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# A BRIEF GUIDELINE ON NON-DISCRIMINATORY RECRUITMENT AND MANAGEMENT

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## Introduction: brief description of Genis Lab

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INFN - National Institute for Nuclear Physics, Italy is one of the six European scientific organisations taking part in the European project Genis-Lab, funded by the European Commission's 7th FP. The project aims to implement structural changes to overcome factors that limit the participation of women in scientific research despite their excellent departure conditions in terms of talents and competences (more info at [www.genislab-fp7.eu](http://www.genislab-fp7.eu)).

The project focuses on factors which limit or impede the change towards an effective equality between men and women in science. These factors appear to be linked to organizational systems and to the relation between individuals and the organizations, thus requiring a complex intervention directed at organizational dynamics, the objective of which is to have an effective impact on the conditions of women and men in research organizations.

The Tailored Action Plan - TAP, elaborated by the GenisLab team at INFN with the support of the three technical partners, and particularly with the special contribution of Benedetta Magri (ITC-ILO), was officially approved by the Executive Committee on January 31 2013.

**The overall objective of the TAP is to increase gender balance in (all) units of INFN.** Among the specific areas of action *to establish a more gender-sensitive and women friendly organisational culture and*

*behaviours* the objective 1.1.2 (HR procedures are developed and adopted to promote time and place work flexibility and transparency in recruitment, performance, promotion criteria) the action 3 involves the development and dissemination of Guidelines on non-discriminatory HR procedures.

#### **4.1.2. Actions for Output 1.1.2. HR procedures are gender-friendly and transparent**

<b>Name action 3</b>	<b>Development and dissemination of Guidelines on non-discriminatory recruitment and management (GenisLab &amp; CUG)</b>
<b>Objective</b>	To ensure that all competitions and promotion processes are checked against discriminatory stereotypes and carried out in discrimination-free ways
<b>Methods</b>	Development of simple guidelines including: <ul style="list-style-type: none"> <li>- Info on legal obligations</li> <li>- Checklist for non-discriminatory processes: CV screening, drafting comments, reference letters, interviews and decisions</li> </ul>
<b>Expected Output</b>	Document to be adopted in all competitions Handbook published and available also at INFN website
<b>Person in charge</b>	H.R. Dept. Director: Carletti; GenisLab team: Leone, Paciello; CUG: Masullo
<b>Human resources involved</b>	GenisLab team, human resources department, CUG, Consiglio Direttivo
<b>Other resources needed</b>	Those who are more likely to sit in evaluation boards need to be involved; CIV
<b>Timing</b>	Drafting of core guidelines by the end of 2013 Finalisation together with competency-based HRM Model to which they will be attached
<b>Process indicators</b>	Guidelines approved by January 2014 Guidelines published on website by February 2014
<b>Results indicators</b>	Guidelines used for training and in competitions in 2014

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## Development of Guidelines on non-discriminatory recruitment and management

### Introduction

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The evaluation of research activity and the methodology used for this evaluation are among the most important challenges facing the international scientific community.

To understand science as a cultural activity and to investigate its impact on society, it is essential to consider '*inequalities studies*' referring to gender and young in this regard.

Science is based on a paradox: on one hand it aims to empower people through education, discoveries, researches and professions, while on the other it enables social bias and reproduces power relations.

Personal growth and the development of science are not necessarily dependent solely on economic factors but also on the quality of interpersonal relations, on a respectful cultural environment and on democratic spaces that contribute to the development of human capabilities and potentials. Therefore, the development of science and increasing the number of scientists also depend on the struggle against any form of gender discrimination and stereotype, in order to guarantee equal opportunities for all citizens and measures of inclusion also in the scientific domain, in particular in this moment of declining rate and ageing in the Italian scientific community.

Since the 1990s, the gender dimension became central for research and science policies in the EU. For instance, in the FP6 the gender issue was conceived in quantitative terms (more women scientists) as well as in qualitative terms (the recognition of gender as a research topic to be explored by experts in this field). The programmes contributed to the launch of gender networks, the promotion of innovative questions, the introduction of debates, in particular on the ideology of **a narrow definition of excellence** (based on male viewpoints in the evaluation of science), and increased public awareness about gender in expert communities.

In fact, for a non-discriminatory recruitment and management it is necessary to revisit

- the “substance” of evaluation, that is to reflect and obtain a common understanding, in the scientific community, of the term **excellence** (see the reference 9), and the criteria that allow to define it
- the “process” of evaluation, that is who evaluates, when, and the type of tools and methods used to perform evaluation processes

These Guidelines on non-discriminatory recruitment and management make particular reference to the report <sup>1</sup> “Women, research and universities: excellence without gender bias” published by LERU (League of European Research Universities)<sup>2</sup>.

In examining the factors involved in gender inequality the above mentioned Report highlights four well-known and evidenced challenges regarding women in research. One of the more relevant in this context is that women progressing in an academic career may face (un)conscious biases that may prevent the appropriate recognition of their qualifications as excellent researchers and scholars. Since most of these biases are relatively small, they are often not obvious in individual cases of selection or promotion. At an aggregated level and at a group level, however, their effects become more significant and easily apparent. In other words, **many mole hills together become a large mountain**.

The report concludes that real responsibility for gender action in research institutions starts at the top, but should also be distributed throughout the organisation’s multiple layers and structures. It is imperative that those who are responsible at a certain level have both the power and the accountability to ensure that actions reach the desired objectives. It suggests that research institutions should pursue gender equality strategies with the support of all divisions and levels. These can be embedded in a broader Equality Strategy and should be managed professionally, possibly through a dedicated structure such as, for example a **Gender Equity Office**.

Gender equality offices can help to ensure that appropriate levels of accountability are built in. Gender equality officers can be present in board, committee and panel meetings where gender aspects are relevant, in order to make sure that gender-related processes are followed and that the selection boards are gender-sensitive.

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<sup>1</sup> [http://www.leru.org/files/general/LERU%20Paper\\_Women%20universities%20and%20research.pdf](http://www.leru.org/files/general/LERU%20Paper_Women%20universities%20and%20research.pdf)  
<http://www.leru.org/index.php/public/news/women-research-and-universities-pursuing-excellence-in-research-without-loss-of-talent/>

<sup>2</sup> LERU <http://www.leru.org/index.php/public/home/>

Before describing how unconscious biases can be detected in evaluation processes, we recall that INFN is committed to establishing a permanent “**Observatory for monitoring and evaluating women participation in research**” because the successful implementation of actions towards gender equality requires transparency, accountability and data monitoring. Such Observatory will be critical in order to assess whether gender equality plans are yielding their expected results, and whether corrective action should be taken.

## 1. “Many mole hills together become a large mountain” – unconscious biases and their effects on evaluation processes

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When focusing our attention on recruitment and promotion processes, women’s under-representation in science top-leadership seems to be related to various factors

- a major factor is the definition of “capable” in searches for institutional leaders: the less transparent the definition is, the more likely men are chosen over women. Research shows that the lower the percentage of women on selection committees is, the less transparent the criteria for selection, the less women are to be appointed<sup>3</sup> (EC, 2009c; Zinovyeva and Bagues, 2010);

- additionally, research has shown that qualitative assessment can be heavily gender biased. For example, recommendation letter writers tend to use stronger language of praising when describing men rather than women<sup>4</sup> (Sandström and Hällsten, 2008), as medallions compiled in the occasion of the recruitments appointments. A recent MIT report (2011, p.14) also points to bias against women appearing during search and hiring procedures stating that for women “the proportion [of a letter] devoted to intellectual brilliance compared to temperament is much less than for men”. The report goes on stating “it is essential to describe clearly the need to eliminate bias, while at the same time emphasising that the same high standards of excellence apply to the hiring and promotion of men and women” (MIT, 2011, p.15);

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<sup>3</sup> <http://documentos.fedea.net/pubs/dt/2010/dt-2010-15.pdf>  
[http://ec.europa.eu/eu\\_law/state\\_aids/comp-2009/n642-09-en.pdf](http://ec.europa.eu/eu_law/state_aids/comp-2009/n642-09-en.pdf)

<sup>4</sup> <http://link.springer.com/article/10.1007%2Fs11192-008-0211-3>  
[Scientometrics](#) February 2008, Volume 74, [HYPERLINK](#)  
"http://link.springer.com/journal/11192/74/2/page/1" Issue 2, pp 175-189

- recent empirical research based on professorial appointments shows that many mechanisms prevalent in recruitment and appointment practices of professors are disadvantageous to the careers of academic women<sup>5</sup> (Van den Brink, 2011; Van den Brink and Benschop, 2011). Those mechanisms include “gate keeping”, academic networks that are predominantly male and the way in which scientific excellence is defined;
- moreover, in many cases, even if it seems to the board that only the primary criteria of quality has been considered, the percentage of female grantees is significantly below the percentage of female applicants. In such cases a renewed discussion of the criteria for quality raising or reinforcing awareness about possible bias is needed. This type of awareness within committees and female researchers can by itself be effective in eliminating unconscious bias and in changing attitudes without resorting to targets or quotas and without compromising excellence;
- for leading positions other characteristics of CVs (e.g. career breaks and international experience) are evaluated as well, some of which (most prominently career breaks) cannot be judged properly without reference to gender;
- often the decisions could be taken not into the specific committees or boards relative to the carrier progressions, but in private discussions between colleagues (outside the committees) and the committee members rely more on the opinion of colleagues within their own network (the famous 'old boys network')

Gender stereotypes have been acknowledged<sup>6</sup> as important determinants of most of these facts. Literature reports their “unconscious” feature, i.e. their unconscious and involuntary activation of stereotyped judgments<sup>6</sup> which has a dual effect: stereotypes are particularly difficult to wipe out and

<sup>5</sup> [https://www.researchgate.net/publication/216897596\\_Gender\\_practices\\_in\\_the\\_construction\\_of\\_academic\\_excellence\\_Sheep\\_with\\_five\\_legs?ev=prf\\_pub](https://www.researchgate.net/publication/216897596_Gender_practices_in_the_construction_of_academic_excellence_Sheep_with_five_legs?ev=prf_pub)

[https://www.researchgate.net/publication/259553188\\_Gender\\_in\\_Academic\\_Networking\\_The\\_Role\\_of\\_Gatekeepers\\_in\\_Professorial\\_Recruitment?ev=pub\\_cit\\_inc](https://www.researchgate.net/publication/259553188_Gender_in_Academic_Networking_The_Role_of_Gatekeepers_in_Professorial_Recruitment?ev=pub_cit_inc)  
<http://www.ncbi.nlm.nih.gov/pubmed/21636196>

<sup>6</sup> [https://www.researchgate.net/publication/216897596\\_Gender\\_practices\\_in\\_the\\_construction\\_of\\_academic\\_excellence\\_Sheep\\_with\\_five\\_legs?ev=prf\\_pub](https://www.researchgate.net/publication/216897596_Gender_practices_in_the_construction_of_academic_excellence_Sheep_with_five_legs?ev=prf_pub)

<sup>6</sup> In 1995, social psychology researchers Anthony Greenwald and Mahzarin Banaji proposed the extension of ideas already existing in cognitive psychology to social psychology. They asserted that the idea of [implicit](#) and [explicit memory](#) can apply to social constructs as well. If memories that are not accessible to awareness can influence our actions, associations can also influence our attitudes and behavior. Thus, measures that tap into individual differences in associations of concepts should be developed. This would allow researchers to understand attitudes that cannot be measured through explicit self-report methods due

are attributed to biological or cultural and psychological differences; suppression of stereotypes is often ineffective because it is intentional, whereas stereotypes are automatic and not under rational control.

For this reason, **Gender equity** officers must be present in selection boards, committees and panels to avoid the risk of unconscious discriminatory practices throughout selection processes. Committees should have adequate gender representation and members should be sensitized and trained to eliminate possible hidden or unconscious gender bias.

Also publishers of academic journals, books, etc. should take care to adopt gender-responsive science policies when considering the publication of research results. Publishers of academic journals, books, etc. should ensure a more gender-balanced composition of editorial boards and reviewers. These (gender) diverse teams should lead to more varied ideas and thus increase scientific excellence. It should be kept in mind that adopting policies which promote a gender dimension in research is possible without jeopardising the criteria of excellence.

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## 2. Focus on Substance: evaluating excellence and its gender dimensions

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### 2.1. Qualitative evaluation: The peer review and the current debate

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As the evaluation of research activity and the methodology used for this evaluation are among the most important challenges facing the international scientific community, it is important to dedicate a special attention to its developments: **the peer review** is used to evaluate the careers' development, the funds' allocation, the articles' publication on scientific journals.

The peer review is the methodology used since about 100 years but the societal, political and geopolitical environment in which science is conducted has been transformed, in particular in the past 50 years, and scientists are increasingly aware of the need to examine their evaluation practices in light **of these fundamental shifts**: peer review (like democracy) is not perfect but remains the best system available and there is no convincing evidence of the contrary.

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to lack of awareness or [social desirability bias](#). In research, the IAT (Implicit Association Test) has been used to develop theories to understand [implicit cognition](#) (i.e. [cognitive](#) processes of which a person has no conscious awareness). These processes may include [memory](#), [perception](#), [attitudes](#), [self-esteem](#), and [stereotypes](#) (from Wikipedia).



Nevertheless many approaches exist to improve this methodology, in particular with respect to the gender dimension. A number of studies have demonstrated the considerable effect of unconscious gender bias in what is the hallmark of science: the assessment of excellence and particularly the process of peer review. The practice of evaluating excellence often conceals gender bias<sup>7</sup>

The EU and Member States' aspirations for economic and societal development enabled through R&D can only be realized through novel research planning, design and implementation, where the gender perspective is an essential element. Sufficient examples and methods for the deployment of gender analysis in R&D are available. Ignoring this knowledge will perpetuate gender biases in the practices and content of science, which have already been shown to impact negatively on scientific quality.

Editors of peer-reviewed journals can require analysis of sex and gender effects when selecting papers for publication. The US Journal of the National Cancer Institute does it as a matter of "commitment to sound, scientific research": "where appropriate, clinical and epidemiological studies should be analysed to see if there is an effect of sex or any of the major ethnic groups. If there is no effect, it should be so stated in Results"<sup>8</sup>.

Research<sup>9</sup> has also pointed to bias in peer review (Wenneras & Wold, 1997) and hiring (Steinpreis et al., 1999; Trix & Psenka, 2003). For example, Wenneras and Wold found that a female postdoctoral applicant had to be significantly more productive than a male applicant to receive the same peer review score. This meant that she either had to publish at least three more papers in a prestigious science journal or an additional 20 papers in less-known specialty journals to be judged as productive as a male applicant.

The authors concluded that the systematic underrating of female applicants could help to explain the lower success rate of female scientists in achieving high academic rank compared with their male counterparts. Trix and Psenka (2003) found systematic differences in letters of recommendation for

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<sup>7</sup>Assessing excellence by Flavia Zucco, biologist – former research director; EU GenisLab project  
[http://www.ki.si/fileadmin/user\\_upload/datoteke-L07/PDF/genis\\_lab/assessing\\_excellence.pdf](http://www.ki.si/fileadmin/user_upload/datoteke-L07/PDF/genis_lab/assessing_excellence.pdf)

<sup>8</sup> Women in Science and Medicine, The Lancet, Volume 377, Issue 9768, Page 811, 5 March 2011 Simone Buitendijk, Daniela Corda, Anders Flodström, Anita Holdcroft, Jackie Hunter, Elizabeth Pollitzer, Teresa Rees, Curt Rice, Londa Schiebinger, Martina Schraudner, Karen Sjørup, Rolf Tarrach; Globally Accessible, Peer-Reviewed Gendered Innovations Websites: <http://ec.europa.eu/research/science-society/>; <http://genderedinnovations.stanford.edu/>

<sup>9</sup> All the following citations are present in: - Why So Few? Women in Science, Technology, Engineering and Mathematics - <http://www.aauw.org/resource/why-so-few-women-in-science-technology-engineering-and-mathematics/>

academic faculty positions for female and male applicants. The researchers concluded that recommenders (the majority of whom were men) rely on accepted gender schema in which, for example, women are not expected to have significant accomplishments in a field like academic medicine. Letters written for women are more likely to refer to their compassion, teaching, and effort as opposed to their achievements, research, and ability, which are the characteristics highlighted for male applicants. While nothing is wrong with being compassionate, trying hard, and being a good teacher, arguably these traits are less valued than achievements, research, and ability for success in academic medicine. The authors concluded, "Recommenders unknowingly used selective categorization and perception, also known as stereotyping, in choosing what features to include in their profiles of the female applicants."

These results suggest that gender stereotypes can prompt bias in evaluation and judgments of women in male-dominated environments, even when these women proved to be successful and demonstrated their competence (Heilman et al., 2004).

Biases do change. Today the fields viewed as stereotypically male have considerably narrowed compared to even 30 years ago. Life and health sciences are seen as more appropriate for women, while physical or hard sciences and engineering fields are still considered masculine domains (Farenga & Joyce, 1999). At this regard the article of Wenneras, C. & Wold, A. (1997, May 22). *Nepotism and sexism in peer-review*. *Nature*, 387, 341-343 is very interesting<sup>10</sup>.

Guided by its principles for external action (Art 21 TEU), the Union is well placed to play a leading role in promoting common principles for driving international research and innovation activities. These principles will deal with issues such as responsible research and innovation, research integrity; **peer review** of proposals.

New forms of quality control as the "extended peer review" have been proposed.<sup>11</sup>

Finally it is useful to report a synthesis of relevant items regarding the peer review discussed many years ago in the *Consensus conference on the theory and practice of research assessment*<sup>12</sup>: at a time

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<sup>10</sup> See also: Sandström, Ulf and Martin Hällsten (2008) Persistent nepotism in peer-review, *Scientometrics*, 74( 2), 175-189

<sup>11</sup> For example: Funtowicz and Ravetz (1993); Funtowitz, S., Ravetz, J. (1993): Science for the post normal age, *Futures* 25(7) (1993): 735-755. in "Challenging Futures of Science in Society - Emerging trends and cutting-edge issues" - [http://www.masis.eu/files/reports/Emerging\\_trends\\_in\\_SiS.pdf](http://www.masis.eu/files/reports/Emerging_trends_in_SiS.pdf)

<sup>12</sup> European Science Policy Briefing - Capri, October 1996 – ESF Report June 1998  
[http://www.esf.org/fileadmin/Public\\_documents/Publications/ESP03.pdf](http://www.esf.org/fileadmin/Public_documents/Publications/ESP03.pdf)

when there is a demand for increased accountability in science, **the system of peer review itself should also be subjected to review and analysis.**

*“The scientific community would support the “highest quality science” and that the decision-making is independent and not influenced by non-scientific factors:*

*- to ensure the “quality control” of the process so that it can be seen to operate in a fair and open manner and can provide decisions which will support the best science;*

*- to examine the process itself so that it can be adapted, as appropriate, to changing circumstances.*

*For instance, the pressure on research funding has frequently resulted in very low success rates for grant applications at both the national and international levels. Such success rates have often reduced the peer review process to something of a lottery. Peer review then provides a gross discrimination between good and poor proposals with funding decisions on the former often taken on grounds other than the “absolute” quality of the science. There are also changes occurring in the way we carry out our research with a greater emphasis on the team or group, on large facilities or on a combination of both. In other words, are we evaluating the person and the idea, or the team and the facility? Furthermore, science and its peer review system are conservative: **so how receptive are we to new ideas?***

*Science is an international activity, but its conduction differs subtly from country to country. Nations have their own key scientific objectives, local problems to be addressed and national priorities. Within nations, scientific approaches are necessary to address issues of regional importance. Even if a specific local problem needs to be addressed, it is important to ensure that mechanisms are available to select only projects of the highest quality. Research quality is a necessary, but not sufficient condition; other stakeholders should be involved too.*

*Local user representation provides valuable inputs to shape research directions and ensure the ultimate success of locally driven research-based endeavours. Few countries have the range and depth of expertise to be able to peer review all their research activities satisfactorily; an international perspective provides an important global “benchmark”. Multi-national evaluation panels are valuable for all but the most specific local problems and provide a perspective that can overcome national cultural differences.*

Relevant conclusions on peer review can be summarized in the following.

First of all, of course, for science to be relevant it must be *good science*. The idea of excellence (a criteria often used in peer review), however, relates to being better than others in some competition, rather than being good: then the excellence can to be redefined each time in each committee reflecting the power of the “old boys’ network”: the worst enemy of women in science.

Concerning the evaluation boards, they should comply with the following criteria: gender balance in evaluation boards and training evaluators, peers and chairpersons in gender issues.

In the case that the principal criterion is the list of publications, if women want to work part-time, “*that’s fine*”, but when women apply for a position and she has half the number of publications she should have had, the committee will never invite her for an interview.

The boundaries of the discipline matter: borderline, interdisciplinary, and very original works may be less visible because they fall between boundaries and women, often, choose interdisciplinary activity research.

It is essential to avoid any conflict of interest between the research proposal or proposer and those asked to take part in the peer review process. Those requested to undertake peer review should also be active researchers, as one aspect of the review process the novelty of ideas and the applicability of the methods proposed to the research problem must be considered. Members of the “users” community could be included as peer reviewers as a way of broadening the review procedures and introducing new perspectives.

A large pool of peers needs to be maintained if the system is to work well, providing expertise across all aspects of the scientific research community (both where women are a majority and where they are minority). International participation should be encouraged wherever possible and appropriate, to the extent that foreign peers should be included in committees. This is a way of enriching the quality of the peer review process by bringing new and independent ideas to any review panel.

The problems with the peer review process are amplified when success rates for grant applications run at 10% or 15%. In this situation, peer review was reduced to a lottery because so much excellent science was not funded. In fact, women have more success rates when a large number of grants are available

All members of a peer-review committee must be active scientists, and any discrepancy between the results of the citation analysis and the final decision must be explicitly justified.

## 2.2. Quantitative evaluation: using performances indicators

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Peer review is a qualitative performance indicator which can be supported by more objective quantitative indicators. Forming an opinion on the excellence of the science is the “easy part” of assessing a project application. Forming an objective view on track record is more difficult because of the problems of perfect knowledge of candidates and personalities.

In periods of intense competition, it is clearly advantageous to have an additional source of information other than personal opinion, to help inform rational and balanced decision making and to support peer review with additional objective data.

*“ These include indicators such as: output indicators (scientific papers, books and so on), impact indicators (citations, esteem measures - such as honours, awards and so on), performance indicators (outputs in relation to input - financial, labour and so on), activity indicators (interface with industry, international cooperation and other indirect measures), socio-economic indicators (patents, new products and their impact on society and the economy), management indicators (teaching, administrative success and related measures).*

*Objective performance indicators associated to peer review can be categorized into a number of areas (see the reference 13), e.g.:*

- *publication-based indicators, based on either journal impact factors, citation analysis or papers in internationally refereed journals; but:*
- *publication-based indicators are valuable for screening of candidates for fellowships and other positions, but should not be used in isolation. The use of publication data risk to become mechanical, with little thought being given to their purpose or meaning;*
- *reviews and methods papers, which tend to attract large numbers of citations, should be weighted appropriately .*
- *the number and size of grants held;*
- *membership of editorial boards and scientific bodies;*
- *prizes and invitations;*

The impact factors of journals in which a scientist publishes represent only a proxy measure of performance, a shortcut to assessing current performance. Nevertheless indicators facilitate a more objective evaluation within a given field but not across disciplines.

Publication-based indicators are easy to manage and transparent but their use can become mechanistic. It is important that indicators are recognised as a tool in assessment but care must be taken in their application. They are best used by a knowledgeable scientist in any given field. The conference emphasised the need to take account of multi-authorship, overciting of papers, review articles, comparisons between different scientific fields and other factors which can lead to misjudgements if care is not taken in the use and interpretation of these methods. Publication-based indicators are useful for screening candidates but should not be used in isolation.

Performance indicators bring forward questions which may otherwise have been overlooked and they provide objective justification for decisions. The conference acknowledged the need for evaluation tools to be targeted at the project to be evaluated. In general, the evaluation criteria and practices will be set by the funding agency. However, there is room for the researcher to contribute to the identification of appropriate tools. Crucially consensus was reached on the need for all those involved to agree that the evaluation methods were fair and transparent.

### 2.3. The Collegial Culture and the peer review

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As it was noted **peer review** is central for the assessment of the majority of research proposals in most developed countries. Its conduct and shortcomings are therefore at the core of any discussion about how to judge both the competence of researchers and their ideas. Very deep is the keynote speech by the University Chancellor Lars Haikola (in particular regarding the **College Culture** practice), the Swedish Higher Education Authority, Stockholm at the second GENIS LAB transnational conference – 2013<sup>13</sup>:

#### **The Collegial Culture – for Good and for Bad**

- Academia is an informal culture - informal cultures are steered by silent rules
- If you possess the silent rules you win – if you don't possess the silent rules you lose
- Collegial assessment and peer review is an essential method in all academic appointment processes - and a vital part of the collegial culture.

#### **Collegiality, the nice side**

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<sup>13</sup> GENIS LAB 2nd Conference Blekinge Institute of Technology - Campus in Karlshamn (Sweden) on 18th and 19th April 2013

- Discussion as a method and culture, the collegial dialogue as a model
- The strongest argument wins – regardless of person and position only the validity and relevance of the argument matters
  - The trust in discussion – exchange of arguments – to reach truth, better results and wiser decisions
- The rational sense – analytical and testing
- Scepticism against absolute truths – all truth is provisional (Popper)
- The disputation as an ideal – everything is open for public criticism and assessment
- The academia as an arena for openness and tolerance

### **Collegiality, the not so nice side**

- Strong individuals, sometimes poor as listeners, have considerable space to develop their egocentricity. A collegial environment is easy to sabotage!
  - The aspiration for consensus may lead to schools of thought, conservatism and resistance to the different
  - Peer review risks to have the effect of levelling; like-mindedness!
  - In the worst case – collegiality is narrow "guild – and corps behaviour", intriguing, jealous guarding of your territory, conflicts, prestige!

### **A (self-critical) report from the Swedish Research Council <sup>14</sup>**

#### **Conclusions**

- A tendency to assess with the same measures as you like yourself. You reward what you recognize
  - Assessment is not reproducible
  - Informal criteria are created. Non-explicit presuppositions are systematically made use of

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<sup>14</sup> Collegial assessment of scientific quality – a research survey:

<http://www.vr.se/download/18.5adac704126af4b4be2800026153/1274705347658/Rapport+4.2010+100517.pdf> 2012; [https://www.vr.se/download/18.49e6aaba13ef4cb9623a7d/1371540667559/Rapport+J%C3%A4mst%C3%A4lldhetsobservationer\\_130614\\_FINAL.pdf](https://www.vr.se/download/18.49e6aaba13ef4cb9623a7d/1371540667559/Rapport+J%C3%A4mst%C3%A4lldhetsobservationer_130614_FINAL.pdf) 2013

### **Collegiality and Research Career**

- Peer review – the best we have, or the least bad
- But its weaknesses must be considered
- The peer review system's informal and collegial character may explain why women are underrepresented in research careers

### **But to wait and see is a no solution:**

- 23 % female professors grade A in Sweden
- 20 % female professors grade A in Italy

With today's pace the body of female professors will be 31 % in Sweden in twenty years time and **in Italy more than in twenty years.**

Then <sup>15</sup>

*“Science curricula in particular are gender-biased. Science textbooks do not relate to women's and girls' daily experience and fail to give recognition to women scientists. Girls are often deprived of basic education in mathematics, science and technical training, which provide knowledge they could apply to improve their daily lives and enhance their employment opportunities.*

*Advanced study in science and technology prepares women to take an active role in the technological and industrial development of their countries, thus necessitating a diverse approach to vocational and technical training.*

*Technology is rapidly changing the world and has also affected the developing countries. It is essential that women not only benefit of technology, but also participate in the process from the design to the application, monitoring and evaluation stages.”*

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<sup>15</sup> Statement of the Fourth World Conference on Women, Platform for Action (United Nations 1995)  
<http://www.un.org/womenwatch/daw/beijing/pdf/Beijing%20full%20report%20E.pdf> (pg.27)



### 3. Focus on Process

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It seems relevant to **the evaluation iter** <sup>16</sup>:

- i. **Criteria**
- ii. **Evaluation process**
- iii. **Procedures**

- i. **Criteria**

*The modes of organization of contemporary science now require more and more the evaluation of a broader set of “competences” that comprise technical skills (e.g. capacity to acquire/lead projects) as well as “skills” (e.g. team work, leadership) and “institution's values” (loyalty etc.)*

- ii. **Evaluation process**

*The evaluation process has different stages. An effective evaluation process should be guided by fairness and transparency throughout all these phases: Silvana Vallerga <sup>17</sup> recommends:*

- Calls to be advertised at least two months in advance
- All evaluation criteria to be published along with the job description
- CVs of the evaluation board's members to be published
- CVs of the candidates to be published
- List of winners and their CVs to be published
- Evaluation boards should comply the gender issue and train evaluators, peers and chairs in gender issues

- iii. **Procedures** (see reference 7)

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<sup>16</sup> Many of the items in this paragraph are taken from:

Meta-analysis of gender and science research -'Topic report Gender and Scientific Excellence': by E.Addis - [https://genderedinnovations.stanford.edu/images/TR5\\_Excellence.pdf](https://genderedinnovations.stanford.edu/images/TR5_Excellence.pdf)

Special issue on research evaluation – Euroscientist - <http://www.euroscientist.com/special-issue-on-research-evaluation>

Assessing excellence by Flavia Zucco, biologist – former research director; EU GenisLab project [http://www.ki.si/fileadmin/user\\_upload/datoteke-L07/PDF/genis\\_lab/assessing\\_excellence.pdf](http://www.ki.si/fileadmin/user_upload/datoteke-L07/PDF/genis_lab/assessing_excellence.pdf)

<sup>17</sup> Consiglio Nazionale delle Ricerche, Italy / Imperial College London, UK & Helsinki Group on Women and Science) author of The Minerva Code, fostered a model of implementation for the European Charter and Code for Researchers - [http://www.sssup.it/UploadDocs/3892\\_codiceMinerva.pdf](http://www.sssup.it/UploadDocs/3892_codiceMinerva.pdf)

- **One school** of thought considers assessment an art and the criteria and procedures are defined each time. This option reveals the desire “to have a free hand” and reflects the power of the “old boys’ network”

- **The second school** of thought defines assessment as a science. It morphs into constituted knowledge having schools, teachers, books, associations etc. It consists of a corporation of self-referential experts who are the only people qualified to assume this role and thus hold the related power

- **Today** it seems more appropriate to talk about an **evaluation culture** which requires both the existence of a clearly defined set of transparent procedures and a change of mentality in those who evaluate as well as those who are evaluated. This change of attitude should comprise capacity to detect and overcome unconscious gender bias.

- **Tools for evaluation comprise:**

- Curriculum vitae (different version)

- Publications: 10 most recent or pertinent for the position or of the candidate’s profile

(maternity leave exceptions)

- Interviews

- Lectures

- Paper discussion

- Your Suggestions/contributions

### 3.1 Evaluation criteria: competency-based models and their use for recruitment

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An example of a systematic attempt which can prevent the negative impact of gender bias in evaluation processes is the **Competency Model (CM)** at CERN<sup>18</sup>, whose aim is to outline coherent standards to define the competencies which **drive performances and lead to excellence**. CM provides CERN with a **reference framework and a common language with which to discuss performance**”:

This has a deep impact on the **selection standards for recruitment** and **career advancements**. The “CERN Values and Behavioral Competency Model” provides useful suggestions for the design of a similar model at INFN, which could be adopted as a tool to guide professional self-development. .

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<sup>18</sup> The CERN Competency Model: <http://hr-info.web.cern.ch/hr-info/competencies.asp>;

The CERN Competency Model is one of the CERN HR Initiatives and has been approved by Management as part of the HR Strategy. Its main aim is to provide coherent criteria throughout several organizational processes to drive performance and continuous development of staff.

The Competency Model can have an impact not only on the performance appraisal but also on many other HR activities, such as the selection criteria used during recruitment, the assessment criteria used during the process from limited duration to indefinite contracts, the criteria used in the career path during promotion exercises, etc. The methods in use at CERN have proved particularly useful in :

□ **Staff recruitment processes**

- a new technique called CBI (“Competency based interview” o “structured interview”) is introduced in the selection interview, in order to ascertain the actual expertise and ability of the applicants and to evaluate them with a more objective approach with respect to the current “unstructured interviews”.

□ **Indefinite contracts**

- many of the benchmarks previously applied in the selections have been replaced by behavioral competencies;
- at CERN, behavioral competencies are assessed primarily with respect to technical expertise as a first screening of the applicants under review, especially in the case of an indefinite contract, whose required effort is prolonged (around 30 years), then it is necessary to evaluate carefully all the acquired expertise.

#### 4. In conclusion

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A definition of the relevant characteristics of a good selection method is provided by F. Zucco (see reference 7)

▪ **Relevance**

*“Relevance refers to the significance and usefulness of the method to achieve its aim. First of all the framework of the context has to be defined, and in the case of scientific research the characteristics “of those who are good at carrying out research” and “good research” have to be defined*

▪ **Reliability**

Once the reference context is fixed, a reliable assessment method must be perfected. In other words, the assessment protocol adopted must be able to work with the same accuracy (reproducibility) even if used in different situations and at different times. In the case of research assessment, it is a question of defining procedures that select suitable people/projects (for the present objectives) effectively and objectively.

▪ **The procedure** that determines whether a method is accepted is called **validation**, and it verifies both reliability and relevance. As previously mentioned, these two criteria are necessary, yet inadequate if used alone. Each assessment method should be validated. The reasoning behind the validation procedures of methods, protocols and assays may also be useful for assessment.

**It is necessary to update evaluation procedures**

- **Use** a broader and more inclusive concept of excellence;
- **Implement** transparent and objective evaluation procedures (accountability);
- **Re-install** the decisional powers in the official institutions;
- **Re-evaluate** research in multidisciplinary fields, still considered as borderline;
- **Evaluate** the scientific outputs normalized against the resources inputs (grants, apparatuses, personnel);
- **Introduce** the ex/post evaluation;

**And always remember the value of the difference:<sup>19</sup>**

- Women have their own qualities, their differences
- They have to keep their specificity
- They don't have to enter a masculine mould

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<sup>19</sup> Claudie Haignere 'Chairperson of the jury of the 2007 Descartes prize for excellence in scientific research'

