Synthesis of the conference

Who are the best? Equal opportunities in recruitment procedures

Innovation and Excellence by Women in Science

University recruitment procedures under scrutiny

Barbara Müller

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Who are the best? Equal opportunities in recruitment procedures

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Foreword

The competition that defines the modern academic world is driving universities in Switzerland and the rest of the world to strive for excellence. This objective plays a key role in the strategies that universities develop to improve not only their international ranking, but also their capacity for innovation, thus ensuring the longevity of their institutions.

This principle of excellence lends itself naturally to research and teaching. It is equally involved in current staffing and recruitment policies, with one goal being to acquire a greater proportion of female professors in our universities. Fortunately, the percentage of women among university professors in Switzerland has increased over the last few years, reaching 14.5% in 2008. This progress can surely be attributed in great part to the federal programme for equal opportunities for women and men that has been established in Switzerland during the last decade. It is difficult to ascertain the exact impact of such a programme, but statistical data nevertheless allows us to confirm that the percentage of women granted a post as a level I or II professor (associate or full) is now higher than it would have been (12.3%) had we continued in the trend observed during the years prior to the start of this programme. Even if this little difference cannot be credited entirely to the federal programme, the effect is nonetheless statistically significant.

Equality in academic careers for women and men has become an objective of utmost importance. Without a doubt, this has been emphasised by the incentives established in the federal programme, particularly in Module 1, which is devoted to financial subsidies linked to the appointment of women to professorial posts. In this manner, the federal programme not only encourages universities to establish new means of achieving parity, but it also prevents potential candidates from losing hope and encourages them to apply for open professorship positions.

Despite the substantial progress ascribed to the federal programme, a long journey still lies ahead before we reach truly equal opportunity. The success achieved thus far should not prompt universities to rest on their laurels. The percentage of female professors today still remains unacceptably low. In order to further improve this percentage, we first must be able to ensure that a greater proportion of women apply for the professorial posts that are available. It is also important to take measures to support dual careers, which are becoming increasingly frequent among academic couples.

Above all, it is essential to review all procedures for recruiting professors to our universities in order to eliminate any aspects in any step of the process that could present an obstacle for women attempting to join our professorial ranks. This should start with the committees which are in charge of defining the profile of the advertised positions as well as their integration into the recruiting department or university. The next step to be considered is the publicity and information intended to attract potential candidates. Finally, we must not overlook the frequently crucial steps of the selection process itself and the interviews held with selected individuals. In all of these steps of the recruitment process, good practices allow equal treatment of women and men.

In light of this, the document prepared by Barbara Müller is an extremely valuable tool. It provides an indispensable guide for all universities that are concerned with equal opportunities for women and men. We encourage universities to heed the recommendations presented in this document in order to achieve necessary levels of excellence in staffing and recruitment policies.

Yves Flückiger, Vice Rector, University of Geneva

President of the Steering Committee of the Swiss Federal Equal Opportunitiy at Universities Programme

Introduction

Europe's first female professor with the authorisation to examine candidates and the right to sit on the university senate was Anna Tumarkin (1875–1951).[1] This philosopher gained her doctorate at the University of Bern in 1898 and went on to lecture there. She was of Russian-Jewish extraction and began her studies in the early 1890s in Switzerland. As one of the many women who were no longer or not yet allowed to study in their home countries – particularly Russia and Germany – she embraced the opportunity to fulfil her dream of gaining an academic education.

The issue of women becoming professors was a controversial one, despite the fact that women were making *"strong advances into the male bastion of professorships"* (Rüegg 2004, p.120, *transl. BM*). Particularly in those subjects in which women began to make a name for themselves very quickly – such as in medicine and in the natural sciences – their suitability for a career as a professor or scientist was questioned by their colleagues and often countered using biological arguments – in keeping with the mentality of the times. Also, fear of competition was a frequent motive behind the voicing of these reservations (cf. Einsele 1992).

This scepticism was anything but new, having already been encountered some decades previously in most European countries in the context of admitting women as fully registered students (cf. e.g. Costas 1992). Access to higher education had been limited to certain social classes in early modern Europe, right up until the end of the 19th century. As far as women were concerned, it was only possible in exceptional cases.[2] In the USA and France, women were allowed to study from 1833 onwards, whilst Zurich was the first German-speaking university to accept women as equivalent students with equal rights, doing so with effect from 1864 (cf. Einsele 1992). By the 1872 summer semester at Zurich University, as many as 63 of the 354 matriculated students were women (medicine: 44), of which 54 were Russians.[3] This is remarkable insofar as it was to take another hundred years for Swiss women to be granted full political rights at national level (cf. Koch 2008).[4]

In most countries it was the government that offered chairs. This meant a certain level of uniformity, at least in those countries with relatively stable government systems. The faculties often had the right to propose candidates, but this could be ignored (cf. Rüegg 2004). Academic qualifications were increasingly the subject of a more open competition and viewed as being of central importance whilst *"teaching skills, length of service and general social achievements"* (Rüegg 2004, p.121, *transl. BM*,) were accorded less priority as quality criteria.

More than one hundred years after Anna Tumarkin, the proportion of women university professors in Switzerland, as in other European countries, still leaves a lot to be desired. This vertical segregation can clearly no longer be explained on the grounds of differences in the number of students, the number or quality of completed degree courses, and especially not by biological or other gender-specific predispositions. Rather, the remaining differences are attributable to historical, structural and higher-education factors and, still today, to society's preconceived notions of the roles of men and women. These factors also frequently occur in combination with each other. Such factors and causal relationships are often complex and therefore difficult to explain.

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[1] Sophia Kovalevskaya (1850-1891), a mathematician based at Stockholm University from 1884 onwards, was Europe's very first female professor. In Germany, the chemist Margarete von Wrangell (1877–1932) was appointed as the first female professor at the University of Hohenheim in 1923 (cf. Rüegg 2004). In 1909 the physicist Marie Curie (1867-1934) became the first woman to be appointed a professor at the Sorbonne University in Paris (cf. Koch 2008).

[2] Nevertheless, there are numerous known cases of women who, although outside the institutions, were active in the field of science. They also published pioneering studies back in the 16th and 17th centuries, albeit often not under their own name (cf. Koch 2008, Lind 2004, Schiebinger et al. 1993).

[3] Technische Hochschule 1871; Bern/Geneva 1872; Lausanne 1876; Neuenburg 1879; Basel 1890; St. Gallen 1900; Freiburg 1905 (cf. Einsele 1992)

[4] This relative receptiveness to women as students in Switzerland can be explained as follows: The exercise of power was not dependent on having a higher education, which meant that the social prestige that came from academic training was small, which in turn had a positive impact on the acceptance of female students. Additionally, for a long time the social structure was dominated by the agricultural sector (cf. Costas 1992).

And the fact that these issues are back on the agenda today has nothing to do with a new wave of emancipation. Rather, it is recognition of the fact that vertical and horizontal segregation need to be tackled head on. There are various different lines to the argument supporting this view (cf. e.g. Committee for Mainstreaming 2007):

- Fairness: The aim of achieving equal opportunities is essentially an ethically motivated demand for equal chances to participate. Women and men should be able to participate jointly in a critical public debate on the imminent challenges facing society.
- Democracy: The involvement of women in scientific decision-making raises the credibility of (political) institutions.
- Economy: "Return on investment" also means perceiving economic responsibility in relation to the use of (financial) resources spent also in educating women.
- Competition: In an increasingly competitive environment, all potential players must be mobilised so that both an optimum of quantitative and qualitative participation can be achieved.
- Quality of research: Diverse ideas and innovative approaches are derived most readily in an environment of opposites, contrasting approaches and experiences that differ both culturally and socially (diversity).

This is the context in which the debate on recruitment procedures in the university sector is firmly locked. As an act of self-completion, the specific processes to appoint staff are based to a large extent on the way in which the persons and institutions involved perceive themselves. It is this direct involvement that requires a correspondingly self-critical and responsible basic attitude.

This publication, made possible by the Swiss Federal Equal Opportunity at Universities Programme is designed to encourage and accompany this reflection. It is intended as a synthesis and development of the issues of the conference publication "Wer sind die Besten? Chancengleichheit im Berufungsverfahren" (cf. Müller et. al. 2007) and is also designed to make the issues accessible to an interested international public.[5]

The aim has been to place the conference contributions in an academic and historical context, and to show how they relate to (the Swiss) educational policy. At the same time, an effort is made to compare well-known facts with new information. The second part is devoted to implementation. The readers are invited to consider the individual stages in the recruitment process with a broad view and, subsequently, to link them to the political, institutional and academic instruments already established in many areas or with a view to quality assurance and development.

[5] Reference to the conference publication can be identified by the use of italics *(→ Brouns, p. 34)*

1 Facts and figures

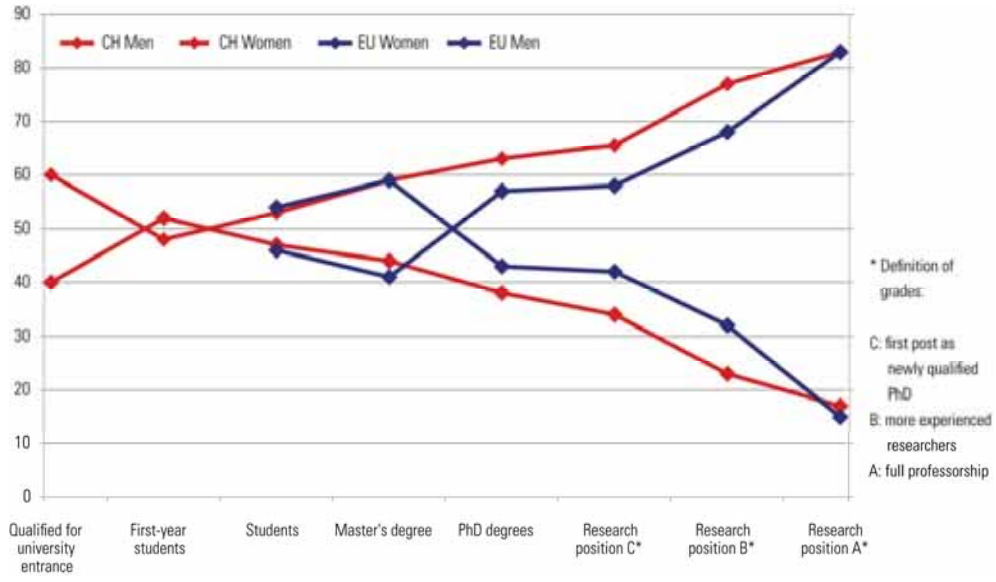
1.1 Scientific careers: Vertical segregation

Over the past five decades the proportion of women working in the tertiary sector Europe-wide has consistently increased. In terms of university students, the proportion of women is currently higher than that of men, at 54.9% for the EU-27 member states, compared with 46.0% in Switzerland (cf. Eurostat)[6]. In most countries of northern and western Europe, more first degrees are awarded to female than male graduates. The proportion for Sweden, Ireland, Denmark and Finland lies between 58.5% and 63.1%, compared with 43.9% in Switzerland. With regard to doctorates, Switzerland – at 36.9% - has one of the lowest proportions of female PhDs. This low representation at doctorate level applies across the board, with the exception of Italy and Finland. The rate in Germany, Austria and France lies between 39.0% and 41.7%. This underrepresentation of women is reinforced among researchers at each level through to full professors, of which women only account for an average of 15% in Europe.

Even if the trend in nearly all northern and western European countries indicates an increase in the percentage share of women among those completing doctorates, and a slightly slower increase in the case of professors (cf. Federal Statistical Office FSO 2008), the generally strong drop in the percentage of women from one qualification level to the next represents an enormous waste of resources. The often-used term "leaky pipeline" is a seemingly apt description of this phenomenon. It has, however, to be kept in mind, that it takes some 20 years for a person to enter university to become a full professor. A high percentage of female students thus will only appear as a high percentage of PhDs after some 7 to 15 years, depending (also) on the field. As to the percentages of female professors, these represent means of appointments of women through some 20 to 30 years and should not be compared to figures representing situations involving just one year. The observation of a cohort will/may still show a “leaky pipeline”, albeit a much less steep one.

The reasons for women to interrupt or completely abandon their academic career with an above-average frequency are manifold. In the process, they get either lost completely or to some extent as a human resource in academia that can contribute to the sharing and development of knowledge.

Figure 1 "The leaky pipeline" – The proportion of men and women pursuing academic careers in the EU and in Switzerland, 2003/2004



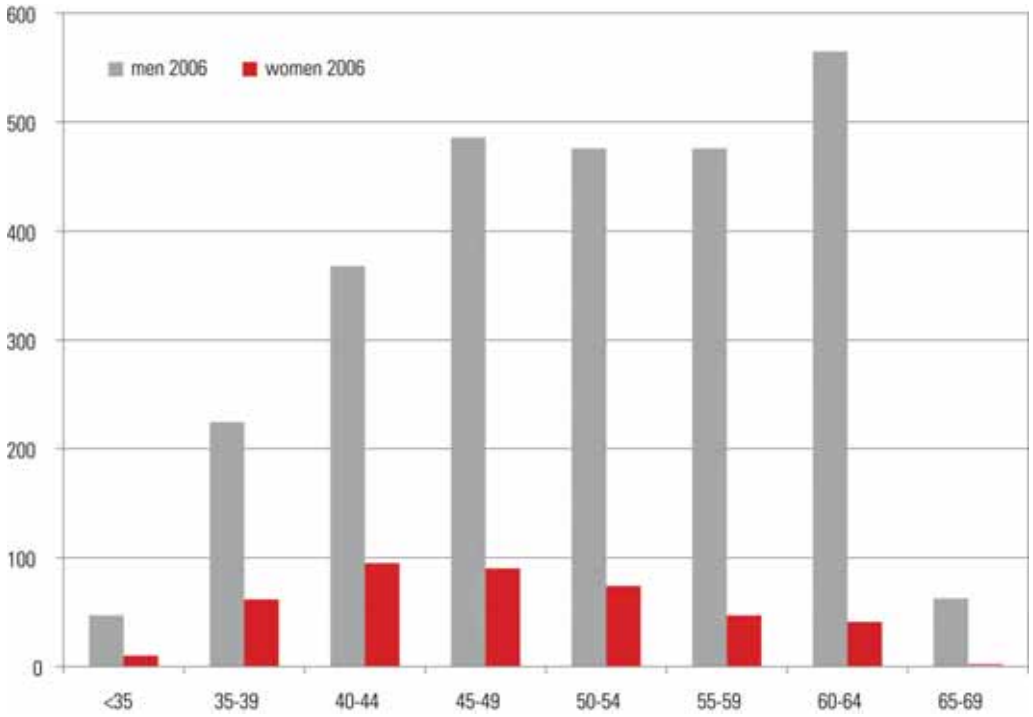
Source: Federal Statistical Office, Eurostat 2007

[6] For the purposes of international comparison, these figures include those studying at a university of applied sciences (UAS) in Switzerland and students at institutions of higher education with university status.

Will the situation remedy itself automatically, when the older generation of male professors retires? The experience of the past decade shows that this is not the case.

This is well illustrated by the current age distribution of Swiss professors: the gender gap is just as much in evidence among the younger age groups.

Figure 2: Breakdown in numbers of professors at Swiss universities by age



Source: Federal Statistical Office, 2007

So what development can be expected over the next few years in terms of an increase of female professors? According to the Federal Statistical Office, the proportion of women will rise further due to the increase in the proportion of women among students 20 to 10 years ago. It could reach 19% to 25% for professors by 2016. Factors contributing to the uncertainty include the development in staff/student ratios in the departments and future retirement rules.

1.2 Horizontal segregation and differences between universities

The generally low proportion of female professors should not obscure the observation that there are large differences between departments. The fact of major *horizontal segregation* has a significant impact: on the one hand women are strongly underrepresented in most European countries in engineering and natural sciences as well as in computer sciences, technology and architecture[7] (European Commission, She Figures 2006). On the other hand they are overrepresented in the life sciences.

In terms of subject selection, men and women appear to have a traditional understanding of their roles, which, however, also may differ according to the cultural background.

In Switzerland, the proportion of female students in universities ranges from 25% for technical subjects to 64% in social sciences and the arts. There is an even stronger divergence in the universities of applied sciences (UAS), ranging from 5% in technical disciplines and IT through to 85% in health professions (State Secretariat for Education and Research SER 2007). This uneven distribution across the different subject areas also has, of course, an

[7] In mathematics and computer sciences

impact on appointments, with significantly fewer potential candidates in the natural sciences and technical subjects than in social sciences. Generally there also is a distinct lack of female role models for prospective female “high flyers”.

There are major differences between the universities in terms of the proportion of female professors, primarily attributable to the profiles of the universities and the range of fields that they offer. The Universities of St. Gallen and Lucerne are examples of this in Switzerland: the former has a strong focus on business and economics whilst the latter has made a name for itself in the cultural and social sciences. Both of these aspects have an effect on the respective proportions of male and female professors – few in St. Gallen and more in Lucerne.

At an international level, a high proportion of women in natural sciences is a strong priority of the European Commission.[8] As part of a comprehensive, long-term framework programme, three objectives were defined by the European Commission in 2005:

To deepen the debate on science

To deepen the knowledge basis on relationships between gender and science

To improve monitoring of gender-related issues.

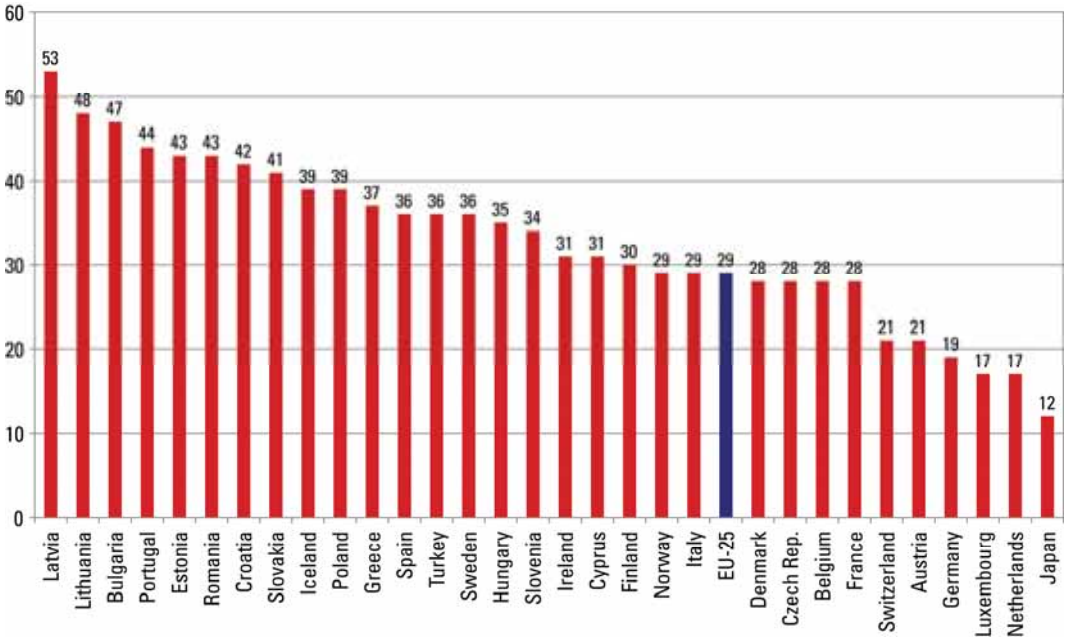
Numerous projects have been set up in this context. These include the support of the Helsinki Group as an active network group between individual nations and the European level, or the compilation, processing and presentation of data broken down by gender, known as “She figures”. Gender mainstreaming was also stipulated as a fundamental principle in the framework programme and called for in conjunction with the ETAN Report concerned with criteria of excellence, particularly in the context of the corresponding assessments and access to networks (European Commission 2008).

[8] Since the European Commission's "Women and Science Action Plan" in 1999, gender issues have been an important aspect of European research policy both in the European Parliament and, to an increasing extent, in the national bodies.

1.3 Female scientists working in research in Europe

The figures for the proportion of women among researchers reveal major differences between individual countries. This should be considered with regard to the respective historical and educational policy backgrounds.

Figure 3: International comparison of percentage of female researchers; public and private sector, 2003



Source: European Commission, She figures 2006

Considered in its entirety, the situation in terms of European education and research is informative to the extent that the low proportion of female researchers also justifies corresponding political measures at an international level. Looking at the period from 1999 to 2003, the fact that there was a 2% increase for male and a 4% increase for female researchers is certainly an encouraging trend. However, there is a clear need for action in terms of promoting up-and-coming researchers overall. If such efforts are not being made at a European level, they are unlikely to have a real impact (cf. Section 2.2.).

1.4 Measures in Switzerland: the Swiss federal equal opportunity at universities programme

The new Federal University Funding Act[9] came into force in Switzerland on 1 April 2000. Under the heading "Tied Contributions", this act created the legal basis and means whereby joint initiatives on the part of the Confederation and the Cantons with their own universities could be supported.

Now into its third round, the Swiss federal equal opportunity at universities programme (2000-2003; 2004-2007; 2008-2011) represents a common effort. Those interested and/or involved in higher education – equality experts and politicians alike – have recognised the urgent need for action in the area of gender equality at universities and developed and/or supported a four-year action programme comprising three modules[10]: The three complementary modules are at the heart of this programme:

Module 1	Incentive system "Female professors"	*Bonuses as incentives for the hiring of female professors:* The individual universities are paid a bonus per newly appointed full or associate female professor. Although these payments are not tied, all of the universities concerned have thus far allocated the funding to equal opportunity of women and men or gender studies projects.
Module 2	Mentoring; Support for female junior researchers	*Advice and networking support (also across different universities):* Organisation of projects to support junior female researchers; mentoring programmes and a wide range of courses and workshops; setting up databases, organising information and awareness events, etc.
Module 3	Childcare making an academic career reconcilable with family life	*Structural support measures:* Creation of new and extension of existing childcare facilities at all universities. A project to support dual career couples (DCC) is also due to be launched at Swiss universities.

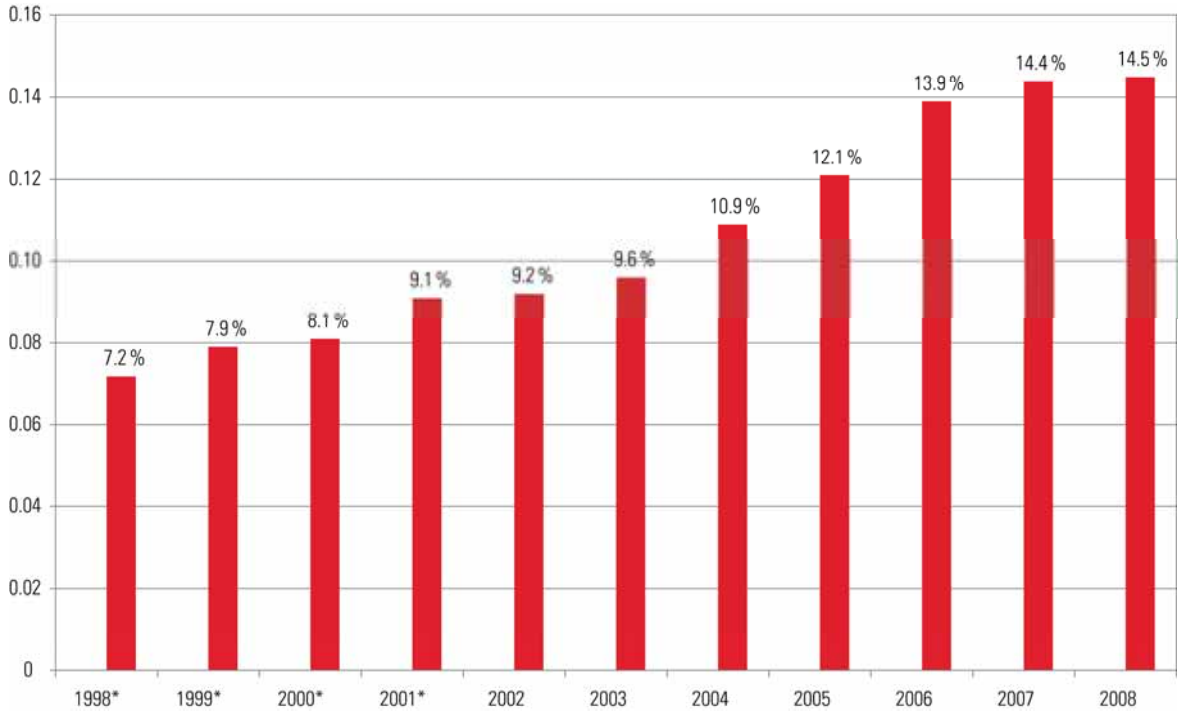
As part of modules 2 and 3, the universities receive a flat rate and basic amounts in the form of tied funding. Competitions are also held for the funding of individual or cooperation projects.

The main objective of the first two periods of the equal opportunity of women and men programme was to increase the percentage of female full professors at universities, the aim being to raise the proportion of women from 7.2% in 1998 to 14% by the end of 2006. This goal has been achieved.

[9] http://www.admin.ch/ch/d/as/2000/948.pdf (SR 414.20)

[10] http://www.crus.ch/information-programme/chancengleichheit.html

Figure 4: Proportion of women among full and associate professors with >50% permanent employment at Swiss universities (exclud-ing ETH's/Federal Institutes of Technology) 1998 - 2008



Source: CRUS, Federal Administration's "Equal Opportunity at Universities" Programme 2008
(*FSO data: slightly different criteria)

The assessment of the two programme periods completed so far (2000-2003 and 2004-2007) provided further encouraging results (Bachmann et al 2004, Spreyermann & Rothmayr 2008):

- The programme is being widely accepted, and the issue of gender equal opportunity of women and men is on the agenda at all management levels in higher education, e.g. by providing a common link between very different universities.
- New impetus is being lent to the support of junior female researchers, particularly thanks to the opportunity for the development of and the experimenting with various products and services. Case studies on the mentoring programmes are suggesting ways in which such activities can be taken further.
- Gender equality units at universities were installed or/and expanded and national link-ups and cooperation promoted. This has been driving forward the process of raising awareness about gender equality.
- It has become easier to achieve a work/life balance through the creation and expansion of a diverse range of childcare facilities. Now the universities are also showing greater commitment to other more family-friendly policies. A further step in this direction will be measures to support dual career couples (DCC).
- The monitoring process is providing a view of Switzerland as a whole. As well as boosting competition, this also promotes cooperation and the transfer of good practices. Increasingly, efforts towards gender equality are becoming a mark of quality of a progressive higher education policy.

With regard to recruitment procedures on a professorial level, the Swiss federal equal opportunity at universities programme has encouraged debate about appointment practices in universities particularly in conjunction with Module 1 *(→ von Salis, p. 14 et seq.)*.

In terms of its form and objectives, the Swiss federal equal opportunity at universities programme has assumed a pioneering role in Swiss higher education. The incentive system of Module 1 – in conjunction with the other two modules – has created an instrument for tackling the different levels of the problem of under-representation of women in senior academic positions. This was done in a somewhat provocative manner by raising awareness

with Module 1, through gender-based support for junior female researchers (Mentoring, Module 2) and by taking into account some basic structural parameters such as childcare with Module 3.

This programme has set a benchmark in Switzerland with regard to the urgently needed institutionalisation, professionalisation and coordination of equal opportunity activities in the university sector.

2 Science, female scientists and the excellence debate

2.1 The need for women to be involved

In today's era of globalised competition, education – and science and research in particular – have a key role to play. The term "knowledge society" is being frequently used in debate at the national and transnational levels on the need for more research as well as on the optimisation and harmonisation of educational systems. Many different measures have been introduced to train or educate and recruit the available human resources for the requirements of our present society. If the European Higher Education Area as defined in the Lisbon Strategy is to become a reality, an additional 700,000 researchers will be needed over the next few years![11]

The "leaky pipeline" referred to in Section 1.1 represents a certain brain drain of women and in the area of research in general. With this in mind, the European Commission, with regard to the Fifth Framework Programme for Research and Technological Development (1998-2002), called for the greater involvement of women in science. Its reasoning was that an increased participation of women in all areas and at all levels of science would contribute to the further improvement of quality and speed of scientific progress. This, it was argued, was also in the interests of democracy (European Commission 1999).[12] Further initiatives followed at the European level such as, in 2001, the report from the ETAN expert group "Promotion of excellence in science through gender mainstreaming", the 2002 report of the Helsinki Group "Women and science in Europe – National Policies",[13] and the 2005 recommendations of the Commission on the European Charter for Researchers and a code of conduct relating to the hiring of researchers.[14]

Innovation – a concept often associated with this global process – is an expression of the need for impetus but also of the belief in a furthering of wealth and the overcoming of current problems, such as those of a social or ecological nature *(→ Landfried, p.24*). Diverse socialisation backgrounds and cultural roots may lead to a broader range of questions, proposed solutions and approaches. "Innovation" remains an important criterion in the competition for research funding. This similarly applies to network interdisciplinary and transdisciplinary research (cf. European Commission 2005). Women provide a key contribution to such innovation and networking processes. Their creative involvement in research as well as in planning and decision-making processes – on an equal footing with their male counterparts – helps bring about greater and/or faster social progress.

Thus the reasons why women must be strongly involved in science are not just ethical ones concerning human rights and social justice. They also relate to increase quality, innovation and to promoting efficiency in science in general (cf. European Commission 2006). If the proportion of women occupying senior positions in science is to be increased quickly and sustainably, however, measures to support junior female researchers will not suffice. Rather, recruitment policy must be critically reviewed and overhauled.

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[11] Cf. for example "More women scientists needed in Europe, Women's rights/Equal opportunities" 15.4.2008 (press release): http://www.europarl.europa.eu/news/expert/infopress_page/014-26455-105-04-16-902-20080414IPR26454-14-04-2008-2008-false/default_en.htm

[12] http://europa.eu/scadplus/leg/de/cha/c10930.htm (10.5.2008)

[13] All relevant documents can be viewed here http://www.cordis.lu/improving/women/documents.htm

[14] http://europa.eu/eracareers/pdf/am509774CEE_EN_E4.pdf

2.2 Where have all the female scientists gone?

The question of what causes female scientists to turn their back on academia is as topical as ever, and today decision makers in higher education are increasingly interested in and searching for the answer.[15] The problem is included, entirely in keeping with current needs, in the discussion on a sustainable way of supporting junior researchers.[16] Simple answers to the question of how to keep women in academic careers cannot be expected, but it is worth reflecting on the issues – in the interests of effective measures if nothing else.

For more than thirty years, the area of research "Women and science" has branched out in many directions with regard to methodological approaches and content. Lind (2004) described the results of research that were still, even in the 1960s, questioning the ability of women to carry out scientific work, and pointed to the turnaround that has been achieved in this regard. Nowadays, in contrast, the tendency is for a lack of equal opportunities in science to be denied. Causes are to be seen as originating in the different socialisation and in problems associated with reconciling work and other aspects of their lives, which prevent women from pursuing an academic career. More recent studies focus on science itself and consider there to be negative effects in the sector itself as far as women's careers are concerned. Thus, there are presently two different research threads. Reasons for the low proportion of women are considered to be related to individual situations by some, whilst others seek the answers in structural areas. Both reasons may, however, apply depending on the national and/or societal circumstances.

It is indeed possible to observe that women are often less determined than men in pursuing an academic career or, at least, over the longer term consider other life or career choices, or actually pursue these on a temporary basis. This emerges in professional biographies as a kind of "detour" or types of “time out”, in which different sorts of experiences are accumulated. Issues relating to children and, very frequently, a dual career partnership, also fall into this area. In other words, women who are in a partnership find that the problem of reconciling their own career with that of their partner’s is a dominant one. In many cases, women adapt themselves to their partner's professional opportunities and their own career is made less of a priority than the relationship and/or the real or assumed needs of children (cf. Schiebinger 1993, 2008, Swiss federal equal opportunity at universities programme 2008).

The structural aspects that can be listed as factors hindering women also include, crucially, the academic system itself (cf. for example Costas 1992, Krais 2000, Leemann 2002, Lind 2004). As universities were opened up to women, those structures and traditions that had been adapted well to the life circumstances of men and that were dominated by men were not questioned but simply taken over. They are still primarily determined, appreciated and dominated by men who experience and define them as “normal”. As also pointed out by the European Commission in 2000 and 2008, the result is that the academic system is not a neutral one. As career paths and traditional criteria are based on the conventionally male system, other life paths, different focuses and unconventional scientific questions tend to be excluded. It is not uncommon, that such heterogeneous pathways lead to such a subsequent decision for a professorship or to combinations of subjects that do not fit in with conventional patterns. Both aspects attract attention during the process of applying for a professorship, provoke questions and awaken quite general fears with regard to professional aptitude and availability which – rightly or wrongly – are still associated with the career of a scientist, male or female.

There are of course correlations between these two threads of the argument, which, ultimately, can lead to women leaving the academic sector.

The recognition of women's performance is therefore subject to subtle defence mechanisms or even just scepticism, which needs to be identified. It is clear that bottom-up strategies alone are not enough. It is only when structures and traditions, systems and even the "holy cows" are contested, that anything fundamental can be

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[15] A study commissioned by the Swiss National Science Foundation on Gender and Research Funding will also highlighten this lack of female researchers: First by the quantification and description of gender-specific losses in scientific careers, the other is the analysis of the significance of both internal and external factors in science on gender-specific loss rates. The results are expected for November 2008 (www.snf.ch/E/services/femaleresearchers/Pages/default.aspx)

[16] A recent "Federal Report on support for junior researchers" (BuWiN) deals with the development to a higher education issue entitled "From the promotion of women to an equal rights policy – supporting young female junior researchers" (Federal Ministry of Education and Research, Bonn 2008).

changed. In other words progress can only be made once the issue of gender equal opportunities has been moved to the top of the agenda *(→ Landfried, p. 22 et seq.)*.

This also shows that, for example, support programmes for women, or the revitalised proposal that quotas be introduced or the call for childcare for female academics' children are not in themselves enough (cf. Federal Ministry of Education and Research BMBF 2008).[17] Obviously, various different specific structural support measures are required as well. In terms of the gender-sensitive filling of positions, however, there is more at stake, namely the definitions of quality and the validation of achievement.

2.3 The search for excellence in recruitment procedures

University appointments take the form of exceedingly complex personnel recruitment processes (cf. e.g. Leemann 2002). Shrouded in secrecy, highly traditional and complex, these processes to obtain new personnel are the expression of carefully guarded university autonomy and scientific independence *(→ Ries, p. 12)*. The current situation in higher education is one of competition. Academics need to make a name for themselves and yet still cooperate with colleagues. For this reason, personnel decisions are crucial in that they can have far-reaching financial and, even more importantly, academic consequences. Reference is often made in this context to the concept of *excellence*. In the broadest sense, this increasingly popular concept, which nevertheless has not become any clearer, can be described as an expression of particular quality. So what does this mean in practice for science? Which specific criteria are used to measure this particular quality? Which discussions and images are associated with such a rating of quality?

In the context of science, the term would at first appear to be impossible to misunderstand. It refers to the quality of a performance, it is a superlative. So if universities are seeking excellent researchers, it simply means that they are looking for the best.[18]

Any assessment, however, is based on a particular understanding of values. The common processes used to assess quality and "excellence" are not, however, gender-neutral (cf. European Commission 2000, 2005). This is not to say that being of one gender or another is sufficient for exclusion as a candidate, but that the use of diverse criteria means that women often have less chance of being recruited. This essentially has to do with the fact that gender stereotypes and perceived roles can have a major impact on the decision-making process, even if the decision-makers are not conscious of this effect *(→ Carvalho-Arruda, p. 49 et seq.)*. This is also the view behind a motion presented to the European Parliament to the effect that "culture and a cultural understanding of 'research', 'good research', 'excellence' and 'innovation' may impede women's careers in science" (Committee on women's Rights and Gender Equality 2008, Draft report on Women and science 2008, p. 5).

In addition to the number and location of publications as an apparently transparent criterion (see following section), numerous other criteria are also used to assess excellence. The following list, which in no way claims to be exhaustive, provides an initial impression of how excellence can be understood. Additionally, the questions that (should) arise when determining the relevant criteria, as well as possible sources of these criteria, are listed.

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[17] *"Die Quote für Frauen in der Wissenschaft wird salonfähig"*, is the headline of Duz Nachrichten 04/08. The article is based on the call made by the Austrian Research Ministry to introduce a quota of 40% for women in university bodies. It is not possible to go into the discussion on the usefulness and application of quotas in further depth in this document.

[18] Not every appointment will lead to the university in question finding a Nobel Prize winner. To this extent, the term "excellence" – if it is to be used at all – should be understood as meaning "the best candidate (male or female) for this position at this university". This makes it clear that "the best" are only excellent with regard to a particular combination of qualities, which must be redefined for each chair on the basis of specific criteria.

Criteria for excellence	Related questions	Sources
Quantity of output (publications)	Where published? Which texts will be counted and weighted and how will they will be counted and weighted?	Citation index; publication lists
Quality of output	What criteria are used to compare quality? Who assesses which candidates? Are there "impartial" external reports?	Peer reviews; reading in the appointment committee, external expert reports, lists of criteria
Citation rate*	Have also all future-oriented and innovative essays been considered?	Additional research into citations
Relevance and topicality of research	How is this assessed? How are trends weighted?	Institutional and/or research-based structural or profile requirements
Creativity, innovative character or research	When is something innovative and when exotic? Who assesses this?	Compare with existing specialist knowledge
Interdisciplinarity	What does this mean in practice? What is expected?	Cooperation already in place; projects
Success in competitions/awards	Where does the information on this come from?	Provided by applicant, research
Teaching skills	What are relevant teaching skills? How should these be measured?	Trial lesson; list of criteria with priorities; evaluations
Teaching and learning methodology	What is expected and how is it measured?	Trial lesson; list of criteria with priorities; evaluations
Managerial skills	How should these be defined? Who decides? How are they determined?	References; discussion with candidates (e.g. understanding of management)
Success in acquisition of funding*	How are information and success determined?	Questions to candidates
Involvement in networks	How are informal networks covered in particular?	Question to candidates
Team skills	How are these established and how are they reviewed?	Possibly evaluations, references
Experience in self-management, committee work	What is understood by this? Is it systematically investigated?	Questions to candidates; research
Managerial skill*	Who determines the corresponding criteria (understanding of management)?	Evaluations; possibly external assessments (??)
Experience abroad	To what extent is this important for the department? Context to career?	Application documents; discussion with candidates
Language skills	How important are these compared with scientific requirements?	References; publications, discussion in foreign languages
Experience outside field of science	Areas of interest? Why?	Discussion with candidates
Previous positions on reserve list	How relevant and telling are these?	Application documents; question to candidates

** (→ Henne-Bruns, p. 26 et seq.)*

During recruitment processes, criteria often come into play that lead to a view being formed during the conversation or on the basis of the application documents:

- Age
- Background (in the sense of academic background often "schools")
- Availability with regard to current position and other ongoing processes.
- Willingness of the family to move
- (Political) Background and/or religious views

Of central importance, however, is the question of how the criteria listed above are weighted, these being a heterogeneous mix of criteria and some of them being applied unconsciously. Similarly, different criteria are often combined and mixed up. What is important, therefore, would be to install a process as transparent as possible in the commission but also towards the candidates (cf. also European Commission 2008).

2.4 Myths and scientific findings

"We just want the best person for this course, this institute, this university - whether this is a man or a woman is completely irrelevant to us", is a frequent response to the question of how important gender is as a selection criterion when filling vacancies. In contrast, it is frequently declared or even set out in writing that in the event of a man and woman having the same qualifications the position will be given to the female candidate, given that raising the proportion of women professors is a justified concern.[19] The only problem remains: who decides that the qualifications held by the two candidates are of equal value, what criteria are used to make such a judgement and how are they weighted?

The view that recruitment processes are generally impartial is contrary to the fundamental concept of self-completion. This traditional approach, albeit one that often involves new procedures, is based on an understanding of science leaves the definition, design and further development of scientific findings to science itself. Thus science itself defines what is relevant. Nowadays, in cases where strategies and profiles are jointly determined by policymakers, the description of positions and the recruitment of personnel are still primarily the responsibility of the academic bodies within the individual universities, departments and faculties. Given current personnel resources, these are dominated by men. Empirical studies on methods and criteria for the measuring of excellent research also reveal that these are not gender-neutral. Traditional selection processes – primarily designed by men for men – pay too little attention to interdisciplinary aspects or newer research threads. Any methods outside the mainstream are barely recognised. Excellence is attributed first and foremost to those persons with a high quantity of publications to their name, who are integrated into known networks and who have a perfect or "normal" career path behind them *(→ Färber, p. 33 et seq.)*. A particular problem lies in the lack of transparency in recruitment procedures in general and the lack of gender expertise in the corresponding bodies in particular (cf. e.g. European Commission 2008).

Three particularly critical issues with regard to the effects of gender bias will be briefly considered here in more detail: the peer review system, publication rates and networks.

The peer review system

Recognition in the scientific community is gained, above all, by those who are held in positive esteem by their colleagues. It is clear that in the case of this central evaluation tool, women suffer disadvantages more frequently than men and thus receive less recognition for their scientific work.[20] Even at the stage of the commissioning of expert reports by the appointment committee, the results are influenced (→ *Färber, p. 38*). As, for example, Budden *et al.* (2007) was also able to show, writing for the "Behavioral Ecology" journal, a double-blind review, in

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[19] The Federal Administration's "Equal Opportunity at Universities" Programme, according to the evaluation report, has also made its contribution to raising awareness of recruitment procedures (see: Ruth Bachmann, Christine Rothmayr, Christine Spreyermann: Evaluation Bundesprogramm Chancengleichheit von Frau und Mann an Universitäten. Bericht zu Umsetzung und Wirkungen des Programms 2000 bis 2003, Bern 2004 • (Schriftenreihe BBW 2004 / 1d (pdf), p. 11, 93)

[20] Bornmann, L. (2007) confirms such results in different studies about the gender bias in the peer review system.

which neither the author nor reviewer is named, leads to a clear rise in the number of contributions from women. In 1997, Wennerås und Wold published the results of their study on expert reports in *Nature* and met with wide recognition. Closer examination of the parameters for scientific expertise reveals clear disadvantages for women. Additionally, however, gender and a work-related link to a committee member contribute to a positive assessment.[21]

Publication rate

There is indeed a difference between men and women with regard to the number of publications. There are various explanations for this difference, covering a diverse range and also therefore being referred to as the "productivity puzzle" (Symonds *et al.* 2006, p.1). It was shown by Symonds *et al.* that women publish less than men but are cited more frequently. Additionally, women seem to publish less at the start of their careers in particular, but catch up over time in terms of quantity. Nevertheless, it is the quantity that determines success during the application process, as also proved by a study looking into the reasons for the lower success rate experienced by women with regard to the award of long-term fellowships (Ledin *et al.* 2007, p. 982 et seq.). This reveals that even when the information on whether the applicant is male or female is hidden, women are considered inferior because they have a lower publication rate. According to this study, this discrepancy can be attributed to the fact that women are more likely to adapt their career in line with their partners (who will frequently be similarly qualified but older), whilst also having greater teaching commitments, whilst male applicants take up higher positions and receive more grants. Women are also more likely to take a career break and work less due to childcare commitments, which in some but not all cases has a negative impact overall on productivity and competitiveness. This heterogeneous picture of scientific findings with regard to publication rates recorded by women should at least qualify the absolute nature of this criterion. Quantity is not synonymous with quality, and a smaller quantity does not necessarily point to childcare duties. It also appears that the publication rates differ very strongly among individual fields and departments.

Networks

Before women were first allowed into the world of science, men had long since established networks – the likes of the old boys' networks. These networks continue to be significant. Gender stereotypes and perceived images of roles on the one hand, and established practices on the other, work against women and make it difficult for them to access these often informal groupings, which are highly significant in conjunction with the filling of senior positions (cf. European Commission 2008).

Two essentially different approaches offer themselves in this regard. On the one hand, women can set up their own networks such as the Business Professional Women (BPW) network for self-employed professional women or the Association of Female Academics[22]. However, it is not just networking among women themselves that is important, but also taking part in men's networks, the effect of which is the most marked in the specialist world of universities, for example with regard to accessing journals. "Making a name for oneself" does not have to mean being pushy, but involves presenting oneself in a self-assured way so that discussion can ensue. Women should in no way underestimate the value of informal contacts and should devote time to this area.

[21] They were concerned, in particular, with the granting of post-doctoral awards by the Swedish Medical Research Council (MRC), one of the major institutions funding research in the area of biomedicine.

[22] Example: http://www.bpw-international.org/ or http://www.unifemmes.ch/DE/network.fifdu.php; numerous other professional associations for women.

3 Recruitment procedures in specific detail

At universities, the process of appointing professors is basically a system of self-completion. Specifically, this means that vacant or new positions to be filled for the first time are designed in the department itself. In this regard, the selection process in the science sector differs from normal forms of personnel recruitment. As a general rule, this specific work is delegated to appointment committees convened on an ad hoc basis that implement the process through to the proposal of one or more candidates. These proposals are then submitted to superior bodies (e.g. faculty meetings, senate, university council, government) where the decision is made by the academic and political management bodies. The appointment negotiations are generally handled by the vice-chancellor's office. The precise procedures and responsibilities vary greatly within Switzerland as in neighbouring countries and are also dominated by institutional traditions. Differences exist not just in the procedures themselves but also concerning the statutory rules with regard to the allocation of responsibilities between political and academic players. The following is a breakdown of the individual steps in an idealized recruitment process. The descriptions include reference to those elements that could make the process as a whole gender-sensitive.

3.1 Reappointments, new appointments: Structural and strategic issues

In the event of a vacancy or newly created chair, the profile and future job description of the professor are defined. This generally happens on the basis of overriding structural or development plans for the university and/or faculty, together with the department concerned. It is also often the case that a separate structural committee deals with such issues. Even in this initial phase, key markers are set with regard to the chances of a woman being appointed:

- The job description is defined in such a way that it is as open as possible yet clear at the same time. There should be a discussion as to whether there are women who meet the required profile. A written justification of the intended profile is often good for clarification purposes and therefore desirable for the subsequent stages in the process.
- The advertisement of the job should contain an explicit appeal to women to apply for the vacancy. This also expresses the fact that equal rights issues are a quality criterion at the university.
- The professor category is determined and the various options are discussed. This is done to keep the range as broad as possible. Discussion will also centre on whether the post can be divided up (e.g. job sharing arrangement or part-time professorship). This is an area in which there is often a need for new experiences and a receptive approach to innovative models. Presently part-time professorships are possible at all Swiss universities.
- One issue with regard to specialist skills relates to interdisciplinary access. This is another area in which openness towards new scientific issues and approaches is required on the part of the committee preparing and managing the process.
- During this phase a decision is made on the location and breadth of the advertisement and possibly also on permitting direct appointments or personal invitations to apply for the post. This requires a transparent discussion within the committee.

3.2 Use of an appointment committee

The appointment committee is generally set up by the faculty. A balanced mix of men and women with regard to those members entitled to vote is certainly desirable, but is often not possible to realise in practice if there is a small number of women professors available. In any case, the carefully designed composition of the committee facilitates the work to be done at a later stage.

- At best, a female professor can be consulted on specific topics and/or relieved of other duties.
- The inclusion in the committee of an expert in gender equality is desirable.
- The search for external experts should be carried out as an intensive process.

- With regard to the composition of the committee, attention is paid to ensure diversity in terms of status and gender, as well as to ensure that voting rights are allocated appropriately.

3.3 Application period

During the period after the position has been advertised, information is provided to potential candidates. In many cases, people are made aware of the vacant position by informal means. The approach to be followed should in this case be clarified in advance in the committee. Transparency towards the members of the appointment committee is the key priority.

- If direct enquiries are planned, women should also be specifically asked.
- The contact person responsible for providing information will be named and the role of that person in disclosing further information discussed within the committee. In any event, details should be provided with regard to who has contacted this person.
- During this phase, the issue should also be resolved of when and in what way the entire application files can be inspected.

3.4 Initial selection

Initially, an overview of the applications received is drawn up, generally in the form of a synopsis. It is also worthwhile to note how many applications have been received from men/women. The proportion of women should as a general rule not fall during the course of the recruitment process. Generally, at this stage, the first rough selection is made. Those candidates who do not meet the formal requirements are eliminated at this stage.

- Prior to the individual applications being discussed, the criteria must be clarified, supplemented and detailed. These are based on the advertisement, are negotiated during the discussions and then stipulated in terms of quantification and priorities. The criteria should be completely unambiguous, to the point and convincing. The committee should always bear them in mind during the selection process.
- The candidates are often categorised at this stage. Criteria and reasons for excluding candidates are adhered to. Generally, an official record is drawn up.
- What follows is the selection of those persons whose academic profile should be studied in more detail and from whom written work is requested. The requirements made of the pieces to be submitted are clearly formulated.
- The texts are allocated. Any personal or professional links to individuals must be disclosed and the motivation for acceptance of an expert report clearly set out.

3.5 Selection to shortlist candidates to be invited to attend interviews

Discussion of the individual candidates is normally based on the submitted written work and applications. It is then a matter of selecting candidates to be invited to give a trial lecture.

- The expert discussion of the submitted pieces is limited to aspects that can be reviewed and to evaluations stipulated as criteria.
- Special attention is paid to particular research traditions or "schools". It is frequently the case that candidates are allocated to a particular direction all too quickly. It is worthwhile ensuring that no candidate is eliminated too quickly during this phase.
- Any aspects that deviate from the criteria must be presented and highlighted as such. Gender-specific issues are tackled consciously and carefully.

3.6 Trial lectures

Trial lectures are generally held in public and end with a discussion between experts and candidates. After further discussions, they lead to the formulation of a proposal/ranked shortlist.

- The requirements made of the candidate in terms of content, timeframe, target audience etc. are absolutely identical and unambiguous.
- Also at this stage, it is important for the evaluation criteria and their weighting to be dealt with in advance in the committee.
- Equal treatment of all candidates during the presentation and subsequent facilitation is guaranteed.

3.7 Interviews

Following the trial lectures and plenary discussion, interviews are generally held, at best with representatives of the non-professorial teaching staff and the students in attendance, too. The aim of these interviews is to enable the candidates and representatives of the university to get to know each other a bit better and to resolve important issues with a view to a potential working relationship.

- Prior discussion within the appointment committee of the procedure and key questions for the interview is a useful stage.
- The atmosphere is relaxed, friendly and professional, and equal treatment of all candidates should be the overriding concern. This particularly applies to questions of family status and organisation (should this crop up during the interview).
- References may be made to the issue of equal opportunities or gender studies so that the candidates are aware of this as a quality feature of the university and to enable them to position themselves in this regard.
- It is important that the candidates are given scope to gain personal impressions and ask questions, and time to talk about how they envisage their future role with regard to the required profile and the prospective colleagues.

3.8 Consultation, decision-making, reporting

The deliberations of the appointment committee result in a shortlist or a proposal, submitted to the selection committee or faculty. Achieving objectiveness and transparency are the key priorities.

- The various different skills (specialist, teaching, social) are carefully balanced against each other and considered in relation to the required profile.
- The members of the appointment committee justify their comments. Any outstanding issues and uncertain areas are voiced.
- Criteria for eliminating candidates are based on fact and can be understood in relation to the list of criteria.
- Personal and subjective preferences must be kept clearly in the background.

The appointment report should be a joint report on the part of all of the members of the committee and any divergent options should be disclosed in the document itself. It is also worthwhile for the process to be recorded in terms of figures with regard to equal rights controlling.

4 Instruments and procedures

To make existing recruitment practice generally more transparent and objective, the involved people have to ensure sufficient attention to the implicit effects of gender in the various phases of the process. Different measures are required at various levels over and above the recruitment process itself and in conjunction with the process. Entering into a constructive dialogue on equal opportunities for men and women requires the basic willingness and support of those with political and managerial responsibility *(→ Suter, Drack, Luminati, p. 57 et seq.).* On this type of political basis, various instruments and procedures to secure gender equality equal can be introduced at the level of the organisation itself and within its structures and processes. A key aspect, however, remains their incorporation into the scientific level: the topics of segregation, excellence issues, innovation and an interdisciplinary approach require reflection – also with regard to the issues around gender differences.

4.1 Political level

Target and performance agreements are part and parcel of how universities are managed. Whether gender equality is picked out as central theme in terms of scientific output, teaching, personnel policy or corporate culture is ultimately not relevant. Realising equal opportunities in practice crucially depends on the political will for change, and is dependent on the appropriate measures being introduced and supported. The importance of leadership in this regard should not be underestimated! Ultimately, the sequence of the areas concerned is not important either - each institution has its own customs, challenges and approaches, as well as specific opportunities. In one university, for example, the first step could be setting up childcare places for the children of university staff, whilst mentoring might be introduced at another institution. Elsewhere the introduction of gender mainstreaming might be discussed.

Quality standards form part of management, providing reference points. When it comes to the issue of quality, everyone has their own idea of what the concept means. Consensus must be reached in this regard during the recruitment procedures. This means that transparent discussions must lead to a consensus on what is understood by quality for a particular position. A general reference point, however, is an institution's commitment to work towards realising equal opportunities. Whether this is reached at a statutory level, by using a code or by following a model is, again, not important. As a reference point in a recruitment procedure, this can be a discussion point that generally reveals a great deal about the candidates. What is the candidate's view on equal opportunities, on support for up-and-coming female scientists and on incorporating gender assets into course content? What track-record do they have in these aspects?

Monitoring is carried out at every university in one way or another. Key figures are important benchmarks of quality and success, and can be used for management purposes. In terms of equal opportunities, some basic parameters have been drawn up in this regard.[23] By way of example, reference is made to the key figures prepared in conjunction with the Bologna reform and their most divergent effects on students. Figures broken down by gender provide a wealth of information and provide a basis for differentiated analysis. The development of the proportion of female professors, which became the focus of greater attention as part of the Federal Administration's "Equal Opportunity at Universities" Programme for example, offers opportunity for analysis and, in some cases, corresponding measures.

4.2 Organisational and structural level

The university, as an autonomous organisation, may present itself more or less gender-sensitively at the level of a legal basis or a model, but also in the design of its personnel policy, continuing education and, in the broadest sense, the creation of a particular corporate culture. Possible ideas in this respect include, in brief:

- Gender mainstreaming: Design conceptually – enshrine politically – implement institutionally.
- Devising equal opportunities guidelines or a code. Declaring this to be binding at the institutional level and ensuring that the word spreads.

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[23] Available in English, French and German: http://www.crus.ch/die-crus/koordiniert-harmonisiert/projekt-bologna-ects/bologna-ects-in-der-schweiz/dokumente/chancengleichheit.html?L=0

- Recruitment procedures: Using checklists, having reports produced and discussing processes in various different bodies.
- Incorporating gender expertise into political and strategic decision-making: Considering all effects on men and women at all times when making decisions.
- Offering continuing education for professors and other members of staff (as general topics e.g. communication or in the form of specialist subjects such as gender studies, appointments etc.).
- Information and communication on the reasons and aims of institutional equal opportunity policy in various different bodies (incorporation of university management and experts).
- Composition of bodies and committees: Actively working towards balanced distribution.
- Creating structures for all employees that enable the professional and private level to be connected in a sensible way.

4.3 Scientific level

At the level of science, it is primarily measures in the areas of supporting young scientists and mentoring that are proposed. Additionally, the departments own understanding of science and its positioning within the scientific community should be clarified.

- At the organisational level, a coherent and binding policy for the promotion of junior researchers should be formulated containing specific aims in relation to the promotion of women.
- Mentoring programmes should be set up/the possibility created of enabling women to take part in cross-institutional or regional mentoring programmes.
- Debate should take place on specialist excellence and on the strengths and weaknesses of the department concerned.
- Gender studies should be supported and integrated in all fields including new ones such as nanotechnology, safety, etc.
- Encourage more women to engage in the technical disciplines.
- Make good practice highly visible!

5 Conclusion

In their search for the best candidates, appointment committees are faced with the challenge of measuring the most diverse range of candidates against criteria that – as described above – cannot be absolute benchmarks. The question of their ranking, weighting and precise definition is a central theme throughout the recruitment process. The members of the committee must generally give up any hope of the best candidate being easy to recognise soon after the beginning of the selection process. Impartiality must be tackled in a similar way. Whether the applicant is known in expert circles or not, committee members – and that also includes external experts – bring their own ideas and values to the table, as well as firm beliefs and positions from their own professional or personal background. Together with the application documents, the career path described in these and the listed written works, pictures emerge of the applicants, and these pictures are supplemented, confirmed or turned on their head during the candidates' trial lectures and personal interviews.

It is therefore clear that the declaration of intent to give the underrepresented gender preference in the event of the same qualifications is by no means enough. Closer examination of the recruitment process from a gender issues perspective offers the chance to find out about such blind spots dominated by preconceived ideas of each gender's role.

From the universities' perspective, the aim is to use a formally correct process to propose the person who is best suited for a particular position – a defined professional and personal profile, an existing group of colleagues or a specific university environment. They are looking for someone with charisma who will contribute to the reputation of the university as a whole and who can hold their own in competition with other universities.

The current educational debates at national and international level support the focus on independent profiles. The increased involvement of women contributes to excellence – exciting research projects and sustained teaching – and to innovation and is therefore in the interests of higher education institutions and the policymakers.

Recruitment procedures are chances AND hurdles in an academic career. Men and women approach these chances and hurdles differently. Even if there appear to be more alternative professional routes for women than for men, scientific development urgently needs research by (and for!) women. Women, male and female decision-makers at all levels should be made fully aware of this.

The focus here on recruitment policy was intentional. However, the need for further measures upstream of the selection processes and in conjunction with it must not be neglected either. On the one hand, concepts for a coherent and consistent policy to support junior researchers must be developed and implemented in universities. On the other hand, at the institutional level, tools must be introduced to tie in with and support the further incorporation of women. At the forefront is gender mainstreaming as a key element of corporate culture, alongside monitoring and targets as a means of ensuring a focused management approach. This should help to tackle structural barriers in concrete terms and, at the same time, subject evaluation of scientific achievement to critical review.

The aim of a gender-sensitive personnel policy must, from the perspective of higher education, be to achieve the optimum in diversity and the maximum in innovation.

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