Environmental Context and Women in the IT Workforce

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INTRODUCTION

The rise of the network society involves a transformation of employment, in which power relations shift with the flow of capital, leading to downsizing, subcontracting and networking of labor. These processes facilitate flexibility and individualization of contractual arrangements in information work. As a whole, there is an increase in self-employment, temporary work, and part-time work, particularly for women (Castells, 1996). This transformation of employment brings heightened consideration about the characteristics of the labor force. Thus, one need is to examine environmental context and the possible connections between economic and cultural factors of a region and the experience of women in the IT workforce. This article summarizes an empirical study presented in greater detail in Trauth, Quesenberry, and Yeo (2005) that explored the influence of environmental context on women in the IT workforce by using the Individual Differences Theory of Gender and IT (Trauth, 2002; Trauth, Huang, Morgan, Quesenberry, & Yeo, 2006; Trauth, Quesenberry, & Morgan, 2004).

BACKGROUND

Previous research has shown that development of an information economy is highly dependent on environmental context factors (e.g., Benner, 2002; Castells, 1996; Kling & Turner, 1991; Trauth, 2000). Importantly, the development of these information economies has been shown to be the result of more than just technological infrastructure (Benner, 2002). The information economy in Ireland was the result of four groups of factors: infrastructure, public policy, economy, and culture (Trauth, 2000). Likewise, Kling and Turner (1991) argue that the development of an information economy is dependent on the number of information workers. Increased focus on information workers brings with it increased attention to gender representation in the IT workforce. Thus, it is critical to investigate the experiences of women in information work as their role has an increasing impact on the overall growth and stability of the network economy.

MAIN THRUST OF THE ARTICLE

This article reports on one aspect of a multi-year, multi-site, interpretive qualitative field study of women working in IT whose goal is to investigate the female under representation in IT. The guiding theory for this research is the Individual Differences Theory of Gender and IT proposed by Trauth (2002; Trauth et al., 2004, 2005, 2006) which examines the individual variations among women resulting from a combination of individual characteristics and environmental influences, in order to explain the under representation of women in the IT workforce.

Fifty-seven female IT practitioners were interviewed between October 2002 and October 2004. Eighteen of these interviews were conducted in Massachusetts, 25 were conducted in North Carolina and 14 were conducted in Pennsylvania. These women represent a wide range of ages, backgrounds,

levels of management responsibility, and degrees of technical specialization. The racial make-up of the women includes Caucasians, African Americans, Asian Americans, Hispanics/Latinas and women from Middle Eastern descent. The interview data is also supplemented by participant observation data and by documentary data about gender and the IT sector in the regions involved in the study.

What emerged from the interviews are several themes about environmental context and women in the IT workforce. The following section discusses environmental context themes of economic and cultural factors from the three regions in the study: Boston, Massachusetts; Charlotte and the Research Triangle Park area of North Carolina; and central Pennsylvania. The cultural factors to be examined are: population migration patterns, ties to region, and attitudes towards women and women working.

Massachusetts Environmental Context

The Boston area is one of the wealthiest regions in the U.S. with a large and thriving IT economy. The information sector in this region grew steadily and boomed in 2001 with the employment of approximately 79,900 IT workers or approximately 4% of the overall labor force in the area. However, in 2003, the information sector showed a decline with the employment of approximately 64,100 IT workers or 3.4% of the overall labor force[1] (U.S. Department of Labor, 2004). In 2000, the national median value of owner-occupied housing units in the U.S. was $119,600 and 66.2% of the population owned a home. Also, in 1999 the national median household income[2] was $41,994 and the per capita money income[3] was $21,587. These figures are much higher in the Boston area. In 2000, the median value of owner-occupied housing units in the Boston area was $221,867 and approximately 55% of the city population owned a home. In addition, in 1999, the median household income was $54,536 and the per capita money income was $28,816. It is important to note that these figures are an average of three counties in the Boston area.[4] When examining statistics of affluent pockets of the Boston area, the figures are much higher (FedStats, 2005).

A noteworthy aspect of cultural context in Boston is the racial and ethnic diversity of its population. Much of Boston's population is comprised of racial and ethnic minorities including African Americans, Asian Americans, and Hispanic/Latino Americans in addition to Caucasian Americans (U.S. Census Bureau, 2000). The regional diversity is also represented in the interviews with women in this study. A number of participants noted the value placed on diversity and the open mindedness in the Boston region. As a result, many women felt it was easier to be a female IT worker in Boston than it would be in other geographical areas.

Several women also shared stories of how employers are proactive in creating a diverse IT workforce. These companies search for employees with a wide range of backgrounds, attitudes, and demographics in order to bring diverse people and mindsets to the workplace. Many participants also explained how employers value and devote significant amounts of corporate resources to diversity training. Furthermore, several women in the study felt that Boston is less hostile to women than other regions. However, even those women who said they did not personally experience hostility in the workplace did acknowledge that discrimination still exists. The women spoke about the difficulties associated with being a female in the IT workplace and succeeding in their careers. Many women shared stories of the challenges associated with moving into management positions and the need to rely upon characteristics—such as assertiveness—that are often socially defined as masculine.

Women constitute a large percentage of the labor force in the Boston region (U.S. Census Bureau, 2000, 2003). Many women in this study felt that being a female in Boston's IT workforce was not uncommon and therefore was not a central factor in workplace issues. Rather, these women felt that other demographic characteristics that they possessed, such as racial, ethnic and sexual orientation differences were more prevalent when workplace diversity issues arose.

North Carolina Environmental Context

North Carolina is undergoing a major transition from an economy based on agriculture and manufacturing to an economy based on IT and knowledge-intensive occupations. Two regions vital to this transition are Charlotte and the Research Triangle Park area. Charlotte is North Carolina's largest and most popu-

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