Chapter 11
SET Women and Careers:
A Case Study of Senior Female Scientists in the UK

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ABSTRACT

Very few studies of senior female scientists have been conducted in the UK. This chapter explores the careers of 13 senior female scientists in a male-dominated, UK public sector organisation. These women operate within a context which reinforces, 'think management, think male' (Schein 2007). Despite this, they have followed traditional career paths of science qualifications and employment. Whilst many parallels can be drawn with other women in science, engineering and technology (SET) these women buck the trend in that they have achieved senior positions and unusually long lengths of service, post-childbirth, despite little or no help from mentors and support networks. Although these women's experiences of gender relations were variable and they have limited strategic leadership career options, they have sustained a positive work orientation and a strong desire to reputation-build. Notwithstanding their failure so far to break through the glass ceiling, they hold the potential to be role models for others in SET.

INTRODUCTION

Women comprise almost half the paid UK labour force but this has not resulted in gender equality in terms of the jobs that men and women perform (horizontal segregation) and the levels at which they operate (vertical segregation). In the case of the latter, women remain under-represented in senior management positions in the UK (Sealy *et al.* 2008) where vertical gender segregation is most pronounced and where women often exist as 'tokens' (e.g. Kanter, 1977). Whilst a third of managers and senior officials are women, only a few have broken through the glass ceiling into senior management. In 2008, women held just 12% of Directorships in FTSE 100 companies, an increase from 7% in 1998, indicating that progress has been extremely slow (Sealy *et al.*, 2008).

This persists, despite the regulatory route for transition to a public gender regime in the UK,

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one in which women's access to employment is facilitated by the legal removal of discrimination, regulation of working time so that it is compatible with caring and policies to promote social inclusion (Walby, 2004). This poses a problem, as it is at these senior levels that crucial decisions are made and leadership exercised around critical strategic issues. If women are not promoted to senior posts this will continue to act as a barrier in defining career choices for women leaving higher education (European Commission, 2006) and will do nothing to improve the already relatively low numbers of female science graduates taking up SET employment.

This chapter analyses the career progression of 13 female scientists who have progressed to senior positions within a single case study, male-dominated organisation engaged in scientific research and development. The careers of these particular women are of interest because they represent a group who have accessed senior management positions within their scientific disciplines, despite their organisation being male-dominated, at every level and within almost every function. The women interviewed straddle three occupational groups: senior management, SET management and science professionals, reflecting their scientific status and progression into managerial roles within their own scientific disciplines. All have reached senior positions but have yet to reach the highest echelons of their organisation.

BACKGROUND: WOMEN IN SET

In their study of SET employees, Wynarczyk and Renner (2006) report that just two percent of women hold senior managerial level jobs in SET, which is far lower than for women in other sectors. In addition, while the gender division at lower levels of organisations may be improving, this, in common with other sectors, has not resulted in proportionate numbers of women progressing into strategic leadership levels. With an estimated shortfall of 300,000 SET recruits over the next few years, this will have huge ramifications (The Independent, 2008).

In 2008, SET occupations[1] represented 3,142,127 of the UK workforce, of whom 595,606 were female and 2,546,521 male. In the same period, there were a total of 1,112,483 SET managers[2], of whom 153,951 were women and 958,532 men and 133,665 'Science Professionals'[3] of whom 52,615 were women and 81,050 men (UKRC, 2009). Men are six times more likely than women to be employed as SET managers and one and a half times more likely to be employed as Science Professionals. Across 17 EU member states, just three can boast a rate of over 40% for female representation on scientific Boards (Norway, Finland and Sweden) while the UK figure is 31%. Cyprus and Poland have the lowest rates, at just 7% (European Commission, 2006).

The women interviewed for this research have been successful in securing senior positions and this chapter aims to establish how they have achieved this status and what they still need to do to progress further. The main objectives are therefore to explore the career histories, challenges and strategies of thirteen senior female scientists. To achieve these objectives, three related themes are examined. Firstly, career backgrounds, including career challenges and career progression strategies, are explored. Secondly, the extent to which mentors have played a role in the progression of senior female scientists is examined, in the context that mentoring is perceived by the government and SET networks, such as the UK Resource Centre for Women in SET, as an important activity for women's progression in SET (Helsinki Group on Women in Science, 2002). Thirdly, the potential for senior women to act as mentors and role models to other women in SET organisations is examined. The aim is to gain a sense of the challenges faced by senior female scientists and the social conditions that underpin these.

The Gold Standard for Assessing Creativity

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