-based, applicable or 'for practical use' knowledge. We can therefore expect a massive increase in deregulated and precarious work-relations as a result of this entire development. It is further to be expected that such a development will give way to intense gender segregation. Nevertheless, you won't find mention of such a development in the equality program. I would like to know, for example, what the gender-ratio for temporary teaching contracts looks like; how the temporary and permanent positions, positions for research and apprenticeships are distributed in relation to gender; and more generally how the wages for academic staff is distributed according to the fields of teaching, research, and other positions and what the respective relations to gender are. Unfortunately, there's hardly any such information to be found in the equality-evaluation data (Cews 2007: 41ff). Equal opportunity's focus on excellence leads, in this case, to a particular bias.

For example, I find it problematic that equal opportunity appraisals only take into consideration the number of dissertations and habilitations (post-doc lectureship qualification), and not the conditions under which they are produced. Thus, one must assume that a woman who has financed her doctoral work through employment outside the university has the exact same equal-opportunity ranking as a male colleague who has written his dissertation within the framework of a paid assistantship at the university (Cews 2006, 30ff). In my opinion, one mustn't simply take into consideration the number of dissertations and habilitations, but also the terms of employment and the respective levels of precarity in relation to gender.¹⁴ Tough I can't prove it due to a lack of data and

13 Cf. i.e. the university course "Gender and Diversity Competence", offered by the "Zentraleinrichtung zur Förderung von Frauen- und Geschlechterforschung" at the university FU Berlin, and for a critic of this development Braunmühl 2009: 55f.

14 Zimmer et. al. (2007: 114-117) have determined that women tend to graduate with the aid of stipends while men finance their studies through employment at the university. At the graduate

statistics in this area, I suspect that there is already a massive accumulation of women to be found with terms of employment in which they are (a) poorly paid in relation to their status, (b) have a temporary contract, (c) are assigned to teaching as opposed to research, and (d) do not have institutional ties. Simply put, they are in precarious positions. If, for example, it is determined that the number of female and male graduates is adjusting in accord with the politics of equality, this is still meaningless in terms of actual equality. One might also question whether equal opportunity unintentionally conveys women toward such precarious circumstances. It is worth considering whether junior-professorships, graduate schools, and all kinds of training programs for key competences should be viewed in terms of equal opportunity measures, just because they are more often occupied or made use of by women. One must at least be very careful in assessing whether such so-called 'equal-opportunity measures' don't lead to a renewed segmentation in which women are brought into further situations of precarity: such as being so overloaded with teaching responsibilities that it becomes impossible to complete the work for additional scientific qualifications, or that certain additional qualifications aren't taken seriously. I currently see a danger in the general trend toward the outsourcing of teaching, which, unfortunately, is increasingly being implemented as a means of facilitating equal opportunity. If equal opportunity wants to avoid becoming an instrument of a movement in which mechanisms of structural segregation are transferred back onto, or rather *onto the backs of*, individuals, then it must immediately recognize this newly developing region of precarious working conditions and at the very least collect and make available the evaluative data concerning these conditions.

Translated from German by Scott Loren

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Reflecting on practical experience and a case study within the field of gender equality politics¹

Elisabeth Maurer

Abstract

The majority of European universities have undergone a management reform that emphasises economic efficiency. This could be expected to offer opportunities for implementing top-down measures to promote equal opportunities for women and men working in academia. Applying these measures in practice turns out, however, to be difficult, especially in a university context. In this paper, I draw on my practical experience as the Equal Opportunities Officer at the University of Zurich and on my research on setting up a Gender Studies Graduate School to derive four insights that should be taken into account when considering ways to promote equal opportunities in an academic environment: 1. *Pay attention to the “power of veto” in academia;* 2. *Remember nothing will happen without bottom-up support;* 3. *Take into account the power of tacit knowledge;* and 4. *Discover how particular gender equality strategies are accepted in a given context or considered a matter of taboo in everyday gender knowledge, and then combine these findings with scientific gender knowledge.*

1 Introduction

What is the best way to develop effective gender equality and equity² policies in academia? This is a question I have been concerned with since 1996 not only from a practical point of view as first the Equal Opportunities Officer and then the Director of the Office for Gender Equality (*Abteilung Gleichstellung*) at the University of Zurich (UZH), but also from a theoretical point of view. Here I

1 I am grateful to Silvia Dingwall for helping me with the English version of this paper.

2 Following Nancy Fraser (1997), I see Gender Equity as a long-term, comprehensive goal associated with the deconstruction of the notion of gender, whereas Gender Equality involves shorter-term action to ensure equal treatment of women and men in a given context. In this paper, I will mostly be referring to Gender Equality, without losing sight of the long-term goal of Gender Equity.

have taken up Knapp's call to reflect on gender equity practice theoretically (cf. Knapp 2004) almost to the letter by writing a doctoral thesis in political science on an intervention I made as the Equal Opportunities Officer at UZH to encourage women to pursue careers in academia. I managed to complete my dissertation in autumn 2008. Writing it allowed me the "luxury" of having the distance to reflect on my work and acted as a counterbalance to the often hectic and demanding everyday as the person responsible for gender equality and equal opportunities at Zurich University.

In writing this paper I have been able to draw first on my practical experience as an Equal Opportunities Officer within the field of gender equality politics in Switzerland, in the specific context of the University of Zurich. I have also been able to draw on my reflections about my most important project, which I launched when I first started working in this area in 1996, namely, a Graduate School for Gender Studies in the humanities (*Graduiertenkolleg*). This was the first such Graduate School in Switzerland, with four universities participating. In this article I describe some of the theoretical insights (Insights 1-4³) I derive from reflecting on my practical experiences and empirical findings. My argumentation always proceeds in two steps: first I describe some "on the job" experiences" and then I discuss some "outcomes of reflecting on these experiences".

The main question I address is: What specific factors have to be considered for gender equality and equity policies to be successful or for "gender change" in academia to take place? I assume that the four insights I describe are independent of a particular strategy such as *gender mainstreaming*, *diversity management* or classical gender equality measures, and are relevant for gender change in academia. They help to explain why very different approaches to implementing equal opportunities tend to run up against similar problems. Thus, when introducing any new kind of gender equality strategy, these insights would be worth taking into account.

2 Gender Equality at the University of Zurich (UZH)

The University of Zurich went through a process of reform from 1996 to 2000, resulting in the drawing up of new University Rules and Regulations, which came into force in 1998. These are based on the principles of New Public Management (cf. de Boer/Enders/Schimank 2007), also known as the *new managerialism*. The new legal structure at UZH conforms to the Swiss Constitution and Equal Oppor-

3 These Insights I discuss further in my dissertation (Maurer 2010: forthcoming). There I reflect on the project SOWI-Disslabor and the findings from the case study and network analysis with the Graduate School. See also Maurer 2009: forthcoming.

tunities law and thus includes guidelines for promoting equality of women and men in practice. Since Switzerland is not a member of the EU, it is not required to have any strategies for *gender mainstreaming*, *anti-discrimination* or *diversity management*. That is why strategies of this kind do not have to be explicitly specified in the University's regulations.

Nevertheless, UZH and the Office for Gender Equality has, during the past ten years, been able to benefit from the Swiss Federal Government's equal opportunities programme (*BpC: Bundesprogramm Chancengleichheit*) to increase the proportion of female professors at Swiss universities. The aim was for 14% of professors to be women by 2006 (a goal that has been reached!) and 25% by 2011.⁴ The BpC programme provides financial support for incentives to employ female professors, for career support for junior female scientists through mentoring, for improving childcare opportunities and for other forms of support for those combining family and careers (cf. Spreyermann/Rothmayr 2009). At UZH we have been pursuing these strategies to make gender part of the mainstream and to promote gender equality with both top-down regulations and bottom-up projects and networking. We have always tried to combine gender equality activities with the main strategic priorities of UZH's management.

Up until now the University of Zurich has managed to implement top-down (see www.gleichstellung.uzh.ch):

1. A Behavioural Code for Gender Policy, including the annual monitoring of gender equality, which could be used in the data analysis;
2. Regulations to provide protection against sexual harassment;
3. Infrastructure for childcare.

In addition, we have been able to set up a well-developed infrastructure for the Office for Gender Equality and an active academic Commission for Gender Equality at UZH (cf. Löther/Maurer 2008).

In the University's organisational structure, these top-down equal opportunities measures are considered to be part of UZH's management policy for which the Rector is responsible. Various gender equality projects in the different faculties and disciplines, for instance, mentoring programmes (www.mentoring.uzh.ch), have also been established in a more bottom-up way. The University of Zurich started its Office for Gender Equality in 1996, and I was elected as the person in charge of equal opportunities. One of my first activities was to initiate the so-called *SOWI-Disslabor mit Gleichstellungsanspruch* (Social Science Dissertation Lab with a focus on equal opportunities). The intervention was financed by the Swiss Federal

4 On average, 14.5% of the full professors at Swiss universities in 2008 were women and 26% of the assistant professors.

Office for Gender Equality (*Eidgenössisches Gleichstellungsbüro*), the Swiss Science and Technology Council (*Schweiz. Wissenschafts- und Technologierat*) and UZH's Continuing Education Commission (*Weiterbildungskommission*). It took on concrete shape as one of the first graduate schools in the social sciences in Switzerland funded by the Swiss National Science Foundation (*SNF*), entitled "Gender-knowledge-professionalisation" (*Gender-Wissen-Professionalisierung*). This project led to various activities and allowed me to gain useful experience, which we could then draw on in setting up the Office for Gender Equality. The project has also been useful for developing gender equality measures and institutionalising Gender Studies at UZH.

3 The Graduate School as an Explorative Case Study

My involvement with the SOWI-Disslabor and the Graduate School provided me with an opportunity to do an explorative case study⁵. Such a study enables a topic to be explored in context to generate insights and potential research questions. The approach I took is dynamic, involving participant observation, critical evaluation (including self-evaluation), and reflection, with the overall aim of improving practice. Here, the focus of the case study was on investigating the scope of the Graduate School as an instrument for implementing gender equality. Over a period of three years (1999-2002) I attended the Graduate School's meetings, doing participant observation and an in-depth network analysis as part of the research for my doctorate. I reflected on my personal experience, the empirical observations and data analyses in the light of findings from research on higher education and from women's and gender studies.

In this paper I have restricted my focus to the question: What specific factors have to be considered for *gender mainstreaming* strategies and *diversity management* to be successful in academia? Rather than addressing the question directly, I use the following procedure: first I discuss some aspects of my practical experience and empirical findings, i.e. I provide some kind of what we could call "inside" information, and then, in a second step, I draw some conclusions from reflecting on this experience and present them in the form of what I have called "insights"⁶.

5 "A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used." (Yin 1984: 23).

6 See footnote 3.

4 Insights from my practical experience and the Graduate School case study

Insight 1: Pay attention to the “power of veto” in academia

On the job experience:

Part of the aim of the SOWI-Disslabor was to encourage young researchers and promote equal opportunities, both separately and in combination, by carrying out a formative evaluation. For this Regula Leemann and I developed a “basic instrument for a formative evaluation” as the first research on the SOWI-Disslabor (Leemann/Maurer 2000). This formative evaluation was intended to test, assess and, of course, support the promotion of equal opportunities in the Graduate School, which was originally set up to encourage young researchers in the social sciences.

We believed that we had very convincing reasons for carrying out such an evaluation, so we were surprised when the Graduate School participants refused to allow us to do this research on the grounds that it was linked to *new managerialism* and was therefore non-scientific. This was why I then decided to do participant observation in the Graduate School, in combination with a network analysis.

Outcomes of reflecting on this experience:

In developing the formative evaluation, I drew on new educo-economic steering instruments in research politics. I had intended to feed the results into an evaluation of the Swiss National Science Foundation. But this approach failed because I found myself on the conflict line between the scientific community of academia and research politics, which is independent of gender issues and which cuts across the fields of work of gender equality departments and gender studies. The rationale for modern management concepts like *gender mainstreaming* and *diversity management* strategies can be considered close to that associated with *new managerialism*. Attempts of universities to introduce educo-economic professionalisation and regulations have also met with resistance, as these concepts are all too often seen as being remote from science and rather political. As a result, they tend to be rejected or undermined, which shows how academia possesses a kind of “right of veto” to resist undesirable socio-political pressure on the scientific community.

Once I had decided to carry out participant observation and a network analysis instead of the formative evaluation, my case study and my involvement in the Graduate School met with more acceptance. I think this acceptance developed because the revised form of investigation had come closer to the thinking of the Scientific Community and further away from politically driven research politics.

Insight 2: Remember nothing will happen without bottom-up support

On the job experience:

The creation of the Graduate School “Gender-knowledge-professionalisation” was possible because it received financial support both externally from the Swiss National Science Foundation and the Federal Equal Opportunities Office, and directly from the University of Zurich. Moreover, the idea of a Graduate School had fortunately met with approval from the University Board and from faculty members. What was crucial was that a group of professors were prepared to work with me, the head of the Office for Gender Equality, on submitting a project proposal to the Swiss National Science Foundation to start a Graduate School. That is, these professors were prepared to take bottom-up action with the support of the Office for Gender Equality.

Outcomes of reflecting on this experience:

It is seldom possible to implement new research policies, whether PhD-programmes or equal opportunity schemes, in universities top-down by decree. To be implemented, such policies need first to be accepted by the specialized scientific community, which constitutes itself through its powerful bodies of experts and assessors.

Without their support from the bottom-up, neither *gender mainstreaming* nor *diversity management* measures will gain a foothold. *Gender mainstreaming* and *diversity management* rely on management processes that are organised top-down. If they are not accepted by the experts or faculty members, they can, like other measures proposed by university managers, be undermined by academics taking bottom-up action.

Insight 3: Take into account the power of tacit knowledge

On the job experience:

My interviews with scientists confirmed the importance of networking for scientists’ careers. During in-depth talks I discovered just how significant “personal scientific friendships” could be. Such friendships are key factors, serving as connection points for “conveying” achievements. If you have “personal scientific friendships”, you have found interesting people who consider you to be interesting too. They then recommend you further and draw attention to you inside the network. Scientific friendships serve, on the one hand, as “gateways” (entrance) to scientific networks and, on the other, help to turn performance of tasks into achievements. I can express this better in German:

Wissenschaftliche Freundschaften machen durch die Anerkennung der Leistung die Leistung erst zur Leistung.

This can be roughly translated as: “*scientific friendships transform, through recognising a person’s achievement, their performance into a success*”. Researchers pursuing academic careers need to realise just how important such key people are for them, and “find out” how to make important scientific friendships. Nobody will teach them this explicitly. It is something that is usually not discussed, but just done – those who succeed (not everybody does) somehow manage to make important contacts and build up a network.

Outcomes of reflecting on this experience:

Implicit knowledge (Osterloh/Wübker 1999: 64-72) is crucial and highly relevant to issues involving gender and diversity. It influences whether people are excluded or included on an informal basis outside the formal realm, and this makes it difficult to implement “classical” equal opportunities policies or *gender mainstreaming* or *diversity management*. Implicit knowledge is communicated via personal contact, face-to-face, in stimulating intellectual and personal discussions and encounters, during which academic norms (*habitus* in Bourdieu’s sense – Bourdieu 1992) are also conveyed.

It is in this large and diffuse twilight zone that many female junior researchers give up on academic careers and leave science. That is why classical equal opportunities policies rightly insist on more visibility in this area. But it seems to me that focussing only on introducing more formal rules in this realm would be a mistake because the power of informal and implicit knowledge has a positive side too. Even though the force of the informal can have other effects, in practice it is just such tacit assumptions that serve as a source of inspiration for creativity, innovation, scientific productivity and successful career-path steps. This is why I am convinced that we need not only formal measures to promote young female and male researchers (e.g. graduate schools and mentoring programmes). We also need to “play” productively with the force of the informal in promoting equal opportunities and take into account the power and influence of implicit knowledge.

Insight 4: Discover how particular gender equality strategies are accepted in a given context or considered a matter of taboo in everyday gender knowledge, and then combine these findings with scientific gender knowledge

On the job experience:

During participant observation in the Graduate School, I saw once again how it is one thing for people to recognize theoretically the role of the sexes in the University’s processes and structures, but quite another for them to speak – in the formal context of the Graduate School – about how gender plays a role in their own everyday lives and work. Despite participants’ considerable theoretical

knowledge, much remained (and still remains) in the dark about what goes on in practice in institutions like the Graduate School.

Even though the members of the Graduate School intensively explore inequalities between women and men theoretically, and discuss research results from studies of “doing” and “undoing”⁷ gender in science, they find it difficult to turn a spotlight on their own personal experiences in academia and in the Graduate School. My participant observation revealed that participants and professors avoid raising questions about differences between men’s and women’s academic careers and finding solutions through discussion. For example, when someone dropped out of the Graduate School for personal reasons, this was not topicalised. The in-depth network analysis also brought to light the different network strategies women and men use. Thus women, unlike men, tended to establish networks with “strong ties” and to build “nests”, with a view to keeping the option to have children open, regardless of whether they had children or not. Some important gender equality topics seemed to be taboo, such as unequal requirements for female and male college participants (strategies of difference) or attempts to find solutions to the problem of compatibility between studying/working and having children (strategies for universal childcare).

In this way the highly gender-conscious members of the Graduate School practised and reinforced the prevailing assumption at Swiss universities that universities are gender-neutral. This de-topicalisation of gender issues creates fruitful ground for gender traps to form and perform in everyday life, and should really be brought into focus if real change is to occur.

Outcomes of reflecting on this experience:

People’s everyday knowledge and routines are essential for life in society. They enable a person to take part actively in everyday life and are indispensable for an individual to be accepted in society as a competent member who is taken seriously. The same applies to everyday gender knowledge in the scientific community. From their everyday experience, both professors and young researchers know which kinds of gender knowledge they can promisingly put to use in a particular scientific context to extract the most benefit. They weigh up whether they want to bring their own positioning on gender knowledge into play or whether they would “disturb” the prevailing consensus if they did. What is essential here is whether they can rely on important allies in the organisation or not (cf. Döllig 2007). It may seem banal to say that competent scientific gender

7 “Doing Gender” means that people’s gender identities are constantly being formed and reformed during human interaction. “Undoing Gender”, which refers to gender neutralisation processes, is also of interest for researchers as it involves identifying those structures that are relevant to gender and those that are not (cf. Heintz et al. 2004).

knowledge does not necessarily go hand in hand with standing up in public to expressly defend this knowledge. But the effects of this are not banal and they are certainly worth thinking about. For it is just in this blind spot that gender traps in the concrete everyday can persist, creating problematic areas which form the basis for including or excluding young researchers. These “blind spots” then get passed on and perpetuated without being noticed.

Professional equal opportunities work in science can be performed as an activity for gender experts, by building bridges between scientific gender knowledge and everyday, commonsense gender knowledge (Wetterer 2007). Dealing competently with gender then means analysing the established potential for “disturbance” or “acceptance” in a particular context and focussing more on particular gender equality promotion measures, taking into account the kind of alliances that are possible. Part of the task of promoting equal opportunities must involve knowing and informing people about what limits the scope of different equal opportunities strategies, and what these strategies can realistically expect to accomplish.

The core business of science is the production of knowledge. Here, different kinds of gender knowledge often collide in an unreflected and highly emotional way, affected by people’s individual sensitivities and experiences. This makes the promotion of equal opportunities in academia particularly difficult.

5 Conclusions

Insights 1 to 4 are important – independent of any discussion of the advantages and disadvantages of various equal opportunities strategies. They provide a background for evaluating the special features of *gender mainstreaming* and *diversity management* in a particular context. The University of Zurich is currently pursuing a strategy that combines a gender policy behavioural code with the systematic integration of gender issues in existing and new management instruments. This approach does not seem, at the moment, to be much more promising than other strategies, but it is certainly not less.

Reflecting theoretically on my practical experience within the field of gender equity politics has led me to draw the following conclusions for *gender mainstreaming* and *diversity management*, as well as for gender politics in general:

1) If *gender mainstreaming* and *diversity management* are perceived as connected with *new managerialism*, the tacit power of veto in academia (mainly through expert bodies and peer review systems) may threaten them. *Gender mainstreaming* (top-down) must be accompanied by bottom-up measures. *Gender diversity management* cannot focus exclusively on promoting a diversity of human resources in academia. It must consider how the informal mechanisms in academia work to include or exclude different kinds of diversity.

2) If a university wants to implement gender equality measures (= top-down), these must be supported by the faculties and professors (= bottom-up). Changing the system in academia means accepting the power of informal and implicit knowledge and, where possible, actively using it.

3) Gender equality policies in academia that seem taboo according to everyday gender knowledge have to be analysed and transformed. The vision of gender equity in the long term will “disturb” academia because its aim is radical: to change established structures and foster a culture where diversity is accepted.

If you try to pursue the strategies of *gender mainstreaming* and *gender diversity management* in universities, or attempt to implement *traditional gender equality measures*, you tend to confront the same forms of competition that are all too prevalent in academia. Thus the crucial question today is: how to involve decision-makers in supporting gender equality. We have still a long way to go before we can be certain that, in a university context, particular gender equality strategies will be successful, and even further to go to reach the goal of gender equ(al)ity, where equity entails equality.

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Gender Mainstreaming, Diversity Management and Inclusive Excellence: From Similarities and Differences to New Possibilities

Mary Ann Danowitz & Regine Bendl

During the past 20 years various policy initiatives and organizational strategies to improve the representation of women and reduce inequalities in higher education have emerged in the European Union (EU) and the United States (US). There are currently three prevailing strategies for bringing about equality: 1) Gender mainstreaming in the EU public non-profit sector, 2) diversity management in the EU and US for-profit sectors, and 3) inclusive excellence in the non-profit subsector of US higher education. From a feminist perspective much more is needed to improve the status of women in higher education as well as to become more inclusive to individuals whose ethnicity/race, sexual orientation, age, religion or beliefs, disability, or nationality may differ from those the dominant group. Despite the increasing complexity and importance of equality strategies and the large bodies of literature associated with the first two strategies, there is limited research comparing their attributes (e.g., Bendl 2004), and the third strategy has yet to be critically analyzed.

In this chapter we begin to fill that gap by reviewing the three equality policy perspectives, focusing on how each highlights particular issues while ignoring others. We present the three strategies by adapting Ely and Meyerson's (2000) typology in order to consider the approaches and their efforts to change organizations. We focus on five characteristics: 1) problem definition, 2) vision of equity, 3) approach to change, 4) benefits, and 5) limitations.

We strive to avoid oversimplifying the various approaches by using definitions and literature associated with the self-defined norm setter for each of the three policy perspectives (Verloo & Lombardo 2007). Thus, we consider the policy work of the European Commission on gender mainstreaming, salient literature driving diversity management practices, and the work of the American Association of Colleges and Universities (AACU) on inclusive excellence. We analyze each perspective in order to assist educational institutions in making informed decisions to improve equality.

1. Framing

There are many ways to describe the major perspectives on equality. Frames, structures that enable human beings to understand reality and to create what we then take to be reality, shape our thinking and language at multiple levels (Rockridge Institute 2007), including moral issues, political principles, issue areas (e.g., equality), a single issue (e.g., the talent crisis), and a specific policy (e.g., gender mainstreaming).

Two kinds of frames are important in this chapter. Fundamental frames refer to the values and circumstances in society that give rise to a policy frame (framing in policy analysis), which Rein and Schön (1993: 46) define as “a way of selecting, organizing, interpreting, and making sense of a complex reality to provide guideposts for knowing, analyzing, persuading and acting” The definition is derived from Goffman’s (1974) work on frame analysis,¹ which serves principally to describe the processes of social interaction and communication. We show how the frames represent distinct conceptualizations intended to solve different problems and produce different organizational actions and outcomes. This approach provides a starting point from which we can examine theoretical and value questions and real issues about working with multiple or hybrid frames.

As Verloo and Lombardo (2007: 30) and Walby (2005) have shown, EU countries approach the framing of one policy issue in a similar manner and another policy issue in a different manner. Furthermore, the institutional, political, and social histories add yet another layer of difference. Thus, comparisons of equality strategies must be considered along with their embedded contexts if we are to identify the fundamental values and circumstances that give rise to a policy frame. In the case of equality strategies, the specific ideas and principles of gender and ethnic relations are also important. As Ferree’s (2007:5) analysis shows, in the cases of Germany (which is similar to many of the EU member states) and the United States, that there are differences, so that “the concept ‘gender’ has different connotations of how citizenship is understood,” but there are also commonalities.

In Germany and the European Union, social democratic principles and class struggle significantly influence the understanding of gender. According to Ferree (2007), gender has been framed in a manner similar to class since the latter part of the 19th century with calls for a voice for the disenfranchised as well as providing economic support for socially vulnerable groups (Ferree, 2007: 9–10). Thus, the working class was framed as a social entity defined by its relation to production, rather than by biological characteristics of individual members. As far as women

1 It differs from a critical frame analysis approach of the kind used by Verloo and Lombardo (2007) to analyze gender equality in the EU, which entails an excellent in-depth analysis of various dimensions of policy discourses, by examining the different representations of socio-political actors about the problems and solutions associated with gender inequality.

are concerned, inequalities came to be defined as socioeconomic, based upon their capacity to bear and care for children. A woman's status was defined in relation to the reproductive rather than the productive system. Moreover, unlike class, race in Germany was defined as being about who could enjoy rights of citizenship and this was similar to other European countries that were establishing state boundaries and citizen rights using ethnic criteria (Ferree 2007).

The United States' fundamental frame, first formalized in its Declaration of Independence, is a form of liberalism emphasizing individualism, self-determinism, and independence. US nation-building depended on socially constructing race as an essential form of group difference, which has included slavery, involuntary immigration of ethnically diverse individuals, and the near elimination of indigenous peoples. Hence the United States relied on a racial ordering of inclusion as well as subordination (Ferree 2007) until the Civil Rights Act of 1964, which prohibited discrimination on the basis of race, color, religion, national origin, or sex. The fundamental frame of race and the construction of racial equality, which challenge differences between Blacks and Whites provided White US American feminists with a powerful political frame (both morally and legally) to develop a parallel position to challenge differences between women and men in order to remove barriers to individual opportunity. This has resulted in considerable success in areas where individual competition matters (e.g., education and employment). As a result, the fundamental frames for equality in the European Union and the United States differ, although their goals are often similar. These fundamental frames shape the policy frames we will compare.

2. Gender Mainstreaming

The development and promulgation of EU gender mainstreaming (GM) policy was intertwined with a larger international movement to integrate a new strategy of equality into international development policies. This movement began at the United Nations (UN) World Women's Conference in Nairobi in 1985 (Moser 2005). In 1995, the EC Gender Equality Commission participated in the UN World Women's Conference in Beijing, where it adopted the UN's Fourth Program platform on gender equality (Hafner-Burton & Pollack 2002). In 1996 the European Commission's "Incorporating equal opportunities for women and men in to all Community policies and activities" set out the most comprehensive definition of GM as well as the soft law² for GM. In 1997 Article 3 of the Treaty of Amsterdam provided the legal basis for all EU countries to implement GM. According to the Council of Europe (n.d.), GM refers to "the (re)organisation,

2 A quasi-legal instrument used to indicate how the European Commission intends to use its power and perform tasks. Its binding force is somewhat weaker than or lacks the binding force of traditional law.

improvement, development and evaluation of policy processes, so that a gender equality perspective is incorporated in all policies at all levels and at all stages, by the actors normally involved in policy-making.”

In simpler terms GM is a proactive strategy intended to remedy women’s exclusion by bringing women into the central activities of public organizations. The strategic approach is to make visible the gendered nature of the assumptions, processes, and outcomes in order to bring about greater gender equality. According to Woodward (2004), GM involves the mobilization of the state in order to achieve a gender-equal society based on better politics and administration. Recent EU higher education data show women’s exclusion continues to be a problem and gender equality is still elusive (SHE Figures, 2009).

GM is intended to complement other equal opportunity policies to achieve equal participation of women and men. The responsibility for implementing GM, however, has been given to institutional heads and senior managers, which often results in the delegation of implementation and monitoring. Effective gender equality strategies have been associated with a strong commitment from organizational leaders, cooperation between managers and equality activists (Squires 2005), incentives and the creation of supportive structures (Danowitz Sagaria 2007), and linking equality measures to outcomes (Moser 2005).

GM has garnered the support of key policy makers and public officials in many EU member states. Nevertheless, it has been criticized for having ambivalent goals and vague assessments (Walby 2005; Verloo 2007). Moreover, GM has been perceived as solely addressing gender while neglecting the multiple dimensions of identity, e.g., age, sexual orientation, and migration.

Table 1 Overview of Equality Strategies

	<i>Gender Mainstreaming</i>	<i>Diversity Management</i>	<i>Inclusive Excellence</i>
<i>Problem Definition</i>	Women are excluded	Increase talent	Diversity & educational quality are not part of the institutional core
	Gender bias in regular policies & social institutions result in gender inequality*	Increase productivity, innovation & competitiveness	Traditional views of excellence exclude diversity
		Respond to a globalization & diversified society & customer base	Higher education will become irrelevant without incorporating diversity
<i>Central Concepts</i>	Gender Equality	Diversity	Diversity
	Mainstream	Competition	Quality

<i>Vision of Equality</i>	Participation of men & women is equitable	Positive work environment valuing differences of individuals	Engagement across racial/ethnic groups & men & women Better learning & welcoming environment for all students A more diverse & better workforce
<i>Approach to Change</i>	Mainline gender into policies	Policy statement sets out principles	Focused agenda centered on leveraging diversity's educational benefits
	Make visible gendered nature of assumptions, processes & outcomes	Highly varied. Most prevalent focus is HR Focused agenda centered on leveraging diversity's benefits to the organization	Emphasis on students to drive organizational change Fluid institutional strategy to change institutional core
<i>Benefits</i>	Generated support of key policy makers	Greater understanding of customers & markets	Students (future leaders) exposed to diverse ideas, perspectives & interactions & gain cross cultural understanding
	Considers impact on decisions before they are made*	Improved social acceptance	Diversity will create a competitive advantage
	Creates networks within & across institutions Establishes gender monitoring tools	Increase in productivity & innovation	
<i>Limitations</i>	Ambivalent goals & vague processes	Poor diversity management produces negative results	Ambivalent goals
	Technocratic perspective on policy making	Links between diversity & productivity & innovation difficult	Minimal emphasis on changing faculty culture
	Emphasises gender visibility through statistics without linking to inequality production		Minimal emphasis on gender
	Often single focused	Often single focused	Attempts to overcome disadvantage without denying difference

* from Mieke Verloo Another Velvet Revolution? Gender Mainstreaming and Policies of Implementation, IWM Working Paper No. 5/2001, Vienna 2001

3. Diversity Management

Diversity management (DM) developed in the United States within a neoliberal frame after more than two decades of antidiscrimination employment legislation. As business leaders learned that 35% of the US population would be part of an ethnic minority by 2010 (e.g., US Census Department, 2004), they began to see

the need for greater minority group representation in the workforce and for companies to function differently with a new and more diverse workforce. DM is intended to benefit those who have historically been excluded as well as those who have been included—all persons benefit from interacting with people having different cultural characteristics (e.g., values, language, customs, skills, and behaviors) than their own. Multinational enterprises have adopted DM throughout the world—within the parameters of national and local frameworks—and some small and medium-sized enterprises in the European Union have begun to address diversity (European Commission 2008). Societal changes and New Public Management³ have also created expectations for public sector organizations to manage diversity.

DM refers to a systematic organizational commitment to recruit and retain employees from diverse demographic backgrounds (Thomas 1992). It implies an active recognition and appreciation of the multicultural nature of contemporary organizations in a globalized world (Cox 1991). The varying pressures for diversity are, however, best dealt with specifically calibrated DM approaches (Dass & Parker 1999). Even within one organization, different strategies can be applied to address issues associated with different diversity dimensions. DM covers both a normative perspective, which refers to the inclusion of difference and sameness of persons based on fairness and the elimination of discrimination, and a business-case perspective, which deals with talent, competitiveness, innovation, and organizational learning (Belinszki, Hansen & Müller, 2003: 22–31). The vision of equality encompassed by DM is mainly based on its normative perspective: a positive work environment for a pluralistic workforce whose differences and sameness are valued and actively managed to produce benefits. This business case perspective includes finding and establishing new market niches based on different cultural knowledge; being a more attractive employer to recruit and retain talent; improving an organization's external reputation and social image; increasing the recognition and creativity of individuals and groups to reduce the costs of turnover and absenteeism as well as improving productivity and innovation; and enhancing international flexibility by using an organization's cultural diversity to reduce the number of cultural conflicts (Bendl 2004; Krell 1997; Koall, Bruchhagen, & Höher 2002).

As an organizational strategy DM is intended to be a comprehensive process that includes functions and areas and is coupled with the organization's mission through policies and practices. DM calls for a strong commitment from senior management, and involvement at all levels of the organization (Danowitz, Hanappi-Egger & Hofmann, in press). However, European surveys show (Euro-

3 The ascendancy of management prerogatives and the legitimacy of managerial practices within non-profit and public sector organizations (Exworthy & Halford 1999).

pean Commission 2005, 2008) that in practice DM has many variations, which are necessary to direct the benefits of diversity to the specific interests of the organization. The most prevalent approach is through human resources. The recognized limitations of DM include a single focus or dimension (e.g., gender or ethnicity/race) while neglecting important intersectional applications of diversity dimensions (e.g., age) (Danowitz et al., in press) and reinforcing heteronormativity (Bendl, Fleischmann & Hofmann, in press). Furthermore, like other management functions, if DM is not strategically planned, implemented, and monitored it can fall short of expectations. Nevertheless, doing a cost-benefit analysis of DM is difficult. Many of DM's benefits are difficult to measure, indirect, or only appear in the long term, such as their effect on productivity or employee turnover. There are, however, important exceptions, such the positive effect of board member diversity (e.g., the performance of Fortune 500 firms) (Del Carmen Triana 2009). Colleges and universities have recently developed a variation of DM that focuses on students, teaching, and learning.

Inclusive Excellence

The US higher education agenda has radically changed since the 1970s. The early initiatives to increase minority enrollment and later to enhance gender equity were responses to desegregation and equal opportunity requirements and social justice concerns. Between 1978 and 2003 there were six major cases in the United States challenging affirmative action at universities. In *Grutter v. Bollinger* (2003), the US Supreme Court ruled that diversity is a compelling governmental interest that justifies limited consideration of race in admissions (Milem, Chang & Antonio 2005: 2) and diversity should be addressed in intentional ways to generate educational benefits for students and for the institution.

The *Grutter* decision allowed higher education institutions to establish narrow provisions that could be used to achieve a diverse student population. These provisions were based on research evidence and a strong theoretical rationale that classroom diversity and interaction and learning across diverse groups enhance education for all students (Gurin, Dey, Hurtado & Gurin 2002). The American Association of Colleges and Universities (AACU), a voluntary organization of 1,200 US colleges and universities, responded with a national initiative to establish basic principles and create a framework for excellence that put diversity at the core of educational quality in the undergraduate experience. This framework is Inclusive Excellent (IE).

IE's core concepts are diversity and quality. Quality is viewed as excellence with close attention to inclusion. It calls for incorporating IE into all aspects of the organization, from defining formal institutional goals to changing campus norms (Bensimon 2004). IE is intended to benefit the future workforce and a

multicultural nation by enabling graduates to develop more complex thinking about people and their behavior, cultural and social awareness, and receptiveness to change (Hurtado 2007). Although IE continues to evolve, it is currently limited by its advocates' attempts to overcome disadvantage without acknowledging the complexities of difference or addressing diversity dimensions beyond race and ethnicity. IE recognizes the importance of deep organizational cultural change, although it gives only minimal attention to the power of faculty norms and cultures and the difficulty of changing them.

In terms of the specifics of IE, the AACU defined it as having four elements: 1) a focus on student intellectual and social development; 2) a purposeful development and utilization of organizational resources to enhance student learning; 3) attention to the cultural differences learners bring to the educational experience and how these cultural differences can enhance the enterprise; and 4) a welcoming community that engages its diversity for student and organizational learning.

This multiyear initiative to assist campuses began with forums throughout the United States on the benefits of diverse learning environments, institutional responsibility to narrow the education gap for minority groups, and organizational change strategies. IE shifts the measurement of diversity and inclusion from numerical representation to the outcomes associated with the processes to achieve excellence in areas such as learning, research, teaching, and workforce development.

IE defines diversity as engagement through broad and varied activities and initiatives across racial and ethnic lines (Milem et al. 2005: 4). It recognizes that as a result of shifting US demographics more students from ethnically and racially diverse backgrounds are entering higher education, and that campuses must be more effective in meeting the needs of all students. Specifically, campuses must better utilize their diversity to improve learning to better prepare students for life in a diverse, multicultural world (Williams, Berger & McClendon 2005). IE calls for educating underrepresented students of color (e.g., African Americans, Asian Americans, Latino(a)s, and Native Americans) in order to reduce projected workforce shortages. Higher education institutions must address the social and educational inequalities that leave many low-income persons underprepared to attend and succeed in higher education. Institutions need to respond to these problems with more inclusive organizational climates and new learning strategies.

4. Looking Back and Looking Ahead

GM, DM, and IE emerge from different levels and social, political, and historical contexts. GM has been an international movement (Walby 2005); DM began in one national context and has become international; and IE began within higher education emphasizing undergraduate (bachelor degree education) that is em-

bedded within the US national context, which to date has limited the frame to the United States. All three strategies make up a second wave of equality approaches that attempt to achieve equality using tactics that go beyond a traditional deficit-based approach. They differ in how they define the areas of action: GM proposes to address all policy areas; DM focuses on activities linked to the mission and profits of the organization; IE is directed at student learning.

All of the strategies lack a legal recourse. Although the European Union and the United States prohibit organizations from discriminating, the success of the GM, DM, and IE strategies depends on the context in which an organization is embedded, i.e., the organizational dynamics and the ambition of those responsible for the policies. As GM deals with a single dimension of diversity and neglects individuals, it seems to be less attractive than DM. DM loosens the normative aspect of gender and makes it one amongst other diversity dimensions whose importance is also context dependent.

IE is similar to DM with the modification that it is specifically tailored to US higher education, and is derived from the idea of difference and sameness of students' socialization and skilling within an organizational context. The strategy focuses on achieving success in a competitive global market and emphasizes outcomes by linking core activities of US higher education to broader economic and social goals. DM and IE differ in that the former uses a broad approach (i.e., multiple diversity dimensions) whereas the latter uses a narrow approach (i.e., race/ethnicity) in encouraging diversity.

In short, each frame envisions equality somewhat differently, has its own vocabulary, and focuses on different problems and change strategies. All three frames, however, have been criticized as empty signifiers that take on as many meanings as there are visions and theories of equality (Verloo & Lombardo 2007). We respectfully disagree with that criticism: We consider the frames to be templates that, with a commitment to equality and appropriate knowledge, allow for optimal adaptation and implementation within national, institutional, and organizational contexts.

Public policy discourses are broadening the issue of equality beyond sex and gender. In the European Union, anti-discrimination now encompasses six diversity dimensions and in 2003 the European Commission launched a five-year information campaign to promote diversity for society in general and businesses in particular. These changes, along with the globalization of business practices and the adaptation of New Public Management to universities, are strong signals that universities will be expected to expand conceptions of equality beyond a single dimension. Furthermore, adherents of feminist theoretical perspectives point out that a single axis framework such as gender mainstreaming limits the emphasis to sex privilege. For example, GM can easily erase many women, such

as lesbians and Muslims, from full consideration unless it includes intersectionality (i.e., the interaction of multiple diversity dimensions).

Thus, the time is right for activists and higher education leaders to reframe policy perspectives. That does not mean imposing a strategy that does not align with the fundamental frames of the state or the university. Policy reframing or adjustment should begin by answering three difficult questions: What are the desired goals of equality? What institutional changes are necessary to develop policies linking equality measures to research and teaching processes? What are our organization's most important outcomes in relation to the changing contexts of equality and diversity in our society? If one understands the distinctive characteristics and issues of an organization, the next step is to consider the challenges and possibilities associated with intersection, adaptation, and the creation of new hybrid equality frames. At that point, the policy frame(s) is tested and the second process begins—turning policy into practice and intentions into outcomes.

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Diversity Politics and Diversity Management in Organizations

Katrin Hansen

“Diversity refers to any mixture of items characterized by differences and similarities”. (Thomas 1996: 5) This is a definition which had been widely accepted in the U.S.A. and other countries during the 1990s and the beginning 21st century. However, diversity should not be reduced to the level of individuals. Instead, intergroup interaction and power differences must be focused (Prasad/Pringle/Konrad 2006). Structure and principles of society as the larger system (e.g. power, status and stereotypes related to identity groups) influence processes in the embedded subsystems as teams, departments, corporations or non-business organisations. Context is supposed to cause varied influences of diversity characteristics (Egan/Bendick 2008).

A Multilevel Approach is Needed

Most recently, researchers dig deeper into detail to unravel mixed effects of diversity documented in literature¹. Thus, Harrison and Klein propose to analyse diversity as unit-level construct which describes the “...distribution of differences among the members of a unit with respect to a common attribute, X, ...” (2007:1200), thereby distinguishing three types of diversity:

- separation as “differences in position or opinion” (horizontal distance),
- variety as “differences in kind or category, primarily of information, knowledge or experience”,
- disparity as “differences in concentration of valued social assets or resources” (vertical distance) among unit members (Harrison/Klein 2007: 1200).

Nevertheless, the authors do not fall short by just disentangling those dimensions but by showing the necessity of analysing relationships and interdependencies

1 Based on a meta-analysis of diversity effects on team performance, Horwitz/Horwitz conclude: “...that different types of team diversity indeed have different effects on team performance” (2007: 1006).

among the types, thereby opting for a multi-level approach to analysis and practice of managing diversity (Harrison/Klein 2007:1220ff; Stuart/Crary/Humberd 2008: 382).

The occurrence of “*faultlines*”, based on salient attributes of group members, show the importance of demographics: “When groups newly form, member may use salient demographics to implicitly categorize themselves into subgroups. ... Consequently, demographic dissimilarity may engender less interpersonal attraction and less group cohesiveness.” (Lau/Murnighan 1998: 328) Thus, demographics producing “*faultlines*” may lead to conflict and reduce group performance. Demographics can be related to stereotypes, which produces “‘stereotype threat’ – the fear of being judged according to a negative stereotype –” (Roberson/Kulik 2007: 24) in members of the negatively affected identity groups which itself leads to reduced task performance on the individual level (Roberson/Kulik 2007). If diversity management is to succeed, it needs to be aware of disparities, it must address identity groups and take account of power structures in both society and in the organizations themselves.

Paradigms of Diversity Management

Ely and Thomas (2001) conclude from case studies that an organization's attitude toward diversity and minorities is an extremely decisive variable in making diversity management a success. The attitude of organizations toward diversity can be structured according to the following three paradigms of diversity management. Each of these paradigms can have specific consequences including ones for relations between the genders (Ely/Thomas 2001; Hansen 2002; Koall 2002; Thomas/Ely 1996).

The “fairness and discrimination” paradigm

As Süß shows (2007) dominant motives for diversity management in German corporations are following those lines: import from abroad (especially in global firms initiated by US actors) and societal expectations are seen as most influential. Ivanova and Hauke come to similar results with anti-discrimination being positioned on place 2 of the advantages connected to diversity in international firms in Germany (2006). In those cases diversity policy very often is molded by the American model and probably not woven into the fabric of the German organization.

In the fairness and discrimination approach, members of racial or cultural minorities, and also women, are represented in the company by a politically

correct quota or through admittance to certain areas. However, they are not really integrated. The well-known “glass ceiling” is a statistically confirmed effect in German companies, like the strong pressure to assimilate imposed on persons in minority groups as long as a company operates within the framework of the fairness and discrimination approach (Kanter 1993; Linnehan/Konrad 1999). Schwartz (1993, p. 30, translated) talks about a “subversive impact on women” that leads them to walk away in despair from organizations that are only superficially pro-women (Roberson/Kulik 2007).

Recently, a new phenomenon has been described: The “glass cliff” can even be based on (“benevolent sexism”[...]), whereby women are assigned (and rewarded for taking on) roles that can be represented as attractive (e.g. as ‘challenging’) but are actually problematic” (Ryan/Haslam 2007: 558). The authors report that those positions are characterized by less authority and fewer tangible rewards; they are more restrictive and less satisfying, leading in sum to more stress.

A company following the F & D-Approach does not really open itself up to new ideas and actions; it loses its potential bearers of change, thereby squandering valuable learning opportunities. Nonetheless, the admittance of minorities to inside posts, the implementation of externally presentable programs, and the enforcement of a “politically correct” regime still have to be seen as a positive effect. Equal rights are not really anchored in the organization and also cannot become part of its organizational culture. One has to anticipate that members of the dominant groups will engage in repeated outbreaks of resistance. In the worst case, a façade is carefully maintained but crumbles repeatedly because covert discrimination can only continue to be disguised through great effort.

The veiling of power structures in the fairness and discrimination paradigm along with the frequently found “color-blind ideology” (Ely/Thomas 2001: 256; Prasad/Pringle/Konrad 2006) send ambiguous signals to members of minority groups: On the one hand, their employment is presented as unproblematic; on the other hand, adaptation is demanded more or less subtly, and failure to achieve this is forgiven generously—but, in truth, condescendingly: “blacks were to be forgiven for their deviations from (white cultural) norms of acceptable behavior, as these deviations were merely understandable reactions to the unjust circumstances of their lives” (Ely/Thomas 2001: 256). We believe that those research findings from the United States generalize directly to gender relations in Germany.

The “access and legitimacy” paradigm

Features of employees should mirror those of customers. An international transport company became aware that diversity follows the same path as their company strategy: “It’s exactly the same. Fits absolutely . . . our customers and staff

and shareholders are diverse, and our market is also diverse, and society as well, of course” (cited in Hansen 2003:164). As Dippel shows, parallel thoughts and arguments are valid for public administration especially in connection with culture and language (2007:77).

The access and legitimacy approach positively invites stereotyping, because employees are reduced to their membership of a certain social group, and typical group attitudes and behaviors are anticipated or encouraged. This either ignores or denies the diversity to be found in individuals, their many-faceted personalities, and their different roles and functions. Finally, one has to ask what happens to persons whose value for the company is basically due to their membership of a social group when that specific market segment becomes less important (loss of purchasing power, shifts on the market). They are not really accepted in this approach, but merely functionalized. At the same time, they have to bear unique responsibility for satisfying the needs of the customers in the group to which they are assigned. The organization can shirk off its own responsibility, and learning is also only limited. This makes it doubtful whether this concept will have any lasting practicality.

Gebert (2004: 418) states that diversity has to deal with a dilemma: “Resources related to diversity do not automatically blaze the trail as intended.” Social categorization, conflicts on the level of relations and, what is even more dangerous, conflicts on the level of values will prevent diversified teams from being effective and efficient as long as shared goals and trust are lacking. Such problems are seen as typical for this approach, because differences are more salient here than similarities (DiStefano/Maznevski 2000; Van der Vegt/Bunderson/Stuart 2005; Roberson/Kulik 2007).

Moreover, the approach has to deal with strong tendencies among male and female employees to leave balanced groups. Chatman and O’Reilly (2004) have shown that female employees report the lowest likelihood of leaving male- or female-dominated groups, whereas male employees “were most eager to remain members of homogeneous or male-dominated groups and also most eager to leave balanced and female-dominated groups – that is, they were more eager to leave their work groups as the proportion of women in their work groups increased” (2004: 202).

Tendencies toward homo-social reproduction might even prevail when they run counter to strategic considerations. Boone, van Olffen, van Witteloostuijn, and de Brabander studied Dutch top management teams and concluded: “Apparently, top management teams tend to close ranks when environmental complexity and pressure increase.” (2004: 653) The authors consider a possible behavioural explanation: Threats to the team’s survival may become more dominant than the strategic considerations of the organization. Furthermore, the authors focus on process losses resulting from team diversity, and argue that in highly

uncertain situations, they can be an appropriate attempt to secure short-term profitability (Boone et al. 2004).

Hence, human resources management is confronted continuously with the task of reproducing balance in groups in the face of counter movements or of stabilizing the minority status of women. This situation will only be overcome through learning processes in which long-term strategic considerations gain momentum and non-dominated diversified groups become valued by the organization and the individuals involved.

Nonetheless, the positive aspect is that more members of minority groups gain access to attractive posts, particularly in marketing but also in product development, compared with companies that have not even taken up the topic of diversity. On the other hand, these posts are then no longer available to the dominant group, which may well lead to resistance and pose a strong threat to the concept of diversity management should positive effects be smaller than expected or fail to materialize.

The learning and effectiveness paradigm

This concept calls for a positive attitude toward the necessary increase in complexity in a company, and requires a productive approach to the tensions arising from a diversity of attitudes, experiences, and actions. A critical aspect of this is the *concept of inclusion* which has not just to be espoused but rather practiced in daily life as well as in training and teaching (Stuart/Crary/Humberd 2008).

The goal of diversity management is to make organizations more successful. Whereas the *fairness and discrimination approach* attempts this only passively by preventing sanctions, diversity in the *access and legitimacy paradigm* represents a resource that can be tapped temporarily. Within the *learning and effectiveness paradigm*, diversity is viewed as an opportunity to increase an organization's effectiveness and its ability to learn.

Diversity can be a strategic resource for organizations. Convincing arguments to be found in literature and in practice are possible effects of cost-reduction connected to human resources (co-worker satisfaction and productivity, advantages retention and recruitment of diverse workforce), marketing argument ("mirror of the world"), argument of creativity and of improved problem-solving, and finally the idea of increased flexibility of the organisation due to experiences with conflicts and their solution in diversity-experienced units.

Diversity management is functional for organizations that require diversity to meet the demands of their environments and mobilize resources on different markets (sales, procurement, labor, and capital markets). Those resources can and often will be related to financial inputs. Nevertheless, as Lederle shows for

Germany, the institutionalization of Diversity Management can be interpreted as "... an attempt to fulfill expectations from the organizational environment in order to gain legitimacy" (2007: 22) – the latter being, on my opinion, an important non-financial resource in itself leading to an increase of a corporation's reputation as a non-discriminating organization.

In the *learning and effectiveness approach*, diversity management follows a medium-term perspective. The focus is no longer on just the use or even exploitation of potential resources, but on fostering and developing them. From a systems theory perspective, the concern is with the functions of goal attainment on the strategic level, that is, with effectiveness, and also with integrating personnel in order to build up or maintain the coherence that will increase corporate value². In this context, legitimacy gains an even higher importance. This corresponds with the modern "enlightened" approach to the shareholder value concept currently being demanded by representatives of German industry³.

The "Charta of Diversity"

In France, in Germany, and, more recently, in Switzerland, an increasing group of corporations and non-profit organizations is pursuing the initiative of "The Charta of Diversity". Six fields of activities are defined in which firms should engage:

- Culture of the firm, mission statement/guidelines, responsibility of leaders.
- Processes of human resources management to be non-discriminating.
- Recognition and representation of diversity in the workforce.
- Diversity as part of corporate communication.
- Sustainability: development and performance measurement.
- Integration of people, workforce and partners.

The specific form of diversity management chosen by the firms is quite different and should be adequate to each firm's situation, strategy and goals. Core meas-

2 Nevertheless, this discussion has recently been challenged. Kossek/Lobel/Brown demand the diversity discourse to "broaden beyond the business case" (2006: 69). Litvin postulates a change in perspective and make sure that the "growth, development, survival and happiness of human beings take their appropriate place as ends or terminal values" (2006:89).

3 This is not an isolated opinion, as is well-confirmed by the company and research reports compiled by Belinzski, Hansen, and Müller (2003). It is also in line with results reported by Deal and Kennedy (1999) who analyzed longitudinal studies in the United States from a cultural perspective, while additionally carrying out their own research on the economic growth of culture-competent companies.

ures and results are exchanged during workshops organized periodically by the initiative. A good example is the well-known Daimler Group which explains its engagement in diversity management and especially in the initiative “The Charta of Diversity” as follows:

“Diversity is a business success factor. Companies and public institutions benefit from a business culture encouraging all talents of their staff. The Charta of Diversity is an elementary commitment to economical benefit of diversity as well as tolerance, fairness and appreciation in companies and public institutions.” (<http://www.charta-der-vielfalt.de/html/informationen.html>)

Until December 2008, 500 German firms and NPO signed “The Charta of Diversity”, among these German units of Commerzbank, Ford, IBM, IKEA, Lufthansa, Manpower, McDonalds, SAP, Volkswagen, further a lot of small and medium-sized corporations, which are specifically supported by the initiative, educational institutions as universities, radio stations, and TV. 87 percent of 155 firms, answering to the initiatives questionnaire are convinced to produce positive effects by diversity management in a competitive environment: they declare that active diversity management improves innovation and creativity and produces decisive impact on economic performance of the firm.⁴

One example from the non-profit area is the Technical University of Munich (TUM), which was the first university to sign the “Charta”. TUM is declaring gender, family and diversity to be key factors of success in an entrepreneurial scientific institution and therefore following the initiative of the charta.⁵ This fits very well with the university’s general strategy to become and stay one of the first places for study and research in Germany. Its activities are focusing on attracting excellent female and male researchers on an international level and on creating an inclusive climate for people from all over the world. In fact, TUM offers a wide range of programs and supportive activities for female students and scientific personnel⁶. Furtwangen University as well signed the Charta in a very early stage, announcing that measures still had to be developed. Meanwhile, impressing activities as “Women on Move”, a study program dedicated to women in motherhood break, have been established.

Just recently, in December, 2008, the integration officer of the German federal government, Maria Böhmer, honoured fourteen organisations by awarding them in the competition “Kulturelle Vielfalt am Arbeitsplatz” (cultural work-

4 see <http://www.handelsblatt.com/unternehmen/strategie/positive-zwischenbilanz-bei-charta-fuer-vielfalt;2104983> retrieved January 2009.

5 see <http://www.uni-protokolle.de/nachrichten/id/134039/> retrieved January 2009.

6 see http://www.lte.ei.tum.de/gender/TUM_Flyer_deutsch.pdf retrieved January 2009.

place diversity), among those well-known, big firms as Ford and Lufthansa which have been active in the diversity field for about 10 years or even more.⁷ Nevertheless, quite interestingly, small and medium enterprises received awards as well:⁸

1. “He Space Operations” with 44 employees is persecuting a distinct diversity strategy aiming on attracting and retaining top talents from all over the world. Intercultural trainings as well as a system of support for experts descending from other countries and continents have been developed.
2. Celik Döner & Fleischgroßhandel with 48 employees has been improving its image and its internal processes by implementing a training program aiming on migrant employees without vocational education. They are provided with courses in German language and a specific training in food processing, security and hygienic standards. After passing an exam the participants receive a certificate which in future will be improved to a formal vocational degree.
3. Systemgastronomie Christian Eckstein (franchisee of McDonalds), 715 employees, supports the staff’s efforts to improve qualification. The firm opened a training centre in which language courses, trainings and even formal vocational education are offered to employees with mostly migration background. Employees performing with excellence are granted and encouraged to study further at a university. The business case is given in this example as well: employees show a high degree of loyalty and performance which results in increasing returns.

Those examples show that a deliberate diversity strategy can support the firm’s policy and performance. Nevertheless, diversity does not necessarily produce (only) positive effects: As DiStefano and Maznevski show in case of multicultural teams, diverse teams tend to perform either better or worse than homogeneous ones, with more performing worse“ (2000: 45). The outcomes depend on how well diversity is managed in a firm.

Systematic Implementation as a Requirement

We propose a systematic implementation of diversity management, based on the system’s view of the AGIL concept (Hansen/Aretz 2006). This approach combines the following functions

⁷ See Belinszki/Hansen/Müller 2003.

⁸ See <http://www.vielfalt-als-chance.de/data/downloads/webseiten/081205FaktenblaetterSiegerWettbewerb2.pdf>.

- Latent pattern maintenance by creating a diversity vision compatible with the organization's values,
- Integration by developing an attitude towards diversity based on the needs of the organization and their members which prevents the split off of particular diversity dimensions,
- Goal attainment by building enabling systems and connecting them to existing systems,
- Adaptation to the organizational needs and resource mobilization in form of financial support, information and commitment to diversity and diversity management.

Those recommendations can be combined with the "7-Steps-Approach", suggested by Becker, Huselid, & Ulrich (2001) as a useful guideline for managing change in general. This is visualised in figure 1.

Following this general guidelines, organizations should find their specific way and pace, making a step back and advancing again as soon one becomes aware the fact the recent level did not provide a secure base for the following one. Logically an organisation begins by finding a core group of promoters who start the process. At least one representative of the top management should be committed to diversity and diversity management, thereby fulfilling the function of a "power promoter". Other promoters should dedicate to content management as an expert in diversity issues, one, and to managing processes of implementing Diversity Management, another. The core group analyses the specific requirements of the organization and its relevant stakeholders. The above introduced typology, distinguishing separation, variety, and disparity as different dimensions of the diversity aspects in relevance should be used to map the organisations diversity adequately. Here, the existing amount of diversity concerning the aspects of relevance and their type should be tried to quantify or at least symbolize in order to discover requirements of urgent actions as well as future chances for enhancing the productivity of the organisation.

Figure 1: Seven Steps to Diversity Management

<i>Step</i>	<i>Function</i>	<i>Actions</i>
Putting people in charge	Resource mobilization	<p>Finding a core group of promoters who start the process</p> <p>Practical experiences: in small firms the owner, in larger ones a team connected to top management level</p>
Creating a shared need for diversity	Adaptation/Integration	Setting up a "Strategy Map" connected to Diversity Management
Shaping a diversity vision	Latent pattern maintenance	<p>Drawing a picture of the future with relevance to the organisations' (economic) goals and the stakeholders' needs and wishes</p> <p>Practical experiences: See examples of the Charta: global war for talents, loyal and qualified employees, image of the organisation.</p>
Mobilizing commitment for diversity	Resource mobilization	Communicating the vision, broaden the range of acteurs supporting diversity management (intranet, mission statement, meetings)
Building enabling systems	Goal attainment	<p>At least a project group or task force must be built, continually improved and connected to existing systems</p> <p>Practical experiences: training center, systems of support for experts from abroad, recruiting principles, mentoring</p>
Measurement and reporting of progress and effects	Goal attainment Integration	Organising, measuring and communicating first positive pilots and their effects. Open discussion of chances and problems; inviting ideas to improve.
Making it last	Goal attainment	<p>Existing networks should be involved and the emergence of new networks encouraged.</p> <p>Systems in use are adjusted to diversity management and this adjustment is controlled.</p>

The focus on the “business case” should be opened to the broader view on the needs and demands of individuals involved in different stakeholder roles. Setting up a “Strategy Map” connected to Diversity Management can be helpful to identify the distribution of diversity management to the organizations main goals. Based on the actual needs, the core group develops a diversity vision which is communicated in the next step to multipliers inside the organisation. Thereby commitment is created and further mobilized. This can and often must be supported by trainings and other skill building measures. Enabling systems (at least a project group or task force in the beginning) must be built, continually improved and connected to existing systems (communication, MbO, HRM appraisal and gratification, recruitment). If a “Balanced Score Card” (BSC) exists, this can be used to integrate Diversity Management goals into the organization’s system of objectives.

As soon as first results and positive effects of diversity are realised, those should be communicated in order to increase commitment inside and outside the organisation. Existing networks should be involved and the emergence of new networks encouraged (e.g. Women in Management, Rainbow, parents’ networks or networks of people being in charge for looking after elderly relatives). In this stage the scope of diversity management activities can broaden, following the needs of the stakeholders involved. Nevertheless, this should be done carefully and preferring smaller steps and a more sustainable process. Diversity is not a project but rather an ongoing process.

Diversity management aims on changing the culture of firms or non-profit organisations and therefore needs a sensitive, organisation-specific approach and a more staying power. “Making it last“ is an indispensable step in organizational change. Adaptation to changing conditions, communicating change efforts, valuing and celebrating progress, and, particularly, communication and behaviour of management and especially top-managers as role models, are necessary parts of diversity management. This prevents diversity from becoming a “Schön-Wetter-Strategie”, as we call it in Germany – a strategy pursued just in easy times. Instead, diversity and diversity management must become integrated into the identity of the learning – and performing – organization.

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Managing Gender & Diversity – Assumptions, Connections and Challenges for theory development¹

Iris Koall

1 Introduction

My intention is to invite gender studies to relate their elaborated theoretical corpus about discrimination and dominance to diversity issues. As Yvonne Benschop (2006) states “the more recent studies on workplace diversity have benefited enormously from the insights and conceptualizations of power processes, material inequalities and discursive practices developed in this field ... the contribution to the diversity at work discussion is manifold...” (Benschop 2006: 291). First, because the topic of heterogeneity is too interesting, to solely leave it to the performativity business discourses, and second, it is always interesting to observe and comment an emerging field of change and professionalization.

2 Diversity management as a theory of action – three stages and applications

Diversity Management (DM) can be described as a theory of action which can be differentiated as (a) espoused theory, (b) a theory in use (Argyris/Schön 1978, 1996)² and (c) as a reflexive theory.

1 Presented at the Conference “Gender Change in Academia: Re-mapping the fields of work, knowledge, and politics from a gender perspective”, University of Göttingen, 13th-15th of Feb. 2009

2 “The notion of a theory of action can be seen as growing out of earlier research by Chris Argyris into the relationships between individuals and organizations (Argyris 1957, 1962, 1964). A theory of action is first a theory: ‘its most general properties are properties that all theories share, and the most general criteria that apply to it – such as generality, centrality and simplicity – are criteria applied to all theories’ (Argyris and Schön 1974: 4). The distinction made between the two contrasting theories of action is between those theories that are implicit in what we do as practitioners and managers, and those on which we call to speak of our actions to others. The former can be described as *theories-in-use*. They govern actual behaviour and tend to be tacit structures. Their relation to action ‘is like the relation of grammar-in-use to speech; they contain assumptions about self, others and environment – these assumptions constitute a microcosm of science in everyday life’ (Argyris & Schön 1974: 30). The words we use to con-

a) First, as an *exposed* diversity management *theory* “which we call to speak of our actions to others” (Argyris and Schön 1974: 30) it is oriented to business cases, best practices, developing strategy of profit- and non profit organisations; affirmative action, non-discrimination due to legislation developing and empowering personnel potential, challenges of heterogeneous work force and team cooperation. On the level of organizational behaviour (mostly us-approaches) are analyzing team structures and moderate conflicts.

b. *Theories in use* describes underlying patterns, which are most latent and not published, these assumptions are govern actions, way of thinking (like grammar in use). They are cultivated as tacit structures. Theories in use have the function to avoid to describe discrimination as inherent to organizational systems, Managing Diversity as theory in use has the function to avoid perceiving and discussing discrimination as inherent in profit-organizations. These discourses of human resource managers are analysed and criticized as ideology (Zannoni & Janssen 2004).

But why is there a need to distinct what is done and what is to be talked about in social systems? Probably these theories in use would destabilize the operation, because irritating by contradiction and paradoxes are overwhelming. One track might be to have a look at deficits of legitimation of private companies, described by (Staehele 1992) a German management researcher acknowledged by the mainstream. Due to private wealth and public poverty and state dependency on taxes, furthermore private capital accumulation strengthens power of economic elites on political formation. This de-legitimizing has to be covered by fostering control and non-solidarity among members of differentiated groups (gender, ethnicity). This need to be supported by ideas of justice of inequality in benefits – according to different quality of performance (manager/worker). Organisations regulating this control “necessity”, by hegemonic cultures of homosocial recruiting/excluding standards of performance appraisal and by regulating information and decisions through hierarchical processes ... and much more.

Anyhow, this supports organizations which are constructed much more as defense systems against anxiety, developed in order to avoid the confrontation with “the other” and other culturally suppressed irritations (Menziess 1960). This perception, which is really a dark scenario, does not enable social entities, to transform subjective efforts into collective performance.

Based on Argyris/Schön’s distinction, Managing Diversity can be considered as a *reflexive theory*, e.g. to analyse discriminative procedures. Managing Diversity as reflexive theory, which

vey what we, do or what we would like others to think we do, can then be called *espoused theory*. <http://www.infed.org/thinkers/argyris.htm>

- connects political (macro-approach) and business approaches (meso) by relating to interactional and societal relations (multi-level)

and are oriented to first, analysis and critique of individualization of work force (personnel management term cf. Drumm 1989, Grieger 2004) or subjectivity of labor (sociological term). Second, deconstruction of dominant (us-driven) business cultures in organizations, third as an illusion of superiority and manageability of diversity (Adler/Gundersoen 2008), or like Miller/Katz (2002) to differentiate male identity (Miller/Katz 2002). Considering Managing Diversity on a more theoretical, reflexive level, research is dealing with challenges of change, perception and resistance against heterogeneity – or as complexity theory (Baecker 1994, 2001, 2005, Koall 2001, Knoth 2006). Research is done in the field of Managing Diversity as reflexive theory on a functional level. Different theories of social sciences, which are connecting Gender & Diversity related issues to social theory

- Bourdieu's Habitus and capital concept (Özbilgin/Tatli 2005)
- Theory of Social Systems, on a level of organisations as communicative systems (Knoth 2006; Koall 2001, 2002)
- Complexity Theory on the level of path dependency (Walby 2007)
- Managing Diversity activates functions of social Systems (based on Parsons's theory of social systems cf. Aretz/Hansen 2002)

These approaches are analysing processes of system stability, change, irritations on the level of interactions, functions or microdiversity for self-organizing processes in organisation (Luhmann 2000).

Practical related considerations of Managing Gender & Diversity are referring to external and organisational structures and procedures of inequality. Like political-normative approaches, which are focusing and analysing conditions of emancipation with political arenas of profit organisation, relating to structural resource dependence (Krell 1996; Krell/Sieben 2007; Ortlieb/Sieben 2008). More prescriptive approaches (Domsch 2006; Aretz /Hansen 2002; Vedder 2003; 2004) are suggesting and developing functional relevant alternatives to discrimination, very often by describing best practices.

3 Diversity Studies as reflexive theory

Diversity Studies is a related field to Managing Diversity and describes how gender studies as methods and methodology are used to observe and analyse processes of marginalization to the discourse of Diversity.

Gender- and Diversity studies are deploying methods and methodology in the analysis of processes of marginalization *and* emancipation as multi-level approach (Benschop 2006), deployed as deconstructing modes of hegemonic cultural representations and diversity discourses in corporations (Bendl 2002; Calás/Smircich 1992a, 1992b; Koall 2001) and as constructivist analysis of doing gender while doing diversity (Nentwich/Kelan 2009).

Related to cultural studies

Diversity issues refer to the fields of minority studies and ethnicity studies (Proudford/Nkomo 2006; Bell/Mclaughlin 2006) which are considering conditions of marginalization. Furthermore, postcolonial studies (Mir/Mir/Wong 2006) analyse world-economy in their aspects of discrimination and focus on hybrid and differentiated cultural identities. LGBT-Studies (Creed 2006) are related to queer studies, e.g. critique of heteronormativity and homophobia, where diversity studies gets professional knowledge about deconstructing demographic diversity categories and discourses in the field.

On the level of management studies, diversity may be either related to complexity and contingency of organisations and social systems (Heijl/Stahl 2000; Hannan/Freeman 1989; Baecker 2003, 2005; Ortmann 2009) and or to the reduction of complexity by organisational strategies, instrumental and cultural change, design and behaviour (Becker/Seidel 2006).

4 Challenges for my work Managing Diversity (Five Paradoxes)

I would like to introduce *my contemporary perspective* on the field of managing diversity as *work in progress*, which relates academic work to experiences of working with consultants and equal opportunity officers in the field of managing Gender & Diversity. This work is focusing to enrich diversity management concepts with gender theory (mostly poststructuralist approaches and theory of social systems).

Most important for my work have been three aspects:

- First, to understand and describe how social systems tend to re-produce dominant standards and homogeneous cultures. Organisations transfer heterogeneity into internal complexity by fostering functional-structural relations in organisations (Luhmann 1984) or by using generalized communicative media. Organisational decisions are related to socially constructed sense and legitimate in recursive communicative process modes of exclusion and inclusion.

- Second, following this analysis to deconstruct homogeneous settings by poststructuralist deconstruction on the one hand (supplementary logic, analysing construction of binarity, performative discourses) and developing functional equivalents (or alternatives, which serve the autopoiesis in organisations or “keep them going”).
- Third, diversity management is rising complexity, and thereby unfolding paradoxes in management processes. Paradoxes have the function to reduce complexity, and we may use them as guideline to develop a complex diversity theory (Özbilgin & Tatli 2008: 29; Koall & Bruchhagen 2009), which relates to multi-level approaches and contemporary discussions about intersectionality.

I have published several papers, related to the topic 1+2, so I would like to concentrate on the third, contemporary research about challenges unfolding of diversity paradoxes (Lindsay 2003, in Özbilgin/Tatli 2008: 27).

Diversity management has “the problem” of rising complexity in social systems, most theories are very busy to “reduce complexity” and perform an unity management (Dirk Baecker). This tendency is related to ideas, that organisations might not be able to deal with contingency, ambivalence but produce rationality and control relating to management approaches (Ortmann 2009). Enabling management and organisation to deal with more than one hegemonic cultural reality leads to the process of unfolding paradoxes in social systems. Paradoxes have the function to cover complexity, and therefore they have the capacity to work as guidelines to develop a complex diversity theory (Özbilgin & Tatli 2008: 29; Koall/Bruchhagen 2009). Paradoxes are part of complex systems and learning depends on the capacity to unfold them (Lewis/Dehler 2000; Luhmann 1990; Baecker 2001).

As we will see later, paradoxes are relating to the necessity of complexity theory which leads to work multi-level approaches and they occur in case an assumption or reality construction refers to a condition which is contradicting the basic premises of its existence. Both, the intended and the opposite are supposing to be prevalent. A paradox is a form, which offers to see both sides of the complexity of reality – the manifest and the supplementary latent part.

Standards of dominance are attempting to cover paradoxes to unfold and to reduce complexity by enabling congruence, stability, and decidedness. *Seemingly negative phenomena might be helpful to reflect on diversity.* Apparently one might observe how both sides of binary construction of reality – the good and the evil – are interdependently interwoven.

- *Paradox of categories or equality: Diversity is focusing differences* by simultaneously expecting fair equity in organisational conditions. Differences are made relevant in a homogeneous context and are relative in contingent organizational settings. There is the need to describe the interaction of differences on organisational and personal level.
- *Paradox of tolerance: Diversity claims tolerance as appreciation of differences* on a surface level (rhetoric of appreciation), but needs to understand that tolerance is a part of an hierarchical order of bourgeoisie habitus (Koall 2007). Managing diversity gets relevant in a situation, where it hurts one's own value system and conditions of identity construction. Conditions and structures of intolerance are part of organisational complexity avoidance and have certain functions by proceeding control, decisions and evaluations of performance. Intolerance is – as blind spot – part of the construction of organisational reality – e.g. heteronormativity and homophobic attitudes are part of the hegemonic masculinity construction in management (Collins/Hearn 2007). Here, feminist critique of gendered organisation (Kuhlmann/Kutzner/Müller/Riegraf/Wilz 2002), and hybrid identity constructions get relevant (Nentwich/Kelan 2009).
- *Paradox of strong culture: Diversity needs a strong cultural bond and commitment to be implemented*, but strong cultures are promoting exclusion on the communicative and interactive level. Organizational cultures are not seen as fixed entities and construction can be analysed by relating to networks of meaning and intentions (Czarniawska-Jorges 1992). Ethnomethodological (Frohnen 2005) and constructivist (Knoth 2006) observations describe how cultures and professional identities are interdependently constructed – as an interplay of interaction and symbolic structuring. This ambivalence within hybrid cultural constructs in organisations offers opportunities for practical deconstruction (Bailyn/Blake/Beard/Fletcher 2006) and may lead to unfold the paradox of strong culture. The way culture is perceived or discussed depends on the perception of variety and subculture aberrancy – especially in qualitative research it might be interesting not to reintroduce dominant cultural representations, but to have a look at the functionality of sub-cultural, microdiversity in organisations (just like the Foucauldian supplementary logic).
- *Paradox of fit or inclusion and exclusion of otherness*. Strong social bonds are fostering cooperation but are often related to the social dynamics of social categorization theory (Tajfel/Turner 1986; similarity-attraction theory (McCain/O'Reilly/Pfeffer 1983). These paradox tendencies are excluding constructed minorities, by including them in minorized roles and functions (Wansing 2007) which are to be encouraged by Diversity Management,

whereby it takes seven to nine years to include minorities in organisations by changing cultures and procedures (Cox 2002). Transformation of differences into inequality is related to organisational constructions like status beliefs (Ridgeway 2001) or convergence of social and organisational (gendered) hierarchies (Brewer 1995) or the powerful use of distinctions in processes of professionalization (Wetterer 2002). There is the tendency to relate the inclusive/exclusive debate to the inertia of opposing entities, like binary distinctions, but ethnomethodological work might show the fluidity of categorical constructions and connects it to organisational change processes

- *Paradox of values*: Diversity needs the knowledge of minorities to become successful e.g. as marketing approach, but „outsiders“ are seldom acquiring a powerful insider position. The hegemonic minority might avoid getting in touch with painful experiences of „outsiders“. Nearly almost, minorized personnel are welcoming diversity initiatives, whilst the members of majority group are rejecting cultural change. Thereby, minorized personnel are in the position of the „token“ and lacks very often the serenity of insiders, which is essential for social acceptance (Moss Kanter 1977; Meyerson/Scully 1995). Research which is connecting the functional relatedness of organisations to environmental pressure to change patterns of distinction is highly relevant to this diversity issue.

What do we get out of unfolding paradoxes?

- Observe ambivalence and contingency in the communication and cultural processes in organisations
- Avoid or reject to rely on demographic related diversity criteria which do describe and observe diversity in organisations
- Referring to anti-categorical intersectional methodology
- Analyse the interconnectedness of micro-, meso-, macro levels to support ideas of interdependent instead of structural inertia
- by using theoretical insights about the construction and valuation of differences in social systems via generalized communication

This diversity approach – which Verena Bruchhagen and I developed in Dortmund relates to paradoxes to describe how binary distinctions in organisations are covered. Unfolding paradoxes makes it possible no longer to rely on gender binary, but using the analysis of form, media and codes in communication processes in organisation. This is reframing managing diversity discourses³.

3 Distincting levels of aspiration in the diversity discourse, there are descriptive and prescriptive modes and there are normative, political approaches and functional perspectives. Most diversity perspectives deploy critical and affirmative positions to the scope of Managing Diversity.

5 Intersectionality and Diversity Studies – a meso level analysis by using the analytical energy of intersectional methodology.

In the case of managing diversity as reflexive theory does it make sense to use intersectionality *as methodology*⁴ and relate it to the selected approach of social theory (Degeler/Winker 2007)⁵. To connect diversity to the different levels of research Dione/Randel/Jaussi/Chun (2004) develop a methodological framework of quantitative research, whereas attribution, domain boundary, demographic unit are the main focus for social research. In my work, I decided to relate to the theory of social systems, as meta theory to describe the complex phenomenon diversity in organisations. Both, intra- and anti-categorical assumptions are used, in the above described way, by searching for the modes of construction and deconstruction demographic distinctions in organisations. This is related to diversity management studies, which were developing three varied paradigms of dealing with diversity in organisations (Thomas/Ely 1996). This also related to the development of organisational and personal competencies to deal with heterogeneity (Koall/Bruchhagen/Höher 2002). In the first step there is an inter-categorical perception of differences as prerequisite perceiving divergences from the dominant culture. In the second step – on an intra-categorical level, differences are valued (e.g. female lawyer with bi-national background) and used, instead of excludes and minorizes. In the third step contingency and situated evaluations and decisions are de-covered. In this situation, the body as reference does not disappear but evaluations are reflected according to personal motives and organisational functions.

4 The debate, whether Intersectionality is purely a methodological or a genuine theoretical approaches might relate to (necessary or questionable) distinctions between heterogeneous practice, theoretical strength and enlightenment and methodological enrichment. As Cornelia Klinger claims it (on the Frankfurt Conference on celebrating Intersectionality) it's hard work to get to a theoretical level. "The topic of intersecting experiences and identities of actors has to be connected to questions of societal structures, power relations and discourses on a global scale." (Celebrating Intersectionality, Ffm 2/09; Klinger 2009)

5 http://www.tu-harburg.de/agentec/winker/pdf/Intersektionalitaet_Mehrebenen.pdf, Stand 2009-04-29

This relates to learning processes as *loops* in organisations, where the used distinctions and (de-)valuations are reflected “deutero learning” (Argyris/Schön 1996) is a common place organizational learning theory. Reflecting processes of prescribing to a person an demographic related behaviour is a key element of the learning and efficiency approach of managing diversity (Thomas 2001). On the methodological level this is compatible with the critique of demographic or categorical distinction, McCall (2005) problematizes the use of social distinctions because there is no correspondence to reality, but terms have the power to constitute reality.

Table 1: classification intersectional approaches according to Leslie McCall (2005)

	<i>social categorizing</i>	<i>relation between different categories</i>	<i>epistemological methodology</i>
<i>anti-categorical approach</i>	sceptical use/ rejection of categories fluide, multiple, hybrid (des)identifications	social complexity and contingency does not allow comparison of social layered diversity	deconstruction, categories are (re-) producing social fictions about stable critique of differences reproduce instead of fluidate discrimination
<i>intra-categorical approach</i>	critique and observation in constituting social boundaries	critique of homogeneous group constitution, crossing of identities traditional complex (diversity) categories between social groups	critique of „white“ feministic essentialisms;
<i>inter-categorical approach</i>	contemporary definition and strategic use of social categories to document social inequality	empirical analysis of differences between social groups, analysis of changing configurations of inequality by multiple and conflicting dimension	feminist social scientific research narratives, ethnomethodological

Connecting the classification to McCall to diversity related issues as multi-level approach we might reflect on the following schema.

As the third step of this “work in progress”, I would like to connect this intersectional inspired methodology to a social theory, in my case to the theory of social systems. The following framing seem to be relevant to support the idea of managing Gender & Diversity in organizations.

Table 2: multi-level approach connecting with intersectional aspirations

	micro	meso	macro
anti-categorical	hybrid constitution of identity (Kathy Davis; Nentwich)	cultural complexity social distinctions as use of media, codes forms of communication paradox construction by unfolding meaning (Luhmann 1997; Baecker 2001, 2003) Differences as construction and perception according to organisational functions	hybrid milieus and (de)thematizing of gender relevance participation in roles as performers and audience (Weinbach 2007)
intra-categorical	critique of reality formation by using social distinctions	human resources as potential in combination of different aspects, diversity within groups (us-diversity debate)	differentiating milieus of migrants (Scocio Sinus 2007)
inter-categorical	research on stereotypes, analysis of discriminative behaviour	analysing intersected discrimination on institutional level and in organisational practices Konrad/Prasad/Pringel 2006	configurations of inequality, path dependency related to categorical construction of social differences (Walby 2007)

6 Theory of social systems as combining micro-meso-macro dimensions of observation

Theory of social systems does not divide between micro-, meso- and macro perspectives, but related to common constituencies of social systems as (interactions, organisation, and functional differentiated subsystem). These entities are related to each other by communication, media, perception and interaction. Multi-level connections are enabled by two situations, i.e. a) interpenetration or structural coupling b) generalized communicative media:

a) structural coupling as interpenetration of micro, meso and macro level does occur, in connecting

- communication and interactional system (e.g. teams in organization),
- conscious system and interactive system (persons in interactive team),
- conscious systems, which are taking part in social subsystems or as environment of society (e.g. by perceiving restricting or enabling conditions of action and interaction)
- networks and organisations (e.g. lobbyism of organisational members).

b) The connection of micro, meso and macro relations occur by the use of symbolically generated media of communication:

- which are enabling persons to communicate independently from a defined context, by codes, media and forms in use, and independent of bodily present persons.
- Persons are making it probable that communication is accepted or is motivating an understanding, although language has the inherent tendency of misunderstanding by double contingency (who knows, what you think, what I mean) and complexity of meaning.

Different levels of relevance in the diversity discourse are described by distinctions between interaction and communication. Communication occurs on the level of organisation, and cannot be related to single subjects, so the subjective parts of diversity might only be related to the form of the person. So Gender and Diversity can only be actualized in the organization within the form of the person (Weinbach 2007).

Interactions are occurring in organisations as “micro diversity” and are supporting or enabling processes of self-organizing (Luhmann 2000: 255f). Self-organizing interactions are forming structural components, either as informal, supporting components or getting relevant to the organizational communication by being perceivable as connectivity to forms, media and codes. Interpenetration as structural connectedness between conscious systems and organisational systems constitutes the conditions for or how micro diversity of self organization can be connected to organisational programs, processes and structures. The personal capability to transform subjective diversity into organisational relevant communication depends on the capability to transform interactional micro diversity into self organising processes of the organisation. Heterogeneity of subjective diversity is contingent – random but not arbitrary (Aulenbacher/Riegraf 2007) – but has to be connected to relevant organisational functions to be perceivable for the organisation.

Connecting interaction (micro diversity) to structures of decisions, -programs, and -paths produces an internal contribution to communication, and provides sustainable performance of the environment or subjects. Organisational programs are regulating communication by inherent processes, paths of decisions, functions and goals. To use social complexity – as heterogeneous environment or subjectivity – depends on organisational capacities to condensate complex communication. Complexity is condensated by re-using sense and enriching it contextually (Luhmann 1997: 409). Sense enables persons – as generalized communicative media (like power, trust, competition, love, money, truth) to perform communication by getting in connection to “the other” without the

prescriptive attitude to act only within the own functional relation. It is the connection to the relevant other as “alter-ego” (Luhmann 1987: 119) who enables to act in connection with other (conscious) systems, but being distinct. The other is first of all an “address” for communication or action, which performs under the condition of double contingency or insecurity to make choices of performing or rejecting an understanding. Like sense – someone understands us and we react with meaningful, “correct” answers – we are able to rely on emotions like trust, competition, empathy. This produces sense and understanding in unclear, complex situations and makes it possible or keeps complex systems going (Luhmann 1987: 125). It is not the relation to e.g. gendered communication, but the interactive gendering or degendering of communication media, which is deconstructing privileges or discrimination in organisation. This ability to get interpenetratively connected – by making structural complexity available to the other system – depends on the relevance or involvement of this special fraction of reality for the other system (as organisation, person).

7 Results

We suppose that within a multi-level perspective diversity in organizations might be investigated in the following processes.

- Understanding interpenetrative processes of subjective complexity and organisational functions and understanding how gendered professional roles are functional or dysfunctional in gendered or gender-neutral organisational cultures.
- Reconstructing the conditions of the possibility (Galtung 1978) of developing and changing organisations on the basis of self-organizing processes, which is much more related to micro diversity, than to hierarchical forms of excluding diversity. The observation of diversity in interaction might be supporting the fluidity of binary gender constructions and might be an opportunity to work with deconstructive modes of degendering in interactive processes.
- Observing the inclusion in the form of the (de-)gendered person into the organisation, related to the functions and the autopoiesis of the system. Here are junctions to discourses about individualization of workplace diversity or subjectivation of workforce possible (Pongratz/Voss 2003).

Observing diversity practice as exposed theories and theories in use in their capacity to condensate/reduce complexity by focusing on symbolic generalized communication media. This offers the perspective to change patterns of aca-

demic investigation (e.g. diversity management practice of relating to demographic differences is reproducing essentialists perspectives). Relating to media – instead to essentialist modes – scrutinizes how communicative actors are “recognizably” connected, within hybrid and contextual identity construction by (despite double contingency which makes understanding highly unlikely).

Finishing remarks: Managing Diversity as expanding field of research, can be enriched by reflexive theories of gender studies, connecting gender politics and organisational development and form of collaboration of business case and empowerment of minorities.

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Promoting e/equality and excellence in universities and research: The “Gender-Alliance” for the German science system

Heike Kahlert

1 Introduction

Contemporary rhetoric in German science politics makes clear that women should and do have the same chances than men to reach high positions in universities and research organisations. (Mainly male) Elites in science politics seem to have understood that they have to act for promoting e/equality and excellence in the German science system. In 2006 the leading organisations in the German system of science and higher education signed a paper called “Offensive for Equal Opportunities of Female and Male Scientists” aiming to increase the participation of women in high positions in science and universities and to improve gender equality during the following five years clearly recognizable. They call their initiative ‘Gender-Alliance’¹ and put some activities to gender equality into action.

In this article I will give a short overview of the initiative (3) and discuss its concepts, instruments and measures and the underlying understanding of ‘gender’ as a category of social inequality (4). I will also reflect on the initiative in the light of organisational realities of gender politics and gender equality in the German system of science and research. By giving examples from empirical case studies on the implementation of gender mainstreaming in German universities I will argue that the organisational realities in science and research still look very different from the rhetoric of the science political elites (5). Finally, I will close with some concluding remarks on the importance of the Gender-Alliance (6). First, I will reflect on the changing political and organisational conditions and on the changing institutional landscape coming up with the shift to “entrepreneurial universities” (Clark 2007) that form the frame for the Gender-Alliance (2).

1 As far as I can see this notion was initially used by Ernst Theodor Rietschel, the president of the Leibniz Science Association, in a discussion during a conference in 2007 (Rietschel, in: Dalhoff/Kreuzer 2008: 38).

2 E/quality and excellence in entrepreneurial universities

Since the late 1980s, early 1990s in most Western countries a process of modernising the system of science and research has started. This modernisation mainly comes from outside the system and is dominated by economic issues. From the perspective of organisation studies the aim of this modernisation can be described with Henry Mintzberg (1983, 1989) as the restructuring of universities and research organisations, as part of the type of organisations of professionals, with highly autonomous working professionals and experts and horizontal, de-centred power relations to entrepreneurial organisations which can be considered to form a type of a so-called machine organisation that is now based on the principles of economic rationality, a centralised management and centred vertical and horizontal power relations. The changes accompanying this reform process are of high importance for political interventions from the outside and mainly concern the managers. The key concepts of this reform can be identified as *quality* and *excellence*, on the organisational as well as on the individual level. Some of the changes will be described in more details as follows (cf. Delanty 2001).

First, the relationship between the state and the universities has changed because of the implementation of contracts that are offering the possibility to control all organisational in- and output and thus to spend money by referring to the specific contractual agreements. All organisational products, results and qualities can now be evaluated and made visible to the public. The state does not completely abandon the control of the universities but, its influence has changed from detailed government to entire government.

Second, relationships between the universities themselves have been reshaped by means of individual agreements realised between the state and each individual university. These agreements promote competition and concurrence in the institutional landscape. But, they promote cooperation as well because of the fact that money is decreasing and especially some of the smaller universities can only survive by working together. National and international rankings help to compare all of the different organisations. The political aim is to promote institutional excellence of single organisations by referring to particular profiles, results and qualities.

Third, universities are challenged to change into organisations that are guided by economic rationality and market standards like efficiency and controlling e.g. and resulting in a certain independence of the state's bureaucracies. They shall be governed by new management concepts and by strong, powerful managers. Organisational structures and processes have to be reshaped by placing contracts between the management and the departments or the individual scientists and by using the means of evaluation and controlling. These procedures promote competition inside the organisations.

It seems to be clear that these changes on different institutional levels under the law of economic rationality must affect the disciplines, the research and the teaching as well as the organisational cultures, too.

So, fourth, a new understanding of research and knowledge and their orientation towards public communication, teamwork, transdisciplinarity and usefulness with regard to economic or social development is or should be implemented (cf. Gibbons et al. 1994). And fifth, a new understanding of teaching and learning based on competence, output and the need for employability, accompanied by new structures of the teaching and learning system within the frame of the Bologna process, is installed. The “shift from teaching to learning” (Welbers et al. 2005) goes hand in hand with changing expectations to university teachers. In the developing European Higher Education Area and European Research Area the mobility of students, teachers and researchers will be extremely important.

Finally, these aspects of bringing economic rationality to the sciences and the humanities as well as to their organisations are also accompanied by changes influencing practice and (self-)understanding of the professionals. They also have to be excellent in their work, their products and their results being evaluated by peer reviews and so-called personal impact factors, coming from the natural sciences – even in disciplines that did not have a system of impact factors yet, like the humanities.

These processes of “creating entrepreneurial universities”, as Burton R. Clark (2007) calls this new kind of emerging universities dominated by economic standards and values, does not only change the political and scientific landscape all over the Western system of the sciences and the humanities, higher education and research but also the questions of gender equality in the science system. Under conditions that could be called as being ruled by the new regime of governance even gender equality politics and gender studies can no longer count on a mighty state that provides for strong parliaments which are intervening in the processes of organisational developments within the academies. This new situation does not seem to be favourable to equal opportunities and gender equality in university and research. And thus, gender studies have to arrange inside the science system under conditions that are ruled by the economic laws of efficiency and the so called economic rationality and under conditions of power that seem to privilege those political and scientific fields that had been established on Fordism in former times. If equality is put on the agenda it has now become a subject of governance that has additionally to fit to the structures formed by contractual agreements. The separate political fields of affirmative action and equality politics established in the 1980s, seem to be replaced by the politics of gender or diversity mainstreaming that are both supposed to fit better

to the emerging 'lean' entrepreneurial organisations of science and research, dominated by questions of quality and excellence.²

Of course, quality and equality can go hand in hand and even more: equality can also be part of quality. But, let us see what is actually happening. Morley argues that both feminism and quality assurance movements have attempted to deconstruct and reconstruct the academy and the field of sciences and research. Both have sought for more transparency in procedures, accountability from elite professional groups and the privileging of the student experience, she writes. Both are globalized systems calling for transformation. However, Morley argues that it is rather questionable if these two forces for change can form strategic alliances to challenge inequalities and social exclusions, or whether indeed they are in oppositional or indifferent relationship (cf. Morley 2003: 146). I want to add that both movements are challenged by the movement for excellence that promotes competition and seems to result in more inequality between academic organisations and persons, students, teachers and scientists, too.

After these short remarks on a changing frame of political conditions and political action for gender equality I will now come to the initiative of my contemporary interest: the so-called Gender-Alliance for the German system of science. What does it consist of and which gender is meant by this initiative that, viewed from its name, sounds very progressive and modern?

3 The Gender-Alliance – an initiative in German science politics to put gender equality in science and research into action

To start telling the story of the Gender-Alliance means to start from a highly arbitrary point of a longer development with successes and struggles between different actors like the women's movement, affirmative action officers, the Federal Government and the governments of the Lands of the Federal Republic of Germany, organisations of science politics, universities and, of course, scientific professionals of both genders. All these actors have in common that they have been struggling for gender equality in the German system of science since the 1980s but in their struggles they did not always follow the same directions and aims; mainly the universities and research organisations did not give the question of fulfilling gender equality a high priority on their political agendas.

2 Here, I cannot discuss if these changes have *improved* the chances for putting gender equality in academia into action or if these changes have *weakened* the chances for putting gender equality in academia into action or if perhaps both are the case. Anyhow, concepts, strategies as well as the rhetoric accelerating gender equality have changed.

I would like to start telling the ‘founding-history’ of the Gender-Alliance in 1998, when the German Council of Science and Humanities³ published a paper called “Recommendations for Equal Opportunities of Female and Male Scientists” (Wissenschaftsrat 1998). The paper challenged a lot of attention but its impact on organisational developments concerning gender equality seemed to be limited. Eight years later, on November, 28th and 29th, 2006, the German Council of Science and Humanities organized in Cologne a conference to reflect on “Excellence in Science and Research. New Ways in Equality Politics” (Wissenschaftsrat 2007c). The conference had been addressed to different management levels of universities and research organisations, i.e. exactly the levels that are authorized to realise change under the conditions of new governance. Numerous affirmative action officers and gender experts working in the field of sciences and humanities have also been participating in this conference.

Initially, the conference aimed on discussing the chances for putting gender equality into action during the so called and ongoing ‘alternation of generations’ in science and research in Germany that is supposed to terminate in 2014. Second, the conference wanted to give a distinct signal to the media that the problem of gender equality in science and research has not been solved yet, though there has been a lot of discussion on this problem for many years (cf. Strohschneider 2007: 6). Third, – and this is of particular interest for my article – the conference aimed on initiating new developments in universities and research organisations. At the end of the conference, on November, 29th, 2006, the seven leading organisations in the German science system presented a common paper called “Offensive for Equal Opportunities of Female and Male Scientists” (Deutsche Forschungsgemeinschaft et al. 2006: 151), initiated by the German Council of Science and Humanities.

The paper was signed by seven powerful elites – six men and one woman – in science politics, namely the presidents of the German Research Foundation, the Helmholtz Association of German Research Centres, the Fraunhofer Society for the Advancement of Applied Research, the German Rectors’ Conference, the Leibniz Science Association, the Max-Planck-Society for the Advancement of Science and the German Council of Science and Humanities. In the paper, these seven leading organisations of the German science system agree to increase the participation of women in high positions in science and universities and to improve gender equality during the following five years, that means: until 2011,

3 The German Council of Science and Humanities (in German: *Wissenschaftsrat*) advises the Federal Government and the governments of the Lands of the Federal Republic of Germany with regard to questions concerning contents and structural developments of the universities, the sciences and the humanities and the research.

clearly recognizable. In order to reach this aim they emphasized four distinguished approaches in their paper:

- Organisational development: Each organisation will increase the amount of female scientists in decision making and leadership positions as well as their amount in committees and groups of experts recognizably. Qualified female scientists will be recruited still more actively especially for the filling of positions in decision making and leadership.
- Reconciliation of family and working life: The reconciliation of family and work for men and women working in our organisations will be improved by concrete measures. For this for example the further establishment of family just working times and frame conditions as well as the development of dual career programmes count.
- Transparency: Each organisation will inform the public about the participation of female scientists in their structures and processes.
- Evaluation: In five years we will evaluate the successes to put gender equality in our organisations into action.” (Deutsche Forschungsgemeinschaft et al. 2006: 151-152, original emphasizes; translation H.K.)

In the appendix of the common resolution of the seven organisations each organisation a detailed description is given on the institutional conditions as well as measures and instruments that each member will use to reach the common aim. A closer look at the appendix shows that the organisational conditions as well as the measures and instruments mentioned there are quite different in each Gender-Alliance organisation: They are reflecting different political strategies to achieve gender equality – affirmative action programmes for women, gender mainstreaming or a combination of both strategies – as well as different levels on which reflection takes place with regard to resolving the problem of gender inequality within science and research.

But, from the perspective of gender studies there are also critical comments to be added to the mainly positively accepted initiative and the paper of the German Council of Science and Humanities. As a matter of fact and with regard to symbolic politics and in order to define a new powerful frame for gender equality in the German science system it is really an excellent example. But even if this initiative can be considered to be necessary and extremely useful from a perspective of gender (change) one has also to be critical about the rhetoric of the Gender-Alliance and its implications on changes in organisational practices. Unfortunately, in this article I cannot go into more details concerning the analyzing of the different conditions, measures and instruments proposed by the seven organisations that form the Gender-Alliance. Further research will concentrate

on this problem. In addition, and in order to show how on the political level of the leading organisations of the German science system questions of gender equality are actually discussed it would also be useful to analyse all documents and initiatives of each individual organisation. In the following critical reflections I will only concentrate on the common resolution with attention to its appendix and focussing on the four approaches mentioned above.

4 A brief look at the rhetoric of the Gender-Alliance

Londa Schiebinger (2008) has worked out three levels of analysis to identify gendered innovations in science: first, the participation of women in science, second, gender in the cultures of science, and third, gender in knowledge. The paper of the Gender-Alliance only pays attention to the first level: It focuses particularly on the participation of women in high positions within the science system. All instruments and measures proposed by the members of the Alliance concern women, for example mentoring-programmes for female researchers and special positions for women as full professors. But, only the German Council of Science and Humanities proposes a precise quota of women, namely 25 percent, that should be reached in its committees and working groups until 2011. So the question is what will be the basis for the evaluation announced five years later if there are no precise aims, no quotas? There are only very few hints that the members of the Gender-Alliance will also pay attention to the second and third level, mentioned by Schiebinger, to the gendered cultures of science (e.g. when the Leibniz Science Association refers to “social networks, dominated by men”) and to the meaning of gender in knowledge (e.g. when the Fraunhofer Society for the Advancement of Applied Research points to its project “Discover-Gender: Gender-aspects in research”).

It is also quite interesting that the first – promising – point of the paper, namely the organisational development in the common resolution only refers to the duty to increase female participation in science and research. It does not take into consideration the coming changes in organisational structures and processes which are far more than just increasing the number of women or changing the universities into family friendly working places. But, a long sighted consideration of the question referred to in the second point of the resolution and which is how to put family justice into action could also touch questions of organisational development as for example the problems of working time and child care. However, the papers in the appendix show that the members of the Gender-Alliance differ with regard to the question of organisational development: Mainly the German Rectors’ Conference judges topics of gender mainstreaming in organisa-

tional structures and processes to be a task for the universities in order to put gender equality into action.

Another critical point is that the resolution claims to pay attention to gender relations, but, in fact all the initiatives of the paper address exclusively to women but not to men. So the message of the paper seems to express that gender means women. And even more: gender means sex, means biological women resulting in the impression that women do not have equal chances because they can become or because they have become mothers. But this is exactly the problem to which the second point of the paper refers: the reconciliation of family and work. The examples given in the context of reconciliation are mostly described in a gender-neutral language. In the paper, there are only a few sentences dealing with gender changes and concerning particularly the dual careers and men-as-active-fathers phenomenon. There seems to be less sensibility to the scientific understanding that gender is a social construction.

Last but not least the paper does not reflect on the ongoing discussion in gender studies and in politics of affirmative action about intersectionality and diversity – there is a lack of sensibility to inequality in its varieties. One could argue that diversity is mentioned – as the question of gender and of life-style concerning the ‘problem’ of reconciling family and work – but there is no reflection on different social or ethnic or sexual backgrounds. The underlying concept of ‘women’ mentioned in the paper is a concept of white, German, middle-class, young and heterosexual ‘women’.

If all we could know about the problem of gender equality in science and research from the paper of the Gender-Alliance we would know that there is a problem of numbers between the genders – too few women, too many men in high positions and committees in science and research – and that there is a problem of reconciling family and work in science and research. Addressing family just working times and frame conditions as well as the development of dual career programmes could and would mean innovations in organisational development.

Neither the notion of quality nor the notion of excellence is used in the common resolution by the members of the Gender-Alliance, but they both are present in the discussion accompanying the paper: The notion of excellence has a prominent position in the title of the conference where the Gender-Alliance was presented in November 2006 (cf. Wissenschaftsrat 2007c) and the notion of quality was first given by Susanne Baer who named the “Offensive for Equal Opportunities” an “offensive for quality” (Baer 2008: 28):

“Equality is a contribution to innovation and excellence. An equality offensive is a reaction to challenges for justice or economical necessary, but in the sciences and the humanities it is – and must be to have success – an offensive for quality, too.” (Baer 2008: 35, translation H.K.)

Baer points out that gender equality in science and research could and should not forget that quality is part of solving the gender question. Otherwise, the risk that feminisation could coincide with a loss of quality and excellence as can be shown by historical examples from other professions is too high. So, following Baer, the quest for equality must go hand in hand with the quest for quality and contributes to institutional excellence. The German Council of Science and Humanities picked up this idea: When the Council on July 16, 2007, presented its “Recommendations to Equal Opportunities for Female and Male Scientists” (Wissenschaftsrat 2007b) the announcement had the title “Equal Opportunity is a Question of Quality” (Wissenschaftsrat 2007a).

5 Organisational realities of gender politics and gender equality in the German science system

My second point of interest concerning the Gender-Alliance focuses on the question of the advent or the implementation of the Gender-Alliance in organisational practices of universities and concrete research institutions. My question is *if* the ideas of the paper are reflected within the political practices of science organisations and if they are reflected I would like to ask *how* one could describe these reflections. Currently, and because of the reason that there is no research on this topic yet I cannot give any empirically proved information on this question. But as an experienced researcher on gender politics in the German science system and in German universities I dare to suspect, that the rhetoric of the Gender-Alliance will not have strong effects on organisational gender politics until the initiative will be accompanied by strong incentives, sanctions or controls of political practices.

To discuss this suspicion one first has to look at the paper of the German Rectors’ Conference that is part of the resolution of the Gender-Alliance. From a perspective of gender studies and gender politics the paper is remarkable: In the light of the “Offensive for Equal Opportunities” it makes clear that gender equality politics are a task of the universities’ managers. Based on a strong selection by criteria of quality the equal participation of men and women has to be an integral element of the self-government of each university. So, equality between the genders has to be expressed in the organisation’s mission, in its strategy, in its structure and in its basic order. Furthermore, it is said that the managers have the duty to push through better values of participation in cooperation with the faculties and departments. Aims of gender equality have to be included in budgeting and in contracts concerning the tasks and products of the faculties and departments. These processes of self-government have to be accompanied by

quality assurance, monitoring, controlling and evaluation. The recommendations by the Rectors' Conference to the universities consist of all the new measures and instruments of governance combined with the concept of gender mainstreaming. From a perspective of gender and with regard to the rhetoric level the paper of the Rectors' Conference is really convincing the reader.

But the empirical results collected by means of research projects and institutional experiences and concerning the implementation of gender mainstreaming into the German science system reveal a different situation. Taking gender mainstreaming seriously (of course) means to implement it into the strategies taken in order to solve all the problems caused for the universities because of the reform agenda of the new governance. One of these problems is the problem of gender equality, not new for academia but unsolved until today. But one of the main questions in this context is the question of who puts gender mainstreaming on the organisational agendas? And who are these managers, mentioned by the Rectors' Conference above, who should and could implement gender mainstreaming into organisational changes? What do these managers know about gender mainstreaming, and, more important, what do they think about it? Do they fill this task with significance in their daily life – and do they spend money for it? Do they consider it to contribute to organisational quality and excellence? What are their mental models, their values concerning gender equality in science and organisational life?

Of course, there are some examples for institutional success in implementing gender equality politics in organisational practices and in measures and instruments of the new governance of science – highlights in a differing institutional landscape of universities that have to compete and cooperate at the same time, that have to be excellent and of high quality and that give importance to the question of gender equality in the organisational development, too. But there are numerous universities where gender equality is only treated to represent a duty that can be accomplished by using only poor resources of knowledge, of time and of money.

Within the frame of two empirical case studies on the implementation of gender mainstreaming in universities carried out in two different Lands of the Federal Republic of Germany, namely Mecklenburg-Western Pomerania and Saxony-Anhalt, I had the opportunity to interview deans, rectors, presidents and heads of departments, in sum twenty persons of whom only three were women, on their knowledge, mental models, ideas and experiences of implementing gender equality politics in their organisations (cf. Kahlert 2007, 2008). One main topic of the interviews put on the agenda by the interviewees was the question if more gender equality means a loss or a profit of quality for the organisation. To sum up some results of my studies in short, their estimations depended on their

mental models of the organisation, of the relations between the genders and of their willingness to personal and organisational change: Those who fear change are also reluctant to gender change, those who like change are also open for gender change in the academy. All of them wanted more institutional excellence but only few considered gender equality to be a contribution to reach this aim. More, in the interviews the fear of the consequences of gender equality seemed to dominate much more than the positive expectations did. The interviews also showed that gender changes in academic organisations are not only a question of changes in structures and processes, but that they are also closely linked to any change within the organisational culture. The results of both research projects also show very clearly, that the implementation of political initiatives or concepts like gender mainstreaming do not play an important role on the organisational agendas or in the politics of the leaders on different organisational levels. Only very few of my – mainly male and all very powerful – interview partners had further information about gender mainstreaming though seven of them, namely all presidents of the universities in Saxony-Anhalt, had signed a contract with the government to implement this political strategy. With their signature they agreed to do something without knowing what they have signed – and without any consequences.

Comparing these results to the “Offensive for Equal Opportunities” gives reason to be sceptical about the success of the Gender-Alliance on political practices in academia, at least if there will not be any information, education and training on gender for the management staff in science, higher education and research and without incentives, sanctions or controls. So, we are quite eager to know if and how the messages of the Gender-Alliance will be implemented in organisational structures and processes of universities and research organisations and what its success will consist of.

6 Conclusions

To sum up my arguments, what could be concluded after this small analysis of the expected contribution of the Gender-Alliance to gender change in academia?

First, one could claim that elites from science politics nowadays seem to be interested in putting gender equality in the science system into action. I suppose that the reason for this historical new rhetoric is not a normative one – i.e., to fulfil democratic ideas – but that it can be identified to be an economic and strategic one that has been originating from the global field of competition in science and research, namely not to be on the last places in international rankings on gender equality in academia and to be considered not to be as excellent as wanted in a global understanding.

Second, those elites in science politics seem to have learnt about gender politics so far that they mainly focus on, one could say, classical personal activities of affirmative action. In their common resolution and in their individual papers they do not – or only to a little amount – focus on instruments and measures accompanying the new governance in science and research. The idea of gender mainstreaming seems to be put on very few of their agendas. One can also assume that their ‘gender knowledge’ seems to refer to a general understanding of gender than to the knowledge on gender worked out by gender experts.

Third, the political rhetoric of gender equality of these elites focuses on the question of participation but not on change in academic or organisational culture – and not on gender in knowledge. Thus, their initiative to re-map academia from a gender perspective is extremely limited to so called hard facts, will say to aspects that can be counted: they mainly seem to be interested in more gender balanced statistics, not in change in culture, organisation or knowledge in academia from a gender perspective.

However, what makes the initiative worthwhile to be observed, criticized and, analysed is its powerful intervention in a powerful field of politics and knowledge where currently the de- and reconstruction of gender and gender relations go hand in hand with questions of the construction of quality and excellence.

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Do Little Strokes Fell Big Oaks? Mentoring within the Federal Programme for Gender Equality at Swiss Universities and Its Impact on Academic Structures

Ulle Jäger

The relationship between academia and gender in Western European thought has been described in detail in the fields of women's and gender studies. Interdisciplinary approaches have been used to examine the relationship between academia and gender both in history and at present. These relationships not only affect the content and fundamentals of various disciplines, they also affect the academic careers.

The exclusion of women from the production of knowledge up to the beginning of the 20th Century is based on a tradition that associates the male with the intellect and the female with nature. It identifies men as the only ones able to think critically, as they are endowed by nature with the capacity to be autonomous, neutral and objective. The accepted image of the scientist, the basis of modern progress, is purely male. Mother and housewife are the natural roles for women. Intellectual activity goes against their nature. Such ideas are no longer (openly) held, but structural barriers are still in place that make it harder for women to advance in academic standing. These structural effects have been labelled with the terms "glass ceiling", "cooling out" and "leaky pipeline". The statistical fact is that, despite an alignment in the numbers of male and female students, horizontal and vertical segregation still exists. The status passages between the various hierarchical levels are the special points at which women fall off the career ladder, regardless of their qualifications and experience.

Why is it that, despite increasing numbers of students, of promotions, and even of female assistant professors, there are still so few women at the highest level of the academic hierarchy – the professorship? Investigations of this issue have looked for answers either on the side of women or on that of science, i.e. the focus is either on the individual or the structural. Up to the mid 90's, German-language debate on the topic centred on the individual aspect. Socialization processes, biographical pathways, female-specific processes of identity development and conflict resolution strategies are given as reasons, while the structures and processes of the academic sector are only addressed in general terms. Then there was a shift of interest towards the structures and functional mecha-

nisms of academia (Krais 2000a; Engler 2004). Besides the concept of habitus, it is the concept of the field, especially in connection to Bourdieu, which determines the analysis and draws attention to the rules of science as a profession. According to Bourdieu (1967, 1970, 1987), the social field is composed of various fields (e.g. politics, economics) and sub-fields (e.g. literature, university), each of which is structured by its own rules. Each field is a place of power struggles in which every participant fights for a particular stake according to specific rules. The academic field is a part of the social environment with its own rules and norms. Recent investigations have asked why, despite the formal equality of the sexes, highly qualified women drop out and which academic field rules have this effect (Beaufays 2003; Engler 2001/2003; Krais 2000; Krais/Beaufays 2005; Leemann 2002; Leemann/Stutz 2008).

The academic field is considered as gendered and the analysis focuses on mechanisms and modes of operation such as the construction of ability and talent and their gender-specific components (Beaufays 2007). The difference in the evaluation of scientific achievements according to sex, which has become especially clear in the analysis of professorship appointment procedures (Müller et al. 2007a), is among the structures and processes that have come into focus. It shows the importance of gender in a supposedly neutral/objective process; gender-specific choices are made that are invisible to the parties involved and contradict their "official" attitudes to gender discrimination. According to these studies, a wide range of gender-specific elements affects the decisions of the university authorities on the acceptance to or exclusion of candidates (Leemann 2002; Lind 2004). In this case, gender-specific means that it makes a difference whether the candidate is a man or a woman.

Mentoring is one of several political measures promoting equality that attempt to compensate the structural disadvantage of women in the academic field. The supportive character of mentoring for individual women has been analysed in many studies. Mentoring affects individual careers, and women benefit from the support of a senior mentor and other elements of mentoring programmes (Höppel 2002 2003, 2005; Leemann/Heintz 2000; Löther 2003, 2004; Page/Leemann 2000, Nienhaus 2005). Little is known, however, about the structural effects of mentoring. These structural effects are subject of this investigation. The study was commissioned by the Equal Opportunities Department of Basel University. How does mentoring affect academic structures? Does it affect these structures at all?

Mentoring at Swiss Universities

Mentoring was introduced at Swiss Universities under the Federal Programme for Gender Equality as a tool to support young female academics. The pro-

gramme has played a mayor role in supporting equal opportunity measures at Swiss Universities. Three modules are financially supported with a budget of approximately 2.4 million euros per year: mentoring, childcare and an incentive system for the inclusion of women in professorships. In the course of the programme, the number of female professors has doubled from 7% to 14% between 1998 and 2006. It will continue until 2011, aiming at further increasing the number of female professors up to 25%. Mentoring contributes at least indirectly to this goal. One of the principal structural effects of the Federal Programme is the increase of the number of women at different academic levels. How much of this increase is due to mentoring remains unclear. Another structural effect of the Federal Programme is the establishment of equal opportunity offices. When the programme was introduced, only four out of ten universities had an equal opportunities office. By the end of 2002, this fundamental prerequisite for equality politics was established at all ten universities. Last but not least, mentoring, which was non-existent in the academic context of Switzerland, was established in its different forms at individual universities and nation-wide. These effects of the Federal Programme have been described in several evaluations (Bachmann 2005; Bachmann et al. 2004; Drack 2005; Spreyermann 2004; Spreyermann/Rothmayr 2008; Müller et al. 2007b; Rothmayr et al. 2004). The structural impact of mentoring, however, was not taken into account.

Research design: The question of structural effects

Currently, there are two contrasting views on the structural effects of mentoring. There is the optimistic position that holds that mentoring is a way of breaking up career structures at university. Mentoring is said to open up new, more flexible ways for all employees to positions matching their interests and qualifications, regardless of their gender. Mentoring brings together different strands of equal opportunity policies, human resources development and research policies in a creative way, developing new infrastructures that improve gender equality. The pessimistic standpoint holds that mentoring reproduces hierarchies and relations of dependence. According to this view, it only compensates organisational deficits by offering temporary support systems for individuals. Thus, by only reproducing current structures, it is said to hinder real change (Franzke 2005). A third, less opinionated view is that it is still too early to evaluate the structural effects of mentoring in the German-speaking countries Germany, Austria and Switzerland (Nöbauer et al. 2005), because it was only introduced into academic settings in the nineties.

In summary, one can say that there is a lack of empirical research into this topic. It is considered to be more difficult to approach the structural effects em-

pirically than to quantify and qualify the individual benefits of mentoring. In order to approach the question of structural effects, one has to clarify what exactly is meant by “structure” in this context. The empirical analysis of two programmes at the University of Basel approaches the question of structural effects in an exemplary manner. Following the approach of theoretical sampling (Strauss/Corbin 1996), different materials were gathered and used for theory construction. At the beginning, different documents and several evaluations from the mentoring programmes in question and the Federal Programme were analysed. A further insight into the different dimensions of structural effects was gained in interviews with members of the project teams (two professors, three post-docs, two doctoral students). The results of these interviews influenced the design of a survey questionnaire that was used in the four different faculties involved (History and Philosophy, Theology, Law, Medicine) and sent out to all the professors in these faculties (200). The response rate was 25.5%. The doctoral students and post-docs participating in one of the programmes (24) were also asked to fill in a survey (response rate: 25%). Finally, there were five in-depth-interviews with mentors (three male, two female professors) and three interviews with mentees.

An empirical differentiation of “structural effects”

The first outcome of the study is a differentiation of the concept of structure and structural effects in this context. Three different types of structural effects have been identified in the material gathered and used for further analysis of the data:

1. Long-term establishment in university institutions:

To what extent have the programmes become established following the second round of the Federal Programme for Gender Equality? What are the estimated prospects for a long-term continuation of the programmes? To what extent are the programmes having an effect on the current restructuring of post-graduate education and the promotion of young female academics in terms of gender mainstreaming?

2. Awareness of gender-specific career questions:

How does mentoring create awareness of gender-specific difficulties in academic career progression? What are the views on the possible participation of men in mentoring programmes? How do the different players evaluate the existence of programmes for women only? What changes are necessary in mentoring programmes in the light of current changes in gender relations?

3. Changes in the academic field:

What is the effect of mentoring on the academic environment and the university institutions? To what extent are academic rules challenged by mentoring? Are the current scholarly standards and rules of the academic field being critically scrutinised? Are the gender-specific effects of the prevailing academic rules being addressed? How does working as a mentor affect the role of the tutor? How does the relationship with ones own young academics change? How does being a mentee affect the tutoring relationship with one's doctoral supervisor?

In these three areas, mentoring demonstrates structural effects of different magnitudes. The first signs of a sustainable institutionalization are present. The majority of professors at the University of Basel supports the long-term establishment and funding of mentoring. There is a high degree of readiness to commit time. There is support for the continuation of funding but it is not clear where it will come from when the Federal Programme ends. Financial anchoring for Mentoring Medizin Basel has been established at the Faculty of Medicine in the context of the third round of Federal Programme. This ensures the continuation of the programme at least in the medium term. A financing concept for the complete university is pending. In terms of gender mainstreaming, it would also be possible to implement mentoring across the university under the reform of postgraduate education and with the help of general measures for the promotion of young academics.

The programmes show a deficit in terms of raising awareness for structural inequality and gender-specific career issues. However, there is a definite increase in awareness for the issues and problems facing young academics and scientists. Structural inequalities between men and women have little presence in academic life. Gender equality issues are often reduced to the questions of reconciling work and family life. However, as increasing numbers of men take on (or would like to take on) family responsibilities, the need for the exclusive fostering of women is being put into question. Others stress the importance of women's programmes. The simultaneous persistence and transformation of gender relations call for the reconsideration of existing services. At least a partial involvement of men (with family responsibilities) in the subjects of Work Life Balance and Dual Career Couples seems warranted.

In these two areas, which are of key importance from a gender equality perspective, we can see the first positive effects. However, if one takes on a sociological perspective, the question of changing the rules becomes particularly relevant. What counts as scientific? Which criteria decide who should play a role? And how are these criteria questioned in the context of mentoring? The empirical results in this third area of structural change will be documented in detail below.

Changes in the academic field: inclusion and exclusion

Which factors are considered relevant for a successful academic career? This question offers an approach to the issue of changing the rules of the game. The focus is appropriate, given that the transition from post-graduate to doctorate level represents the first threshold at which the almost equal representation of women and men becomes unfavourable to women (Leemann 2002). The questionnaire accordingly invited professors to name the relevant factors for an academic career and the criteria for the selection of their own junior staff.

The feedback on these two issues was organised for evaluation in the following categories:

- Personal attributes
- Personal experience
- Research and qualification work
- Random and structural conditions
- Other factors

The next step was to count the mentions of each category and check which factors appeared in the respective categories most often. The responses were also analysed for differences between professors with and without experience of mentoring. These differences would have led to the assumption that participation in the mentoring programme had had an impact on the rules used for recruiting young academics. The mentees were also asked by questionnaire what they consider to be the relevant factors for a successful academic career and under what criteria they think they were recruited themselves.

The selection of young academic staff disregards gender categories

Querying the factors for the selection of young academic staff reveals the prevalence of a discourse based on performance and talent that blocks out the gender-specific components of the performance and talent attributes. This is apparent both in the results of the questionnaire as well as in the interviews, in which these issues were also raised. There is a significant concentration on individual factors that tends to obscure structural conditions such as financing, employment and promotion. Those who prevail do it on their own merits, those who do not are lacking in motivation and ability. Neither hard factors such as the highly limited number of positions at university nor soft factors such as gender or country of origin are deemed to be relevant to the progress of an academic career.

Individual suitability versus structural conditions

What is especially striking about the responses is that the individual factors strongly predominate over the structural. The focus is on the attributes and experience of the person. Factors associated with research and qualification work only come in third place. Random and structural conditions that can influence a person's academic career are only occasionally considered relevant. The majority of professors consider that a person's progress is more or less independent of external factors. At a time when European universities are undergoing structural transformation, when entire departments are being dissolved and when the conditions of everyday academic work are changing appreciably for all involved, at a time, in brief, when external conditions are becoming ever more noticeable, this response is surprising. Especially when contrasted with accounts of academic careers that commonly depended on being "at the right time, at the right place".

Gender and gender relations

Only one respondent mentions gender as a factor in an academic career. The importance of gender relations is thus overlooked by the majority of surveyed professors. This is true both for the mentors and the mentees. Both groups mentioned career criteria that are supposedly gender-neutral and are typical of the elitist discourse of the field. Forms of informal support, which demonstrably favour men over women, are not reflected. This is surprising in the context of a mentoring programme that was officially introduced to counterbalance the informal networks that mainly benefit men.

Covert selection in the attribution of qualities and experience of the candidate

Of all the personal characteristics considered necessary for an academic career, one is held to be particularly important: motivation. This is a quality that is only expressed indirectly, for example, when a person makes his or her time available for work. Motivation differs from performance in that the criteria for determining its presence are less objective. It is rather a feeling about how much commitment a person is willing to give. Comparison in these terms puts people with other obligations, such as family, in a disadvantage. And as long as family responsibilities are associated mainly with women, this criterion has a gender-specific effect on selection. But also those who have interests outside their scholarly subjects such as political involvement, a hobby, or who just want to enjoy a little free time, are implicitly excluded, because they appear less motivated.

The second most frequently mentioned factor in determining an academic career is the talent or suitability of a person. Again, this is a characteristic that is ascribed rather than based on objective observation. There is sufficient evidence from the field of elite studies to show that such attributions of social and cultural background play a central role in the assessment of a person. Recent works in particular have investigated the importance of gender in these assessments, and how women are discriminated by the usual modes of elite recruitment (Dackweiler 2007).

Discipline comes third in the ranking of desirable personal attributes. Showing discipline means showing endurance, perseverance, diligence and the will to perform. These characteristics can be best displayed by people who have no other interests or any other commitments (such as child-rearing). Networking and integration in the scientific community are seen as the most important factors in terms of work experience. Many professors consider connections, partnerships and participation in conferences to be relevant elements for an academic career. Again, people with family responsibilities are at a disadvantage because they cannot dispose of their time as freely to actively pursue networking. Generally, the research/dissertations category ranks third after personal characteristics and experience. However, it becomes more important when the respondents are selecting their own staff and then it moves into second place – in front of personal experience. Besides the actual dissertation, this category also includes publications, qualifications, competence, technical expertise and quality.

“Full commitment”

All these responses from the open part of the questionnaire fit in with ‘illusio’ of the academic field, which has been analysed by many following Bourdieu. If we regard the academic field as a game that is governed by certain explicit and implicit rules, then the ‘illusio’ is the faith of the players in the value of playing the game. “... anyone who wants to play this ‘game’ has to believe in the field, the ‘illusio’; identifying with the ‘game’ is the condition for playing. (...) So, those who want to pursue a career in science, and those who want to fight for their position in the arena of an academic discipline first have to believe that it is worthwhile to fight for science, that scientific work is what they are made for and where they can prosper.” (Krais/Gebauer 2002: 58, 59, my translation).

How can you show that you really have “what it takes” for a university career? By demonstrating full commitment. Contrary to current opinion and the explicitly formulated rules, fulfilling this requirement does not depend on providing objective proof of performance in research and teaching, but on giving the

impression (both to others and to oneself) of “full commitment”. Scientific careers require absolute dedication: in qualification (monograph versus cumulative habilitation), in the availability for work (full time plus overtime plus weekends versus part-time with fixed time boundaries), in the space left over for the private life or a possible second occupation. And they leave no room for traditionally female roles such as parenting and family work.

As different as the positions of the players in a field may be, there is one thing they have in common: They all share the same *illusio*, the practical faith in the game. And the effect of this practical belief is that the rules of the field are experienced as self-evident. *Habitus* and field interlock seamlessly and lead to a reproduction of the existing rules governing the actions of the individual. This is true not only for the gate keepers of the academic field, the professors, but also for the young scientists. The latter internalize the rules to such an extent that on the advent of other needs and interests (such as having children) they “voluntarily” decide to drop out of the field. According to the results of an investigation by the Swiss Science Foundation on research promotion and gender, this opting-out is not gradual, but conspicuously late: young female scientists tend to remain up to the post-doc phase. Thus, the numbers of application requests to the SNF are near equal for women and men during the first five years after the doctorate. But the different forms of support and involvement in the scientific community lead, in small, almost invisible steps, to the disappearance of women from the scene. The fact that they are gone becomes clearly visible when it comes to the professorships (Leemann/Stutz 2008).

Overall picture: success as a result of “talent” and individual actions

On the whole, this hierarchy of factors paints a rather traditional picture in which the budding scientist needs to demonstrate certain attributes in order to satisfy the requirements of an academic career. At the forefront, we find personal conditions that may be necessary but not always sufficient for academic success. The person’s actual performance comes in second place: Blocking out the structural conditions reinforces the general idea that an individual’s capacity to succeed depends on their commitment, talent and will to perform. Two ideas remain firmly established: On the one hand there is “talent”, on the other hand the image of objectivity, neutrality and universality of science. Gender as a structural category is not held to be relevant to the academic career.

External conditions are only occasionally mentioned as a factor. They include factors such as careful career planning, competent advice or information on rules and procedures in each discipline. For women there are additional fac-

tors: the presence of positive role models and the recognition of own gender-stereotyped behaviour that may be career-inhibiting. The external conditions mentioned by the respondents were subdivided into random and structural conditions. The random factors include luck and chance, which are conspicuously only mentioned by women. Institutional support is mentioned only three times among the structural conditions (“proper promotion”, “support grants”, and “academic support context”). Supervision is only mentioned twice. There are single mentions of financial security, peer groups and positive role models. One person mentions unlimited time resources as a factor and notes that it is difficult to reconcile an academic career with family life.

Change through mentoring?

Does participating in a mentoring programme change a professor’s attitudes? In a second analysis step, the responses of the mentors were compared with those of the professors without mentoring experience. The responses of the two groups differ only slightly. Professors without mentoring experience rank the importance of the thesis and networking slightly higher than the mentors. Professors with mentoring experience are more likely to mention structural conditions. And only people with mentoring experience mention the factor of luck. Each interviewee could mention three factors. If we look at the responses as they appear originally in the questionnaire and not sorted by category, the following stands out: In addition to the above-mentioned major factors in the areas of personality and experience such as motivation, performance, fitness and talent, the mentors always mention one factor that points to external conditions, such as luck, the existence of role models, university support programmes, help from tutors, family support or childcare. From this distribution of answers, one could cautiously conclude that although mentors believe, as their non-mentoring peers do, in the supposedly gender-neutral factors of motivation and performance, they also grant importance to other, more structural conditions affecting the scientific career. This hypothesis should be given more detailed consideration with the help of more extensive qualitative surveys.

Conclusion: The rules of the academic field are not challenged by mentoring

In summary: The rules of the game are not fundamentally questioned by those two mentoring programmes that were subject of this investigation. The effect of the programmes in question on the academic environment and the university insti-

tution is rather small. There is no sign of gender being taken into account in the selection criteria for young academics by those involved in the programmes or those at whose faculties mentoring programmes exist. A discourse based on performance and availability predominates among the majority of mentors, allowing little room for career interruptions caused by events such as family breaks or other social and family obligations. The subject of children and career is mostly understood as a woman's issue, still. Some mentors, however, do speak very clearly in favour of taking up this issue on behalf of men as soon as possible.

Even though these results have to be considered as preliminary due to the size of the sample, they raise important questions. In times of fundamental organisational change of universities, current standards of suitability for an academic career are worthwhile questioning not only from a gender perspective. If one takes the dawn of entrepreneurial universities for granted, the profile of junior academics has to be adapted to the new demands of a system with an increasing workload in the field of managerial tasks. If one sticks to the old idea of "science as a vocation" in the Weberian sense, the gendered effects of this understanding have to be taken into account. With regard to mentoring, the question of structural effects remains anyway. How can the individual effects of mentoring be supplemented by a more structural approach? How can mentoring programmes include elements, which question the game as it is being played? How can mentoring shed a light on the still existing structural inequalities between men and women? How can mentoring bridge the gap between the individual impression of many, mentors and mentees alike, that equality measures are no longer needed and the structural fact that the average percentage of women in academic position is only 16% in Switzerland in 2006?

One way of adding a critical edge to mentoring could be to include results of current studies on gender and academic career within the programmes themselves. Recent results on science and parenthood, for instance, would be interesting not only for the participating women. According to these studies, young male academics in Germany are currently renouncing their wish for children for the sake of their careers (Lind 2008; Metz- Göckel et al. 2009). These results show that an increasing number of men also find it problematic to fit the hegemonic image of the scientist (Connell 2006). The compatibility issue becomes a cross-gender phenomenon.

With regard to Switzerland, an analysis on gender and research grants by the Swiss Science Foundation describes still existing barriers for women to become doctoral students, a lack of support for their academic careers as compared to men and problems with work-family-balance. These factors combined are seen as reasons for the leaky pipeline. Nevertheless, some parts of the game are not questioned in these contexts, either. Publication output and international

mobility seem to be part and parcel of an academic career. Part-time options are rarely discussed (Mücke et al. 2006). If one takes the many differences between women into account, and if one also cares for the differences between men (Maihofer 2004, 2006), a more general and a more differentiated critique of the professional standards seems tangible. Against this background, mentoring programmes – as well as other gender equality programmes – could contribute to the discussion of existing standards.

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Gender Equity in Science

Mary Osborn

1 Why is gender equity in science important?

Gender Equity in Science. is important for four reasons: *Equity, Excellence, Efficacy and Efficiency* (Logue 2006). Gender discrimination violates the principle of equity and the scientific ethos that claims to recognize and reward individual merit. The inadequate use of female talent decreases the pool of available researchers and means that science and technological performance is suboptimal i.e. it reduces Excellence. Efficacy. In northern Europe the number of young people is decreasing, as is the total number of young people entering science. It is therefore important to mobilize female talent both within and across national boundaries. And Efficiency. *It makes no economic sense to train women in science and technology but then not to recruit them into jobs that use these skills.* In addition inaction on the gender issue will decrease Europe's efforts to remain competitive in science and engineering and make it more difficult for Europe to meet the goals of the Lisbon summit.

My involvement in the gender equity issue began in 1992 when I wrote a letter to Nature (Osborn 1992). In this letter I stated that "there is no evidence that sex is related to success in scientific research and that women are prepared to be judged by the same objective standards as their male colleagues. However in return women have the right to demand the same job opportunities and the same resources and to enjoy the same privileges given to men at similar stages in their careers."

In the US action on this issue started in the 1970s stimulated by the Title IX amendment. In Europe, Finland and Sweden issued government reports in 1982, and these were followed by national reports including *The Rising Tide* (UK, 1994), *Excellence in Research* (Denmark, 1995), and *Women in Academia* (Finland, 1998). The European Parliament has been concerned with the low numbers of women in science for several decades (e.g. Resolution from 16.9.88). The first small meeting on Women and Science was held in 1993 and the Mainstreaming Communication was issued in 1996. In 1998, as a result of growing concern at the lack of women among career scientists and among those who shape science policy, I was asked by the EU Research Directorate to select and chair a committee charged with examining the status of women in science within

the EU. The ETAN group included senior scientists from different disciplines from ten Member States from universities research institutes, business and politics. Teresa Rees was the Rapporteur. The ETAN Report (Osborn/Rees et al. 2000), published in the year 2000 provided for the first time reliable international comparative data on women in science and advocated the use of mainstreaming as well as positive action to advance gender equity. It concluded that the under representation of women threatened the goals of science in achieving excellence as well as being wasteful and unjust. And made recommendations to a wide range of bodies including the Commission, the European Parliament, the Member States and organizations that educate, fund and employ scientists.

2 Changes since the ETAN Report in 2000

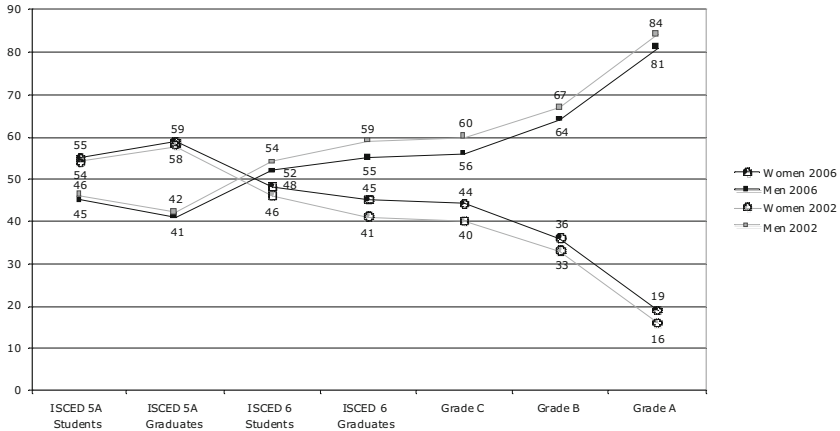
Advances at the EU level. There is a general consensus that the ETAN Report was instrumental in achieving considerable change at the EU level. The ETAN Report was the first comprehensive attempt to collect and compare data for Women and Science on an international basis. Since the year 2000 gender disaggregated statistics have been collected for the EU Member States on a continuing basis by the Helsinki Group and have resulted in the She Figures Publications in 2003 and 2006 (She Figures 2006). The next volume will appear in 2009 (see She Figures 2009 for preliminary data). These volumes give information on a wide range of statistics and indicators and deal with topics as diverse as university appointments, board membership and research funding.

There has been a huge increase in the representation of women on key EU Committees that set policy and control funds. In the 1990s, IRDAC had zero female members while ESTA had originally 4% and was then reformed in 1998 with 8% female members. In contrast today some 25% of the members of The European Research Advisory Board, and of the Scientific Council for the ERC are female. In 2005, 27% of expert advisory group members, 29% of program committee members and 30% of evaluation panel members were female. Success rates are now monitored by panel and by gender. All this was made possible by the insertion in 1999 of a single phrase requiring the Community to take Equal Opportunity Policy into account in the implementation of the Fifth Framework Program. Incredible as it seems now up to this date EU policy had been concerned with geographic distribution but had never really considered gender distribution as important.

The success at the EU level also demonstrates the importance of individuals in implementing equal opportunities, and I note the crucial roles played by the former Research Commissioner Philippe Busquin, by Achilles Mitsos and by Nicole Dewandre, the first head of the Womens Unit.

Academia. In Figure 1 you see the crux of the problem for academia, illustrated here by a scissors diagram plotted for the EU-27 average for the years 2002 and 2006. While more than 50% of the students were female only 15% of the Grade A or full professor positions were held by women. This rate increased by around 0.7% per year between 2002 and 2006.

Figure 1: Percentages of Student and Academic Staff Positions held by women and men
EU-27 average, 2002/2006



Source: She Figures 2009

At the Member State level the proportion of top academic positions occupied by women is very different in different European countries as was originally documented in the ETAN report. In 2007, in Belgium, the Netherlands, Austria and Germany, it was 11-12 % whereas in Finland it was 23% and in Ireland, Romania, Latvia Turkey and Greece it exceeded 25% (Figure 2). Why such differences? In the ETAN report we speculated that it might be due to the greater prestige of a professor in the first group of countries or to a better availability of childcare in some Mediterranean countries. However we were told firmly by female scientists from Spain and Portugal that the answer was different. They had worked so hard to get where they were on the career ladder that they would not think of giving up their career just because they had children!

Changes in certain Member States such as Germany have been slow to occur. In the 33 countries examined in She Figures 2009 only six countries including Malta, Luxemburg and Cyprus have a lower proportion of women in Grade A academic positions than Germany (Figure 2). In 2007 in Germany only 12% of the A positions at the universities were occupied by women, up from 3% two decades previously.



Source: She Figures 2009

Legend to Figure 2. Abbreviations: RO Romania, LV Latvia, TR Turkey, HR Croatia, BG Bulgaria, FI Finland, CH Switzerland, PT Portugal, PL Poland, SK Slovakia, FR France, HU Hungary, IS Iceland, IT Italy, ES Spain, NO Norway, SE Sweden, UK United Kingdom, EE Estonia, SI Slovenia, LT Lithuania, AT Austria, CZ Czech Republic, IL Israel, DK Denmark, DE Germany, EL Greece, NL Netherlands, BE Belgium, CY Cyprus, LU Luxembourg, MT Malta. Data for 2007 except as listed in Reference 4 (She Figures 2009 Preliminary Data) from which this figure is taken. Comparative values from the year 2003 are USA 20%, Australia 19%, Canada 18%, New Zealand 14%.

It is also important to record the rate at which women are appointed to Grade A positions as well as the absolute numbers something done by only a few countries. For example the appointment rates for C4/W3 Professors that are female increased from 11.7% in 1997 to 13.9% in 2004, 21.5% in 2005 and 20.3% in 2006. This results in an increase in the percentage of C4/W3 professors held by women of only around 1% in both 2005 and 2006. There is an obvious limit to the rate at which women can be appointed and this in turn limits the increase in the percentage of total positions held by women.

Absolute numbers for the universities differ depending on the subject area. For example in Germany, in 2005, 6% of engineering, 6.5% of human medicine, 10% of veterinary medicine and 18% of languages and liberal arts appointments at the C4 level were held by women (Bund-Länder Kommission 2006). When the major non university research institutions in Germany are considered the Max Planck Society has the highest percentage of top positions occupied by women. In 2006 this was 6%.

A recent study of appointment practices in the Netherlands shows a correlation between the number of women on appointment boards and the likelihood that a woman will be appointed (Van den Brink/Brouns 2006; Van den Brink 2009). In appointment commissions without women 7% of the appointees were women, in commissions with one woman 14% appointees were women and in commissions with two or more women 22% of appointees were women. Here it would be interesting to know if there is similar data from other Member States. The same study also shows the rather alarming statistic that only 36% of the appointments were filled by open advertisement, while 64% were filled in a closed procedure and in two thirds of these there was only a single candidate!

Graphic representation of the gender imbalance in each university within a specific country may of help in raising awareness. A series of posters recently designed in the Netherlands shows the current percentage of professor slots occupied by women for each of the Dutch universities. Also the number of new female professors that need to be hired by each university to meet either the Lisbon target of 25% or the more recently adopted and reduced national target of 15% in 2010. Such presentations make clear the gender imbalance between different universities and the efforts that will be needed to correct this imbalance.

Postdoctoral fellowships. Wenneras and Wold in their study of the Swedish MRC postdoctoral fellowships determined that women had to be two and a half times better than their male colleagues to win an award (Wenneras/Wold 1997). The female to male success rate in their data set was 25%. More recent data on EMBO long term fellowships, EURYI awards and HSP fellowships show a female to male success rate of 80% or put in another way women are only 80% as successful as men in these competitions.

European Research Council Grants. Even more worrying is data in life sciences from the first round of ERC starting grants that give the successful applicants up to 2 million euros for 5 years. Here five of the seven panels in the life sciences had female to male success rates between 17 and 40%. In the first competition for ERC Advanced Grants only 12% went to women (all disciplines together).

Research Grant Funding. Thanks to the Helsinki group we now have some data on research grant funding by gender and by Member State for the year 2004 (She Figures 2006). Men had higher success rates in 17 European countries, women in 8. Thus far there is little analysis of the causes behind this or even whether men and women in the Member States ask for and receive the same average amount. In this connection a recent analysis of "Mega grants in Sweden shows that only 1/20 Linne Grants went to a project in which a woman was a coordinator (Magnuson 2006). Here it would be interesting to look at the gender distribution of mega grant awardees in other countries.

Scientific Boards. Women are occupying an increasing percentage of seats on scientific boards. Norway, Sweden and Finland lead this table and have almost reached parity but other Member States lag far behind (She Figures 2006).

An increasing number of European countries (e.g. Scandinavia, Italy, UK) have laws ensuring a 30 or 40% representation of women on the boards of public bodies and have made efforts to increase the percentage of women on boards that award fellowships and research funds.

Invitations to speak at national and international conferences. Another important career factor is invitations to speak at national and international conferences. Already in 1991 the NSF Biology Directorate refused to sponsor meetings that have no women on the program and the justification for this is interesting. It is based on a memorandum which states that in 1991 women formed 49% of those getting B.A degrees and 34% of those getting PhD degrees in biology. It goes on to state that in view of these statistics it would *only be in the most extenuating circumstances that the directorate would support conferences, meetings or international congresses that have no women on the program.* Mary Clutter once told me that she thought this was one of the most effective measures introduced by NSF since it forced meeting organizers to screen for female speakers. In contrast in Europe we still see meeting programs in the sciences that lack a single female speaker. In larger international meetings while women often account for around 40% of the participants the percentage of female speakers is usually very much lower (10-25%).

Industry. There is little data divided by *gender and level* for industry a fact commented on both in the ETAN Report (Osborn/Rees et al. 2000) and in the EU report on Women in Industrial Research (Rübsamen-Waigmann/Solberg et al. 2003). Data for Germany indicates once again a scissors diagram – lots of women in the lower ranks and very few at the top! The percentage of board members of industrial firms that are female in major European countries shows wide variation. From 0.8% in Portugal to 44% in Norway (Germany 7.8%, U.S 14%, all numbers for 2008)¹. Norwegian firms have been required by law since the beginning of this year to have at least 40% of both genders on their boards. In another study firms with more women on the board have been found to be 53% more profitable than those with none. Thus gender diversity may bring economic advantage! There are only 8 female CEOs for the 500 companies in the Financial Times Europe List.

The U.S National Academy of Sciences Report, entitled Beyond Bias and Barriers, was published in September 2006 (Committee on Maximizing the Potential of Women in Academic Science and Engineering). It deals with women

1 <http://www.catalyst.org/publication/285/women-in-europe>.

in science in the US and is focused on why women advance up the academic career ladder so slowly. The panel that wrote the report included five University Presidents and other distinguished female scientists. *The report concludes that it is not lack of talent but unintentional bias and outmoded institutional structures that are hindering the access and advancement of women.* It recommends that universities alter procedures for hiring and evaluation, change the typical timetables for tenure and promotion and provide more support for working parents. It argues that such changes would be good for men as well as women. It is perhaps of particular interest that the National Academy felt the need for such a report although half the Ivy League Schools and MIT currently have female Presidents. In addition this report shows a *clear link between productivity in science and resources.*

N.I.H Pioneer Awards in the U.S These awards are meant to support innovative scientists at an early stage in their careers. In the first round in 2004 all the winners were male in middle to late career stages. Two changes were made in the 2005 competition. Self nomination was no longer allowed and the percentage of jury members that were female was increased from 4% to 44%. As a result 6/13 recipients of the awards in 2005 were female and all were at the start of their careers.

Other gender equity measures.

Role Models and Mentors. If you work in academia it is also worth looking at the pictures on the walls and at your university or institute brochures. When I did this some years ago I discovered that our institute brochure had only a single picture of a woman in it (holding a wineglass) versus pictures of some 50 serious looking men! Try to find out also if there is a gender pay gap in your institution and note that in countries such as the UK and in Germany women still earn on average only 75-80 % of male salaries. Mentors (either male or female) can also help keep a career on track.

Children. In her study of issues of concern for starting female faculty in the POWRE Program in the U.S (Rosser/Montgomery 2000), Rosser has made a list with which many in Europe can also sympathize. *The overriding concern for young female faculty was balancing work with family responsibilities of child or elder care.*

In Europe, and perhaps particularly in Germany childcare can be hard to find. Provision for children below 3 years of age was practically non existent in the old West Germany although the situation is now beginning to improve. Schools can have variable hours depending on the day of the week, children are often sent home if the teacher is sick and half day schools are common. It is therefore not surprising that many mothers choose to stay home with their children or work part time.

Nevertheless the ETAN group did not consider that children were the critical feature holding back women's careers. The main argument was that we did not see in our respective countries women without children making it to the top whereas women with children did not. We also knew of no data suggesting that women with children were less productive as scientists than women without children. The 2006 U.S Report *Beyond Bias and Barriers* (Committee on Maximizing the Potential of Women in Academic Science and Engineering 2006) also cites evidence that marriage and children have minimal effects on productivity and that women and male faculty are equally productive.

Partners and the dual career couple problem. Many of us felt, with Mary Frank Fox, that encouragement from partners played a critical role in determining whether women continued their scientific careers. This is one reason why the dual career couple problem deserves more emphasis in Europe. Women are more likely to have a scientist partner than men and therefore are more often the trailing spouse (MacNeil/Sher 2008).

Good practice examples from both the U.S and from Europe include making women in science an issue (e.g. as speakers, on society committees and at the annual society meeting e.g. American Society of Cell Biology, RNA Society), maintaining lists of expert female scientists in a particular field (e.g. American Society Cell Biology, ELSO/EMBO), skills and career sessions at society meetings, networks for female scientists (e.g. European Platform of Women Scientists), courses for group leaders to learn necessary leadership skills and network (e.g. EMBO, Helmholtz Society, CEWS, Bosch Foundation), leadership courses at the top level (e.g. those organized in Sweden for university leaders, and the L'Oréal/UNESCO Women in Science prize and fellowship Program. For dual career couples, spousal hiring programs, split positions and a dual career service such as that at the ETH in Zürich have exemplary character (see also www.partnerjob.com) Most of the programs listed here are specifically targeted to women and looking at the list I am surprised how few initiatives there are to target and change the attitude of male scientists!

More intangible factors undoubtedly affect whether women stay in science. These include gender stereotypes and whether parents really want the same things for their daughters as well as their sons. In Germany, Society still considers it acceptable for even highly trained women to withdraw from the labor market once they have children. A recent article by Bierach is also intriguing. She suggests that in Germany free education, and reduced taxation for married couples means that Germans have choices not available to their UK or US counterparts who have to work to pay first their own college and university fees and then those of their kids. Undoubtedly also better career structures for young scientists are needed.

To summarize equity measures should include:

1. being aware of institutional gender statistics in relation to level and pool size
2. ensuring access to fellowships, jobs and resources is based on merit not gender
3. best practice policies in recruitment and employment of scientists e.g. open advertisement of jobs and family friendly employment procedures
4. ensuring a better gender balance in universities and research institutes e.g. by monitoring appointment procedures and setting recruitment goals
5. ensuring an adequate number of women on key committees
6. ensuring good career structures for scientists
7. ensuring meetings have a reasonable number of women speakers

3 Mainstreaming Gender Equity into institutions

Finally I want to focus on mainstreaming gender equity into institutions. And making them more inclusive at all levels. The best reason for doing this is perhaps that given by Hopkins (2006): “Changing hearts and minds one by one is much too slow – Change the institution and the hearts and minds will follow.”

Legal measures can be very effective. This is shown by the laws in some Member States which govern gender balance on public bodies and on boards of private companies. However in other countries such as Germany equal opportunity legislation lacks teeth. Without the law on access to public records in Sweden the 1997 study by Wenneras and Wold (Wenneras/Wold 1997) would not have been possible. However only very few Member States have such laws.

Good statistics are required to set policies both at the Member State and at the EU level. And to allow international comparisons which may spur countries with low female representation to take action to try to catch up. Here I would like to stress the work of the Helsinki group, and to say how useful I find the She Figures 2003 and 2006 publications. A EU directive requiring employers to keep gender disaggregated statistics, as suggested in the ETAN Report, would be of enormous value.

Quotas have also been suggested most recently by Ernst Ludwig Winnacker, the ex President of the DFG, and until July 2009 Secretary General of the European Research Council.

Positive Action solutions can make enormous differences in the short term as illustrated for instance by the Aspasia program in the Netherlands. In Aspasia 146 women were promoted to associate professor and as a consequence the percentage of women occupying such posts increased from 8 to 16% in 6 years.

Germany has also just put in place a positive action program at the W2 and W3 levels creating 200 new positions that will be reserved for female applicants.

Setting *recruitment goals* and providing a welcoming atmosphere for new female faculty is also very important. For instance the University of Göttingen recently made clear that increasing the number of women on its faculty was an important priority and has provided a plan as to how do this. And indeed the commitment to this goal was one of the reasons that the University was successful in the recent competition for funds from the Excellence Initiative.

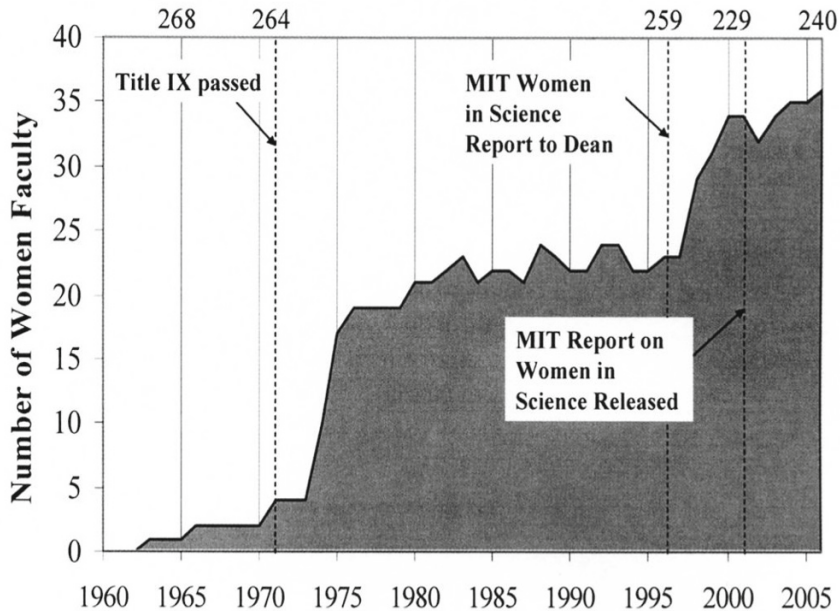
Additional ways to change institutions include

1. First through the individuals who head the management structure.
2. Second through an Advance Type program as in the US (Stewart/Malley/LaVaque-Manty 2007).
3. Third as currently in the UK by a program to modernize human resources in the universities.
4. Fourth by introducing mainstreaming.

And then there is *the MIT example* (Hopkins 2006). Women currently form 13% of the MIT science faculty and 14% of the engineering faculty. Women on the MIT faculty are as successful as their male counterparts and get tenure at the same 50% rate. Plotting the absolute number of female faculty versus time (Figure 3) shows two major increases – one in 1972 in response to the requirement for all institutes receiving federal funding to document efforts to increase the participation of women, and one from 1997 to 2000 in response to the MIT Report on Women Faculty. From 1972 to 1997, and after 2000, when Dean Birgenau left, hiring of female faculty leveled off except in the Chemistry and Engineering faculties. As stated in the report, at MIT there is “general agreement that increases in the representation of women do not just happen but that specific pressures, policies and positive initiatives are required to ensure that women are hired and that when such pressures decrease hiring progress stops or even reverses.” The study goes on to suggest that innovative measures may be necessary to identify and hire outstanding women and puts the responsibility for enforcing change clearly on management and in particular on the MIT Deans and the President.

And finally I want to again stress a point that I first made in 1993 as Rapporteur of the first EU meeting on Women and Science (see Logue 2006) and that is repeated in the ETAN Report, the MIT study and the NAS Report. If the speed of change is too slow- and I believe in Germany and in many other EU Member States this is so- then the most effective way would be to follow the US lead and *link research and other funding in part with progress made in hiring women and in bringing equal opportunities into universities and research institutes.*

Fig.3 Women Faculty at MIT, 1960-2005 (redrawn from Hopkins, 2006)



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