Chapter 5.4
The Cross–Cultural Dimension of Gender and Information Technology

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INTRODUCTION

The underrepresentation of women in the information technology (IT) sector has been widely studied in the contexts of western countries such as North American and Western European countries. These studies indicate that the underrepresentation of women in the IT sector is unveiled in multiple perspectives, including IT access, the development, adoption and use of IT, IT education, and the IT workforce in general and within the IT workforce structure itself (e.g., different levels of IT positions) (Cooper & Weaver, 2003; Gürer & Camp, 2002; Hartzel, 2003; Klein, Jiang & Tesch, 2002; Margolis & Fisher, 2002; Rommes, 2002; Trauth, 2002; von Hellens, Neilsen, & Beekhuyzen, 2001; Webster, 1996).

Why is it important to study issues related to gender and information technology? First, it is argued that the information technology sector should value and leverage all kinds of diversity (including gender diversity as one dimension) to enhance productivity, to facilitate IT innovation, and to develop IT for a wide variety of people (Avgerou, 2002; Roberts, 2003; Trauth, Huang, Morgan, Quesenberry, & Yeo, 2006). Second, it is also argued that women's underrepresentation in and exclusion from information technology can be attributed to power and socio-cultural reproduction of inequality through technology development and use, and the historically social-construction of technology fields as "masculine" domains, which result in a gendered digital divide (Cockburn, 1985; Kvasny & Trauth, 2002; Kvasny & Truex, 2001; Wajcman, 1991, 2004; Woodfield, 2000). Ignorance or failure to address issues related to gender and IT will further marginalize women's participation in future economic and social development, and will endanger social equality and social welfare in general (Kvasny & Trauth, 2002).

A significant trend of the contemporary information technology industry is towards globalization, which is manifested through a

variety of established practices such as IT off-shore outsourcing, global software development, and innovation through global R&D (research & design) collaboration (Sahay, Nicholson, & Krishna, 2003; Walsham, 2000, 2001, 2002). Such a globalization trend of the IT industry and market has put forward new challenges to gender and IT research, to incorporate the cross-cultural dimension. Similar to the rationale for studying gender and IT in developed countries (leveraging diversity and improving social inclusion), Hafkin and Taggart (2001) argued that it is imperative to examine the cultural factors while studying gender and IT in developing countries.

Although the research on the cross-cultural dimension of gender relations with information technology is limited, Galpin (2002) pointed out that the underrepresentation of women in IT seems to be a worldwide phenomenon indicated by statistics. Galpin (2002) also pointed out that there is a wide range of participation in IT by women, which is influenced by complex cultural and societal factors that are different from country to country. Models related to gender relations to IT developed in certain socio-cultural contexts may not be applicable to others (Clarke & Teague, 1994a; El Louadi & Everard, 2005; Mukhopadhyay, 1996, 2004).

In addition to the importance of studying gender and IT within a specific cultural context, there is another perspective of the cross-cultural dimension of gender and IT: the increasingly diversified global IT workforce as a result of the IT skill shortage, global IT outsourcing, and other global IT collaborations. For example, under the pressure of the skill shortage of the IT workforce in America, the IT institutions and industry turn to the global intellectual pool for recruiting talented international students and skilled IT workers through F-1 and H1-B visas (National Research Council, 2001). According to the 2005 ITAA (Information Technology Association of America) report, the representation of Asian IT workers in the IT workforce doubled the number of Asian worker in the overall workforce in America (ITAA, 2005). Globally, an increasing number of countries have a maturing IT sector, which enables them to enter the global IT outsourcing market or to engage in globally distributed collaborative software work through virtual environment (Trauth et al., 2005). The mobility and cultural diversity of the global IT workforce will add more complexity to articulate their gender relations to IT since individuals may have different cultural backgrounds and experiences.

Therefore, it is important for scholars and practitioners to explore the cross-cultural dimension of gender and IT to understand how the nuances of different cultural influences shape women's relations with IT, to build knowledge with respect to the plural perspective of gender and IT research, and to prepare future global IT workforce. In this article, I first articulate the theoretical underpinnings of cross-cultural dimension of gender and IT research, then review some current studies related to this research area, and finally discuss some future research agendas.

BACKGROUND

The theoretical explanations about why women are underrepresented in IT education and the workforce are complex in nature (Adam, Howcroft, & Richardson, 2002, 2004; Webster, 1996). Those theories attempt to articulate the gender IT gap from either the technology perspective (including the IT sector environment) or the people perspective (e.g., women). From the technology perspective, there are two theoretical orientations: technology determinism and social shaping of technology. From the people perspective, there are three theoretical orientations: essentialist theory, social construction theory, and Individual Difference Theory of Gender and IT (Trauth, Quesenberry, & Morgan, 2004).

Technology determinism views technology as a value-free artifact without any biases, and the

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