

he integrated work and family life. Understandably, the daughter's loyalty seems to trump the journalist's objectivity.

Yet perhaps only she could have played the theme of gambling so well, arguing that her father's strategy was the same at the bench and at the table. He played to win, not to get rich. He was disciplined and used gambling as a test of his willpower. Sjoerdsma's strategy was conservative, but he was willing to take big risks and to bet high stakes when the odds were good. As the author says, he repeatedly beat the odds.

Do not read *Starting With Serotonin* for a story of the selfless thirst for knowledge. Rather, read it for the strategy — both experimental and mercantile — and the passion for competition. Sjoerdsma did it for the love of the game, for better and for worse. ■

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national government schemes. Phipps argues that progress has been limited by targeting “the problem with girls”, namely that they are gender-stereotyped and fail to recognize the attraction of a career in science. The most successful campaigns described address underlying reasons for girls' career choices, such as the expectations of parents and peer group, and pressures from wider society and culture. Less successful were initiatives that attempted to make science ‘girl-friendly’, for example an after-school club that taught computing skills through topics such as celebrity, fashion and music. As Phipps points out, this widely encountered approach reinforces the stereotypes that such campaigns are seeking to challenge.

Phipps presents statistics to show that universities are among the worst institutions in the United Kingdom in terms of gender equality. Women who choose a career in science may receive support from many professional women's groups and networks. Yet participation is often low owing to limited funding and lack of time to participate. Phipps assesses that the success of initiatives has been limited by focusing on helping women to survive and thrive in existing masculine environments, rather than challenging the underlying work culture and perception of the ideal scientist as a masculine figure: rational, competitive, independent and technically skilled.

If we fail to challenge the interaction between patriarchy and the professionals, Phipps argues, then increasing the numbers of women within technical professions “will not bring about the hoped-for transformation”. In law and medicine, despite the fact that women make up a growing and significant proportion, there remains a marked pay gap, and the working culture is largely unchanged. The book does not provide any quick solutions: increased flexibility in working hours and better maternity pay support a few highly motivated women, usually white and middle-class, to develop their careers. These initiatives also underline society's expectation that women will take on caring, domestic roles as well as professional ones.

We all know talented women who have dropped out of science from a feeling of “not being good enough” to do research or to lead a research group. Phipps's book puts this inner voice to rest by showing that such feelings arise from one's experience of society, culture and capitalism, not one's abilities as a scientist. ■

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Challenging stereotypes

Women in Science, Engineering and Technology: Three Decades of UK Initiatives

by Alison Phipps

Trentham Books: 2008. 184 pp.
£16.99, €25.50

The lack of women, especially senior women, in science departments is familiar. Less widely appreciated is the effort that has gone into addressing this under-representation. *Women in Science, Engineering and Technology* presents a history of around 150 initiatives to encourage women's participation in science, engineering, construction and technology in the United Kingdom during the past three decades. Alison Phipps, director of gender studies at the University of Sussex, UK, has compiled a valuable resource for activists, policy-makers and educational practitioners, also providing social and political context and analysis.

To a woman working in science, rather than one working for women in science, the book is much more than a reference manual. It puts our experience in context — within the global economy and the women's movement. Phipps makes a compelling case that achieving fundamental change depends on understanding this context and she urges closer communication between educators, academics and social scientists.

Phipps describes how the shift from manufacturing to knowledge-based economies has created demand for skilled workers in science and technology. As in many countries, attracting more women into technical jobs has been identified as a priority for raising Britain's competitive position in the global economy.

Phipps distinguishes between economic and moral motivations to promote gender equality in science, and alerts us to the dangers of relying on the current alignment between the interests of the economy and women's rights. Economic incentives may change with the political climate, leaving women in a vulnerable position if their skills are no longer valued. Also, the ‘business case’ for equality does not concern itself with the underlying reasons for gender inequality, and undermines the idea of equality as an end in itself.

Encouragement for women to pursue careers in science begins in the classroom. *Women in Science, Engineering and Technology* compares grassroots initiatives in schools with corporate-led and



Schoolgirl Amy's depiction of a typical scientist (left) changed after a visit to a laboratory (right).