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Promoting new competencies through gender mainstreaming: the example of life sciences and health research

Introduction

Promoting gender equality in research has been the objective of the European Commission for more than a decade. This objective was enshrined in the Treaty of Amsterdam and was followed by several Communications from the Commission (European Commission, 1996, 1999, 2000). Today's conference is explicitly aimed to boost gender equality in research through the adoption of a strategy of gender mainstreaming. According to the formula in the *Vademecum*, issued by the Women and Science Unit in 2003, gender equality can be represented by the formula: GE = WP and GD pointing to the fact that gender equality in research comprises:

- 1) the promotion of women's participation at all levels of research (WP)
- 2) the consideration of gender issues in the content of research (gender dimension, GD) This paper will address a selection of important issues of gender mainstreaming for the field of life sciences and health research. From these issues arguments will be derived on necessity and ways of fostering new competencies for present-day and future researchers and research organizations in the respective two fields of research.

In the year 2000, as part of the Women & Science Action Plan, seven Gender Impact Assessment Studies were commissioned of the 5th Framework Programme for Research. With my colleague Mineke Bosch from the Centre for Gender and Diversity of the university of Maastricht, I conducted the Gender Impact Assessment of the research programme for the life sciences called *Quality of Life and Management of Living Resources*. In carrying out that research we could profit from the insights and expertise resulting from more than 25 years of gender studies - in fields such as the life sciences and history- on the relationship between gender and science. Gender studies scholarship had demonstrated extensively how biological and biomedical knowledge was severely gendered. To quote Londa Schiebinger, who wrote a comprehensive review of 25 years of gender studies in science «gender turned out to be the silent organiser of scientific practice directing the kind of knowledge to be produced» (SCHIEBINGER, 1999). In fact at the moment in time of the Gender Impact Studies, the existing literature was rich in documented effects of gender. Negative aspects of the working of gender were exposed such as gaps in knowledge, inadequate knowledge, reification of stereotypes and reproduction of gender relations. Focusing on health research such gendered knowledge had resulted in inadequate treatment, the best-documented examples being cardiovascular disease, osteoporosis and depression. (GREAVES, 1999; KLINGE, 1998).

The fact that processes of gender actually influenced biomedical knowledge of course challenged the theoretical framework of disciplines like biology, medicine and health sciences. More specifically, it challenged the concept of scientific objectivity, as paradigm of the natural and life sciences. As a way out of a debate between «positivist» science and «constructivist» science, a debate that I will not go into here, Schiebinger has suggested to focus on goals and outcome of research (what we know and do not know and why) instead of a focus on epistemological issues (how we know). In her view such a science (sustainable

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science) is the best way to realise gender equality in the sciences and a science that addresses the needs of both men and women. Although framed in other terms, the resemblance with the EU objective of gender mainstreaming is obvious. According to Schiebinger, key questions for research are: Science for whom? Whose projects are pursued? Whose experiences are validated and whose's not? Who stands to gain? These questions have become influenced the direction and framework of our gender impact assessment.

Gender Impact Assessment of the research programme for the life sciences (Quality of Life and Management of Living Resources, QoL)

In 2001 the European commission, DG research, Women & Science Unit, commissioned seven Gender Impact Assessment (GIA) studies. Objective of these studies was to evaluate the gender dimension of the respective specific programmes for research 1998-2002. Were aspects of gender taken into account? Was the programme gender-conscious? What about the participation of women in the research? As stated above, we carried out the GIA study of the research programme for the life sciences (QoL). There was a special point in our study concerning the gender dimension: in life sciences and biomedical research both *sex* (referring to the biological characteristics) and *gender* (referring to social cultural processes) are important, should be both checked for their relevance and if appropriate, addressed in the proposed research.

Methodology Gender Impact Study

Our study consisted of three parts:

- 1) A background and State of the Art study
- 2) An analysis of Women's Participation in development and implementation of the programme
- 3) An analysis of integration of the gender dimension in the QoL Work Programme and Project Portfolio.

During the project we developed two instruments: first a *Literature Resource* (consisting of searches in Medline as well as in a database specialised in gender studies literature) to evaluate the programme text; secondly a *Gender Impact Assessment (GIA) Protocol* to evaluate research projects. Using this Protocol, researchers can identify if sex and/or gender aspects are relevant to the proposed research, and it contains criteria for the address of sex and/or gender aspects. For this moment, I will not go into our results. The reports containing our findings on participation of women and on the gender dimension of QoL research are available from the Commission: rtd-sciencesociety@cec.eu.int (KLINGE & BOSCH, 2001 and KLINGE, 2002).

Besides a synthesis report of the seven simultaneous GIA studies was prepared (EUROPEAN COMMISSION, 2001). And finally the Proceedings of the Gender & Research Conference, held in Brussels 8-9 november 2001, where the results of the GIA studies were presented was published (ID., 2002).

Implementation of our recommendations in sixth Framework Programme (FP6)

In 2002, the texts of the new FP6 specific programmes and work programmes appeared. From these texts it became clear that our recommendations had become firmly implemented in FP6. This implementation was visible from:

- The adoption of our sex/gender concepts and terminology (and especially the distinction between the two)
- The elaboration of our GIA-Protocol, and translation of it to the Guide for Proposers, with the inclusion of examples
- The inclusion as a quality criterion of the address of sex and/or gender aspects
- Efforts made to train evaluators concerning sex and gender aspects of research.

For my colleague and me this was a real success and good practice story. We found it very rewarding to see that in this way a translation of *theoretical* insights into everyday *research practice* had become enacted. In other words: how sex and gender issues got flesh and body for traditional professionals, not trained as gender experts.

Engendering Research I- Workprogramme

In order to understand what it means to make life sciences and health research sex and gender conscious we will now take a closer look at these fields of research. I therefore return to the formula coined in the *Vademecum*: GE (gender equality) = WP (women's participation) and GD (gender dimension of research). The gender dimension is elaborated as follows:

- 1) Research must address women's needs as much as men's needs and
- 2) Research must contribute to an enhanced understanding of gender issues.

As stated before, the integration of the gender dimension for Priority 1 *Life sciences, genomics and biotechnology for health* should comprise the address of both sex and gender aspects if appropriate. This is addressed in two important footnotes in work programme:

Footnote 1) Causes, clinical manifestation, consequences and treatment of diseases and disorders often differ between women, men and children. Therefore all activities (funded within this priority) must take the possibility of such differences into account in their research protocols, methodology and analysis of results.

Footnote 2) Because of the inconsistent and often confusing use of the terms sex and gender, their use should be clarified: sex refers to differences attributed to biological origins, gender refers to social influences that lead to differences. Males and females differ not only in their basic biology but also in ways they interact with and are treated by society.

It is important to mention here that the content of these footnotes contains the kind of subject matter that ought to be taught when talking about new competencies

As stated in the work programme too, many science and research projects include humans as subjects. There is no such thing as a universally neutral person. Because gender differences are fundamental organising features of life and society, recognising these differences has important implications in scientific knowledge. The implications of the new FP6 guidelines for research imply a systematic questioning of whether and in what sense sex and gender are relevant in the objectives and methodology of projects.

Some Examples of topics in life sciences and health research

Priority 1 *Life sciences, genomics and biotechnology for health* and Priority 5 *Food quality and safety* of FP6 are examples of research areas in which sex and/or gender aspects are undoubtedly of relevance. For Priority 1 sex and gender differences are relevant in health research for combating diseases, in fundamental research on genomics and in its applications for health. For priority 5, sex and gender differences are relevant in the impact on health of

food products such as those containing genetically modified organisms. Besides sex and gender differences are relevant in the epidemiology of food-related diseases and allergies.

Engendering research II- Guide for proposers

Applications for research under FP6 are now requested to consider the gender dimension of research. The Guide for Proposers is very explicit about the address of sex and gender aspects and contains the following paragraph:

Gender aspects in research have a particular relevance to priority 1 and 5 (see above) as risk factors, biological mechanisms, clinical manifestation, causes, consequences for disease and disorders may differ in men and women. The possibility of gender and/or sex differences must therefore be considered in all areas of health research, unless it can be demonstrated that gender and/or sex is inappropriate, with respect to the health of the subjects or the objectives of the research. Gender and/or sex issues should be considered in:

- The formulation of research hypotheses, in the development of research protocols, choice of research methodologies and in the analysis of results.
- This applies to biological, pre-clinical and epidemiological, behavioural research/studies on both human and animal subjects
- This applies also to the use of cells, tissues and other specimen, where appropriate
- The choice for a particular study population should be thoroughly justified and the sex of the participants described in full.
- The Guide furthermore states that these aspects will be taken into account in the evaluation process.

To address sex differences in fundamental research, listed among our recommendations in the GIA study but also pleaded for by several other organizations for research (FISHMAN et al 1999; EDITORIAL, 2001; GREENBERGER, 2001; GREAVES, 1999) is a relatively new phenomenon, now included in the new guidelines for conducting research. Also in this respect, I want to emphasize how this kind of knowledge now incorporated into FP6, represents the subject matter that ought to be taught at universities where students are trained to become researchers. It exactly describes the new competencies that should be fostered in the traditional disciplines.

Examples of gender mainstreaming van FP6 projects - Integrated projects (IP's) and Networks of Excellence (NoE's)

The Helsinki Group has expressed her concern as regards the mainstreaming of gender issues in FP6. I would like to give a few examples from my own experience. I feel confident about gender mainstreaming in FP6 also because monitoring activities have been implemented.

I myself am involved in two ways. First as partner in a consortium preparing an IP, coordinated by my university, where I was in charge of answering the questions concerning the gender aspects of research and of framing of the compulsory Action Plan to foster the participation of women. My concrete input in that IP (on affective disorders - depression) consisted of:

- Advice on composition of the study population (enrol as many men and women)
- Advice on data collection and results: as sex disaggregated data
- Participation in this IP offered the possibility to submit a work package on gender and depression which was designed to explicitly take account of sex and/or gender effects

described in the gender conscious literature, such as the aspects of sex and/or gender in the diagnosis of depression and design of treatment.

Secondly, several funded IP's and NoE's asked me to become a partner to carry out their work packages on gender issues. This of course is indicative of the fact that gender expertise is not common yet and that consortia are in need of hiring gender expertise. Often so-called gender audits of WP and of GD were mentioned in the proposals, which were in need of further elaboration.

Furthermore the Commission has taken the initiative to set up a network of persons, charged with gender aspects in IP's or NoE's in Priority 5 *Food Quality and Safety*, to exchange ongoing work and to compare best practices. Harmonisation of collection of data on for example the participation of women in the research is another objective. In my view the monitoring and evaluation of implemented gender mainstreaming policies is well organised.

Fostering gender competencies

Taken together the new guidelines and envisaged gender audits all require new skills and competencies. It justifies a redress of curricula in life sciences and health research. Key issue is how to foster future know-how as regards the gender dimension of research?

At my university I am appointed for genderstudies in health and health care and as such responsible for research and education. I teach a trajectory called genderstudies in health sciences consisting of three courses (optional; every year from March to July), which together attract about 50 students. Students are taught the kind of insights that allowed us to conduct the gender impact study. At the university of Nijmegen, Toine Lagro-Janssen has reformed the medical curriculum in a successful way. Training in sex and gender aspects is mainstreamed in the curriculum and also offered as an optional course. This successful project aims at dissemination to the medical curricula of the other Universities in the Netherlands (LAGRO-JANSSEN, 2003).

Support for gender studies is an important gender-mainstreaming tool. Therefore, action is needed to teach gender literacy, gender competence in life sciences and health research. Therefore I would recommend:

- To mainstream gender issues in life sciences and health curricula. In the bachelor and master phase, but also in PhD training.
- The development of a European Master Gender Studies for life sciences and health research. In such an effort AIOFFE and WISE should play a role.
- Researchers trained in the traditional disciplines of biology and medicine, should be offered the possibility of post doctoral courses to acquire gender competency.
- National science funding organizations (NWO, ZonMW for the Netherlands) should follow the EU example and make an adequate address of sex and gender issues a necessary condition for funding.
- (Inter) national research assessment organizations should follow the EU policy and make the promotion of gender equality (WP and GD) a criterion of quality.

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