UNCONSCIOUS AND SYSTEMIC BIAS IN IT

Miriam Hochwald, Armita Zarnegar,
Elizabeth McCarthy and Steven Prince

This article sets out some of the workplace-based problems related to unconscious and systemic gender bias in the information technology (IT) sector, summarises some of the issues as set out in the recent academic literature and details a range of potential systems-based solutions.

Given the challenges of unconscious bias, why do women want to work in IT?

Despite the challenges involved in dealing with the ill-effects of bias, women continue to engage in the IT industry as a professional career choice. In 2008 research into women's experience of IT work, women indicated that they found IT careers to be rewarding, said they were provided with opportunities, and disagreed with prevailing negative stereotypes about the industry (Timms et al, 2008).

What are some of the causes and effects of unconscious and sysemic bias?

Access to mentoring

The current lack of gender diversity in the industry means that there may be a limited supply of appropriate mentors for women professionals and that this, in addition to other organisational factors, works against women's advancement and retention in IT (Fisher et al, 2013).

Tokenism

Unconscious bias and a belief that roles have been awarded with reference to quotas rather than merit can be an issue (Garner, 2015). Kanter's theory of tokenism referred to the relatively few women given prominent positions in a particular occupational setting as tokens. She also argues that tokens are constantly reminded of their outsider status and that their presence serves to increase the "men's club" culture. Retention rates for women in STEM are lower when women hold a higher degree. This can be due to greater isolation, limited availability of senior roles, competition/demands and token status (Kamberidou, 2010).

Meritocracy as a barrier

A study by Castilla et al in 2010 showed that meritocracy, a key feature of tech culture, can create subtle biases against women. They suggested that if the company sees itself as meritocratic, basing raises and promotions entirely on the performance of the employee, women are more likely to get smaller bonuses than men with equivalent performance reviews. Perpetuating the belief of a level playing field through meritocracy may reduce the probability of intentionally interrupting biases fundamentally because their existence is not acknowledged.

Prove it again syndrome

The lack of examples of females in IT can lead to the well-documented "prove it again" syndrome with women having to provide more evidence of competence than men to be seen as equally capable. Within IT women can also experience getting promoted but not being award the title or salary that typically accompanies the new job, and technical expertise is dismissed as soon as they are no longer in technical roles (Williams, 2014).

Stigma associated with requesting family leave

Men who request family leave can experience cultural organisation barriers. They may be viewed as poor organisational members and unqualified for rewards. Compared with control targets, male leave requesters were perceived as higher on feminine traits (e.g. weak and uncertain) and lower on masculine traits (e.g. competitiveness and ambition). This perception uniquely predicted greater risk of penalties such as being demoted or downsized, and fully accounted for the effect of poor worker stigma on male leave requesters' penalties. The poor worker stigma and both agency and weakness perceptions also contributed to their reward recommendations (Goodman, 2014).

Culture of long hours and full-time work

The system of professional work in IT can disadvantage those desiring work/life balance including males and females with caring responsibilities with long hours, lack of flexible work arrangements and full-time rather than part-time work often considered positive indicators of professional culture. Recruitment practices may preclude women by looking at a restricted talent pool, such as full-time workers. Part-time work for programmers is in the single digits accounting for 4.4% in males and 3% in females (OUA, 2015). Sub-specialties classified as IT which enter double digits for part-time work include ICT Trainers, ICT Sales Assistants, Media Equipment Operators, Telecommunication Trade Workers (10.2% M, 0.5% F), Telemarketers (12.2% M, 32.1% F), Telephone Operators (2.3% M, 44.8% F), Technicians (Gallery, Library, Museum, 4.9% M, 56.5% F). Research confirms that less technical roles with a greater emphasis on "soft skills" are over-represented in part-time work roles.

In Australia, there is a two-level employment market where high-status well-paid jobs often involve long hours at the top, and poorly paid, precarious and often part-time jobs at the bottom (Chalmers et al, 2005). There is evidence that working in poor quality jobs may be worse on balance than the consequences of unemployment (Butterworth et al, 2011). Research in the UK has shown that low-wage jobs can cause the worker to be further disadvantaged by time poverty (Burchardt, 2008) that can reduce the opportunity to look for employment on better terms. Consequently for those in professional roles where part-time work or job-sharing is not common, the choices can be stark.

Above average income high-quality jobs can be seen as influenced by a male-centric "ideal worker", not requiring flexible work arrangements balancing house and care work (Pocock, 2003). Within Australia total hours spent in paid and unpaid work does not change substantially. Social norms often place responsibility for domestic and care work on the female (Bittman & Brown, 2007; Craig, 2007). Generous tax transfers and/or family-benefit payments exist for families in which mothers do no paid work, or have very short part-time hours (Craig, L., & Mullan, K., 2010). Australia's maternal workforce participation is comparatively low, with part-time employment the norm. These trends reduce lifetime earnings and subsequent retirement opportunities (Booth & Wood, 2006; Chalmers & Hill, 2007; Craig, L., & Mullan, K., 2010).

Workplace relationships which build or undermine confidence

In a 2013 study of women's experiences of working in IT, women reported that they felt respected (78%) despite still experiencing some discrimination (26%) (Fisher et al, 2013). The responses by female IT professionals suggest that the widely reported discomfort of women is not considered characteristic of the industry but instead arise from specific workplace relationships. The influence of relationships can have far-reaching effects, where they appear to build or undermine confidence, and also influence women's intentions to promote and encourage others to enter IT (Timms et al, 2008).

The maternity penalty

Maternity can also make a job candidate subject to unconscious bias, resulting in being 79% less likely to be hired, half as likely to be promoted, reduced salary and held to higher performance and punctuality standards (Correll, 2007). Females with child-rearing responsibilities that uphold high competency standards and dedication to their job were seen as bad mothers and therefore bad people (Benard, 2010). Unreasonable constraints may be experienced when a female returns to work after maternity leave (Houston & Marks, 2003. Key issues include the level of support from peers and supervisors, access or provision of affordable childcare, attitudes to workplace breastfeeding, family leave options, negotiability of working hours, the capacity of work offered upon return to an employer after parental leave (Coulson et al, 2012; Nowak et al, 2012).