Chapter 9
Differences: Industries and Ethnicity

ABSTRACT

Experiences in other industries and cultures are compared to put the issue of women in IT into a broader perspective in this chapter. The issues of low and declining participation of women are not unique to IT: similar patterns, theories, intervention programs, and results have been noted in other fields. However, in yet other fields women have risen naturally from a small minority to a substantial majority. This supports the thesis of this book that individual interest and choice are the main drivers of career choice. Among different countries and cultures, the proportion of women in IT varies from cases similar to ours, to cases where there is little difference between men and women. However, the latter represent different rather than less gender bias. It is argued that the power of #SocialIT to reach across cultural barriers directly to the individual and their personal interests will help women everywhere by showing them what is possible and giving them tools to achieve it themselves. The overall evidence is that interventions do not achieve their aims. To the extent that they have any positive effect, they do not increase numbers overall or benefit all minorities, merely rearrange the distribution. Not only have interventions had little positive effect, but the warning is made that we need to consider the unintended consequences of our well-meaning interventions.

If your culture doesn’t like geeks, you are in real trouble.

– Bill Gates (Riddell, 2010)

INTRODUCTION

Over my years of involvement in the issues of recruitment, promotion and attraction of women into technology fields, I have seen the perspective expand. Initially the interest was specifically in computing or more generally IT, then over time it became increasingly bundled with the related fields of Science and Engineering, which had been seeing similar issues. This occurred almost across the board in the literature, government policies and campaigns, gathering acronyms as it went: first with SET (Science, Engineering and Technology) and then STEM (Science, Technology, Engineering and Maths).
It is not surprising that we first see our own environment and then broaden our viewpoint to related fields experiencing similar issues. From the other side of that, we can learn from the experiences of people outside our own environment: both in other fields and other cultures. So in this chapter we compare issues of female involvement in industries other than IT and in non-Western or specific ethnic cultures.

INDUSTRIAL REVOLUTIONS

Scientific Analysis

Issues of low and declining participation of women are far from unique to IT. Similar patterns, intervention programs and results have been noted in other fields. Indeed the arguments presented in a United Nations report about the low and falling percentage of women in science are eerily similar to those regarding IT noted earlier in this book: “The participation of women in science can increase their contribution to society, because, among other things, they could influence the agenda for science and technology (S&T) research and development (R&D). However, at present a gender imbalance is observed in S&T education, which favours boys/men in three out of four countries worldwide that report on intake ratios. This is often due to barriers such as inappropriate school environments for girls, safety concerns, teaching methods that favour boys, and varying levels of access to technical and vocational education. Some of these problems can be addressed by promoting gender-relevant teaching methods and materials, and providing funds to promote girls and women in S&T education… To increase the participation of women in science, it would be necessary to promote women role models in STI [Science, Technology and Innovation], allow flexible working conditions, and support women’s recruitment, retention, advancement and leadership in this area” (UNCTAD, 2011).

Asian Scientist (2013) reports that “researchers have found that the number of women in scientific fields is alarmingly low in the world’s leading economies, including the United States, and are actually on the decline in others. The Elsevier Foundation funded study mapped the opportunities and obstacles faced by women in science in Brazil, South Africa, India, the Republic of Korea, Indonesia, the US, the EU. It was led by Dr. Sophia Huyer, Executive Director of Women in Global Science & Technology (WISAT), and Dr. Nancy Hafkin, Senior Associate of WISAT, and experts in international gender, science and technology issues from the Organization for Women in Science for the Developing World (OWSD). Despite efforts by many of the countries in this study to give women greater access to science and technology education, research shows negative results in the areas of engineering, physics, and computer science… the numbers of women actually working in these fields are declining across the board – only 12 percent of the science and engineering workforce in India was female in 2010. South Korea ranks last of the countries in the study in female economic status, access to resources, supportive policy, and participation in the knowledge and STI sectors. In South Korea, less than 15 percent of women are enrolled in degree programs for science and technology fields – a figure lower than the 30 percent in most countries. Only 11 percent of science and engineering enrolments (including bio and health sciences) are women, lower than the average of 21 percent in most countries.”

In Chapter Four – The Old Approach, the suggestion was made of calculating the amount of financial investment into research and intervention programs for women in IT. It seems a further multiplier effect can be applied to include other industries with similar issues. This further stresses how much money has been invested in addressing