

## WORKSHOP SUMMARY

### Women in Science, Technology and Engineering

Addressed by the Secretary of State for Trade and Industry and Minister for Women,  
The Rt Hon Patricia Hewitt MP

Held at The Royal Society, 6-9 Carlton House Terrace, London SW1Y 5AG  
on Wednesday 29<sup>th</sup> January 2003

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LORD JENKIN, welcoming the Secretary of State, said that the purpose of the workshop was to build on the Greenfield Report, and explore how to make better use of women in Science, Engineering and Technology (SET). The participants, chosen among those responsible for setting the policies for, and developing the management of, professional staff were, therefore, inevitably largely male.

THE SECRETARY OF STATE said that making better use of women in SET was essential, not only because of questions of fairness, but also because failure to use half the talent pool affected the whole economy. The problem began in schools and universities, where there were declining numbers going into science, particularly physics. It continued with the numbers of women using their degrees in relevant industries – half as many as men – and culminated with the failure to reach top academic posts – while there were equal numbers of men and women getting Ph.D.s, there were 10 times more men than women in the professoriat – to say nothing of board level in industry. There were 50,000 SET qualified women not in employment. Government alone could not solve the problem: a tripartite effort was needed by government, industry and academia. There were valuable initiatives working -, the Science Ambassadors Scheme, the mentoring schemes, the Rosalind Franklin awards, and the law on maternity rights was to be changed, but these were not enough to create the necessary culture change which recognized and fitted individual needs. This aim might be difficult, but it was not impossible, given the progress in other countries – e.g. Singapore. The Government's challenge was to co-ordinate policy across Whitehall – principally DfES and DTI.

Business needed to recognize that inadequate policies worked against its interests. She hoped that the workshop would produce some practical suggestions about how change might be brought about.

MR CLARK summarised the conclusions of the ETB, Royal Society and Royal Academy of Engineering session "complementing Setfair" held on 27 January 2003. These were fast tracking professional qualifications, so they were obtainable at age 28 (average age for chartered engineers was currently 37); improving maternity leave and career break conditions; developing an e-community linking all women in SET initiatives; and requiring professional institutions, HE/FE, business and industry to publish gender and diversity policy, statistics and initiatives. The last conclusion, he stressed, was by no means unanimous.

In the following discussion there was warm support for the first three of these conclusions, but strongly differing views on the fourth.

Major points made in the discussion were: -

1. Science was a passion. Those who had it wanted to give a 24/7 commitment. They couldn't always give it, of course, but failure to recognize the passion, and feed it would kill it. It was crucial, therefore, to avoid interrupting careers and work: every effort must be made to keep women in the system once they had started. This meant not only generous maternity provision, but also childcare help over long periods, up to age 14. It meant providing part time work, home working opportunities, and the ability to keep in touch with professional developments even if not actually

working. Such provision would keep the passion alive in women who had dropped out of full time work, and they would then return.

2. Women preferred to work in areas where there were already significant numbers of other women. In some areas – e.g. environmental science, where 70% were women – there was no problem in attracting and retaining women: in other areas efforts should be made to develop clusters of women working together.
3. Company culture was crucial. Training and induction courses were often off-putting to women, and there was still an inappropriate protective attitude in some areas to women e.g. some jobs were thought to be too dirty or tough for them. Culture change had to be led from the top: it would happen far too slowly if left to itself, where it would inevitably suffer from priority given to other business goals. It would come more easily when staff were recognized as assets, whose motivation and retention then became justifiable in business case terms. Money spent on culture change and facilities or programmes – such as nurseries, crèches, home or part time working, or outreach - then became part of a core budget.
4. Schools were the problem. At primary school level there were still far too many teachers who were afraid of maths and science, and failed to motivate or encourage their pupils, particularly girls. This was still true at secondary school level, where girls frequently failed to find role models among women science teachers. This must be compensated for by getting SET graduates, employed in business or academia, to go into schools and demonstrate the excitement and interest of SET. But don't leave it too late; remember attitudes can get set by age 11. Such visits should be consistent and part of a programme – one offs are poor value compared with a systematic series of visits and talks.
5. Problems in employing and retaining women SET graduates were problems of kinks in the hosepipe. These were trivial compared with the blockage of the pipe lower down. What we should be concentrating on was getting the trickle of women SET entries into HE into a flood. This would not happen until there were far more trained and enthusiastic SET teachers. This meant paying them a lot more, making their jobs more attractive, and assuring them of Continuous Professional development.
6. Companies must ensure that their policies work together. It is no use providing facilities, such as nurseries, if there is a cultural reluctance to accept women using them were as important as men who didn't.
7. Best practice does not spread because of ignorance. People simply do not know what other businesses or institutions are doing, and, if they do, if there are any benefits.
8. The Set Fair proposal for a Working Science Centre was greeted with a good deal of scepticism. It could create more confusion and weaken other bodies, without great benefit. What was important was to streamline funding sources, and this could be done without setting up a new organization.

The workshop concluded by taking up the Secretary of State's request for practical suggestions for advancing the aim of making better use of women in SET. The following were put forward: -

1. Tax breaks to make it easier to employ home helps, nannies, or childcare for women in work. Also proportional relief from university debt on SET women taking maternity leave.
2. Develop case studies showing the benefit of running on-site nurseries etc. on the retention of women staff.
3. Overcome ignorance by publication, not only of measures but also of statistics
4. Government to recognize value of facilities and outreach in setting budgets in the public sector, and to encourage public sector SET employees to work actively as role models.
5. See if there are ways in which child care in the community could be made easier, in spite of the legal difficulties
6. Tackle the teacher problem by pay, other incentives and training. Do not accept anti science attitudes in primary schools. Ensure SET teachers get more remission of university debt than others do.
7. Continue and improve existing schemes such as Science Ambassador and mentoring schemes, but be wary of introducing initiatives, which could increase burden of compliance and create confusion.
8. Back up incentives for SET teachers, outreach schemes, and development of role models by a sustained media campaign.

Sir Geoffrey Chipperfield KBE