I am not a scientist. So why have I been asked to support this book by writing the foreword? I have spent the last four years or so, immersed in the world of women in science, technology, engineering, maths, and medicine (STEM) in the United Kingdom (UK). During this period I have been involved in various initiatives - running the UK Athena SWAN Charter, a successful award scheme that recognises good practice in supporting and advancing the careers of female academics in STEM; researching personal experiences of academic career progression; setting up a mentoring scheme and attending international conferences to share my learning and borrow other ideas (Dutta et al, 2011 ECU, 2012a, 2012b). I am now using my knowledge and experience to implement a programme of work for the Royal Society in the UK, to increase diversity in the scientific workforce.

I am not alone in my effort and enthusiasm for generating change in the representation of women in STEM; many individuals have been dedicating their time and experience to this agenda for a long time. I have been lucky enough to be involved in this work and to be a part of a UK-wide initiative that has garnered considerable support in recent years, including direct intervention by a funder distributing billions of pounds of research money.

What these experiences show is that there are some fundamental lessons, many of which are supported in this book. The authors depict examples of actions that can work to improve the position of women in STEM. To highlight just a few:

- Knowing your baseline data is essential, as is having relevant benchmarking data. This information can be difficult to collect, but it is imperative in order to identify the real issues and any significant trends. Hard data can be the one thing that will convince the most ardent of critics. Chapter 2 provides comprehensive data on women in SET within the UK and USA.

- Data will provide a picture but it will not provide an explanation. To fully understand why trends exist, it is important to go beyond the numbers and conduct qualitative research in order to highlight common experiences, issues, and possible solutions.

- STEM disciplines cannot be lumped together under one umbrella; STEM disciplines have different attrition points, different working environments, and different cultures. As a result, different targeted actions will be needed.

- The statistics provided in the early part of this book make it patently clear that barriers to career progression for women in STEM do exist. Subsequent chapters identify examples of such barriers, including individual difference in self-efficacy and self-esteem; the effect of gender stereotyp-
ing; the lack of role models, mentors, and networking opportunities; the impact of career breaks and part-time working; and experiences outside of work, such as the gendered division of labour and caring responsibilities.

- What should be taken away from this book, with the wealth of experience in this area, is that there are things that can be done to address the underrepresentation of women in STEM, and there are interventions that should be implemented in order to allow women to fulfil their professional potential. Chapter 9 highlights the role mentoring and networking can play in advancing women’s careers; it is essential that opportunities to acquire information relevant to career development are created.

I am a firm believer of mentoring and have seen the impact and heard the benefits gained firsthand. In addition, the Athena SWAN Charter has developed considerable momentum within the UK higher education sector, with membership and successful award holders increasing significantly since its beginning in 2005. The Athena SWAN Charter has championed a number of actions that can be taken to encourage and advance women in STEM, including mentoring and networking; role models; flexible working opportunities; career development workshops; positive action in recruitment; and organisational culture change particularly in relation to decision-making committees, the long-hours culture, and equal pay.

This book makes it clear and obvious that gendered occupational differences persists. The authors provide comprehensible data, include an important psychological perspective, detail experiential evidence of barriers to career progression, and suggest some real opportunities for change. With this resource, there is no excuse for organisations failing to make these changes. Doing so will not only support and advance the careers of women in STEM, but also increase organisational performance.

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Sarah Hawkes has an LLB in Law and Sociology from Cardiff University and a Master’s in Political Sociology from LSE. Sarah has worked for a number of years on women in science projects. In the last few years she has worked for King’s College London, coordinating the ‘Women’s Advancement Initiative’ and setting up a mentoring scheme for female researchers and academics at the Institute of Psychiatry and Equality Challenge Unit (ECU). At the ECU, Sarah worked as a Senior Policy Adviser, leading on Athena SWAN, during her time the number of universities that joined the SWAN Charter rose to 75. Sarah has recently taken up a new post at the Royal Society, as Head of Scientific Engagement, where among other things she leads a new programme of work entitled “Leading the way: increasing diversity in the scientific workforce.”
REFERENCES


