

# Predicaments Faced by Women in Science & Technology

Dr. Mousumi Maitra\*

## 1. Introduction

Long back, when the Gupta dynasty was reigning over India, the emperor great Samudragupta had a galaxy of scholastic personalities in his Court. Navaratnasava was the term used quite often to mean those gems. Barahamihir, the celebrated mathematician and astronomer of ancient India, married the preincess of Sri Lanka-Khana, much popular to us for her wise proverbs. A sad story about this illustrious lady does the round in history. To keep the supreme command of her celebrity husband, she had to sacrifice her tongue and thus became dumb for ever! While this may simply be a historical tale with no foundation, even today the women of our society do not enjoy the equality with their male counterpart. Women are still underrepresented in mathematics, science and in fields related to engineering. More often than not, women shy away from any sort of scientific and technical activities despite the importance of these areas in modern society. In the long list of Nobel Laureates, names like Marie Curie or Pearl S. Buck are exceptions rather than the rule.

## 2. Present Scenario

Of late, much attention has been drawn to the problems faced by women in science, engineering and technology (SET). This is because of the growing awareness of the huge untapped economic potential that women represented. Much of the work behind the current topic on the role of women in Science and Technology was sparked by the research conducted by the Swedish Medical Research Council (MRC) in 1997. Before that a Texas-based non-profit corporation called "Tomorrow's Women in Science and Technology (TWIST)" was formed

in 1995. Many scientists, engineers, librarians, business people, teachers, writers and artists have been working together to promote science and mathematics education among women as well as to make appropriate career planning for girls and women. The Swedish study discovered three important features of this socio-economic topic. These are :

- i) Significantly unequal women's representation in the area of Science and Technology
- ii) Strong gender bias in the way in which research awards were made.
- iii) Women had to be about 2.2 times more productive than their male counterparts to be as successful in securing financial support.

After this study, research organizations, universities, charitable houses or the government cannot ignore the documented proof of discrimination which was previously denied. It is also no longer possible to assume that absence of women in Science and Technology is due to lack of intelligence or initiative in women. Rather, the positive discrimination they faced in any educational or research institutions while pursuing a serious study or work was the chief factor in relegating them to the background and thus robbing them of the credit they could otherwise lay claim to.

## 3. Constraints

The women face a plethora of problems in taking up, or continuing with, a successful career of their own. More importantly, that they are sometimes compelled to lag behind or even in some crucial stages of their career lose the race for reasons beyond their control is conveniently glossed over. There is no doubt that as in all other professions, women as the

---

\*Lecturer, Electronics & Communication Engineering

child bearers carry the burden (!) of child care as well as the care of aging parents. Unless family-friendly policies are taken in any given work place, the women employees are likely to be distracted from their career in SET or even perhaps, for reasons of compulsion, taken away from it for a considerable period. Time away from the laboratory leads to unfamiliarity with novel technologies and current 'State of-the-art' equipment. Retraining is an expensive and time consuming affair and therefore it becomes difficult to find the necessary financial support and laboratory facilities for a woman who seeks reentry into the research area after a prolonged absence caused by child birth or such other natural reasons. Another deeply ingrained problem is the lack of self-confidence in young women aspiring to be scientists or engineers. This may be due to the fact that the career advisors at school and college levels are often themselves ill prepared to extol the virtues of a career in science, engineering and technology for girls.

#### **4. Action Plan**

To remedy the situation action has to be taken to different levels. Schools, universities and workplaces are the three major areas to be considered. Spurred by the need for new strategies, several policies including quantitative objectives and new administrative structures have been introduced in Europe and America.

The European Union has recently set up a "Women and Science" sector to gather statistics and has created a network for women to take appropriate actions to ensure equal opportunities.

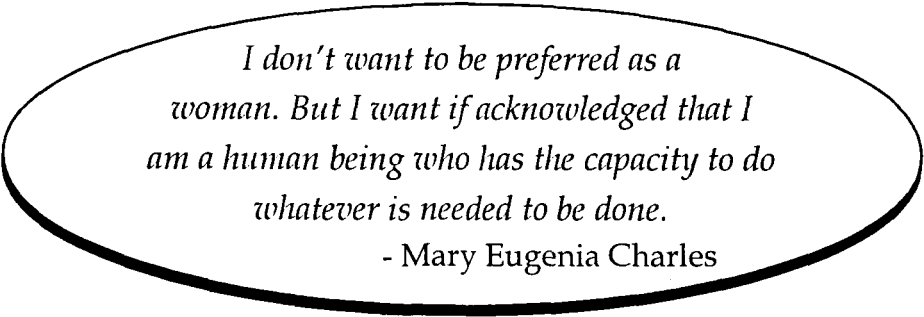
Initially, the concept of equal opportunities was limited to the principle of equal remuneration. Equality in opportunity is now enshrined in the Treaty of Amsterdam (1997) as one of the European Union's objectives. The Treaty's more recent articles enable appropriate measures to be taken against discrimination and provide the specific legal basis for equality of treatment between men and women. In the USA collection of statistics has been practised since 1981, with the director of the National Science Foundation regularly reporting to the government on the number of women in employment and training in science and technology.

In India there is but only very little awareness on under representation of women in the scientific community. Recently a national conference on "Emerging Technologies and Women (ETWOM - 02)" was organized by Shri G. S. Institute of Technology and Science, Indore, during October 25-26, 2002. Their objective was to increase the participation of women into the main stream of technology and to develop vision, strategies, policies and methodologies for their involvement in the growth of technologies.

#### **5. Conclusion**

Despite the onset of the twenty first century women still remain a minority in the scientific disciplines. All we do know now is that there is some hard evidence that gender bias exists. What do we think we should do?

According to Martin Luther King, Jr, "Excellence is the best antidote for racism." This is also true for chauvinism. So, let us try to be excellent.



*I don't want to be preferred as a woman. But I want if acknowledged that I am a human being who has the capacity to do whatever is needed to be done.*

- Mary Eugenia Charles