How Exclusive Work Climates Create Barriers for Women in IS&T

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INTRODUCTION

Organizational climate consists of employees' shared perceptions of rewarded, supported and expected behaviors as well as perceptions of organizational events, practices, policies, and procedures (Schneider, Wheeler, & Cox, 1992). Climate can have significant effects on employee job satisfaction, performance, work attitudes, and motivation (Parker et al., 2003). When an organization's climate is *inclusive,* organizational members feel equally welcomed, respected and valued. Moreover, employees may experience increases in job satisfaction and organizational and career commitment (Major & Morganson, 2009). *Exclusive climates* are linked with turnover, reduced organizational commitment, decreased job satisfaction (Major, Davis, Sanchez-Hucles, Germano, & Mann, 2006) and feelings of anxiety and emotional stress (Brimhall, Lizano, & Barak, 2014).

Unfortunately, women in information sciences and technology (IS&T) frequently experience exclusive work climates (Walton, Logel, Peach, Spencer, & Zanna, 2015). This is due, in part, to the underrepresentation of women in the field. Relative to men, fewer women enter higher education with a science, technology, engineering, or mathematics (STEM) major, while even fewer pursue STEM careers (Hughes, 2014). Currently, women comprise 26 percent of those employed in computer and mathematical occupations and only 27 percent of those employed as computer and information systems managers (United States Department of Labor, 2014). This article details some of the barriers women encounter in an exclusive IS&T work climate, including stereotypes, stereotype threat, the motherhood penalty, work-family conflict, and lack of mentoring.

BACKGROUND

While women's participation rates in male dominated fields, such as medicine, law, or accounting, are increasing, women remain underrepresented in IS&T (Diekman, Clark, Johnston, Brown, & Steinberg, 2011; Walton et al., 2015). This shortage of women is not unique to the United States; in fact, many countries around the world encounter a similar dearth (Jackson, Hillard, & Schneider, 2014). Furthermore, women tend to leave STEM fields for other professions at high rates (Glass, Sassler, Levitte, & Michelmore, 2013).

Women are significantly underrepresented in higher-level managerial roles in the industry (Servon & Visser, 2011; Wentling & Thomas, 2009), stemming from a '*glass ceiling,*' which women encounter when they have greater difficulty climbing the corporate ladder due to subtle barriers that are not as prevalent for men (Adya, 2008; Major & Morganson, 2009). Other barriers women may experience arise from the nature of IS&T work (i.e., long hours, travel, on-call status; Ahuja, 2002; Armstrong, Riemenschneider, Allen, & Reid, 2007) and the IST&T work climate (i.e., male dominated, exclusive; Wentling &

Thomas, 2009). The IS&T climate can be "chilly" for women as they can feel out of place and less compatible with the stereotypically masculine environment of the field (Blickenstaff, 2005). As part of the male dominated climate in IS&T, women may experience exclusion from informal networks within the field, which negatively affects work opportunities, such as job placement and advancement (Adya, 2008) and self-confidence (Wentling & Thomas, 2009).

STEREOTYPES

Gender stereotypes are characterized as either descriptive (i.e., beliefs about characteristics men and women *do* hold) or prescriptive (i.e., beliefs about characteristics men and women *should* hold; Heilman, 2012; Koch, D'Mello, & Schneider, 2014). Both types can incite discrimination against women in IS&T, although in different ways. *Descriptive gender stereotypes* may lead to discrimination against women in IS&T fields because of a perceived lack of fit between typically feminine characteristics that women do hold and the characteristics of a stereotypically masculine field. *Prescriptive gender stereotypes* may lead to discrimination against women in IS&T because working in a traditionally male field violates traditional feminine gender norms. Because of a perceived lack of fit, due in part to prescriptive gender stereotypes, women may be viewed as less competent than men in male dominated fields (Amanatullah & Tinsley, 2013; Ceci & Williams, 2007). When women assert their competence by exhibiting agentic characteristics, however, this may result in *backlash,* negative reactions elicited when gender norms are perceived to be violated (Amanatullah & Tinsley, 2013). If competency is explicitly established, women may still be seen as less likeable and more hostile than their male counterparts (Amanatullah & Tinsley, 2013; Ceci & Williams, 2007). Whereas women's competence tends to be questioned, men's competency is often taken for granted (Heilman, 2012; Koch, et al., 2014).

The IS&T field itself can serve as a barrier to women because of its social construction as a masculine environment, often characterized as anti-social, individualistic, and competitive (Wentling & Thomas, 2009). To the extent that women are stereotypically viewed as more communal (e.g., concerned for others, deferential, emotionally sensitive; Heilman, 2012), and IS&T is a masculine environment that seemingly requires agentic traits (e.g., achievement-orientation, autonomy, analytical; Heilman, 2012) to succeed, women are likely to be perceived as a 'poor fit'. This supposed incompatibility often results in lowered expectations for women's success as well as perceptions of non-conforming women as deviant and less likeable (Koch et al., 2014).

For women that do value communal goals, stereotypes that IS&T is adverse to collaboration and teamwork can lead to disinterest. Diekman et al. (2011) found that female interest in IS&T was bolstered when the field was portrayed as conducive to communal goals. In addition, the IS&T workspace can be off-putting for women when it emits cues of incompatibility with the field. For example, the presence of stereotypical computer science objects (e.g., Star Trek memorabilia, comics) in an IS&T workplace can create signals that reinforce women's feelings of exclusion, whereas neutral decorations (e.g., nature posters, art) can help foster feelings of inclusion (Cheryan, Plaut, Davies, & Steele, 2009).

STEREOTYPE THREAT

Stereotypes are learned from a young age and are so ingrained in us that they can unconsciously affect an individual's perceptions of others (Rudman & Phelan, 2015). Stereotypes can be positive (e.g., Asian individuals are better at math) or negative (e.g., women perform worse than men in mathematics; Ambady, Shih, Kim, & Pittinsky, 2001; Franceschini, Galli, Chiesi, & Primi, 2014). When a group is stereotyped to perform negatively in a certain situation, that group often exhibits less than optimal performance due to concerns of confirm-

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