

# Critical Research on Gender and Information Systems

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## INTRODUCTION

In 1991 Orlikowski and Baroudi published a seminal paper about the role of epistemological lenses in shaping information systems (IS) research. Citing Chua's (1986) classification of research epistemologies they went on to describe the way in which each of three lenses—positivist, interpretive, and critical—influences the conduct of IS research. They concluded with the observation that whereas positivism dominated the IS research landscape, interpretive research was beginning to make an appearance. They also noted the dearth of critical IS research. Throughout the 1990s a few papers on critical research appeared. Myers' (1997) paper on critical ethnography helped to bridge the understanding gap between interpretive and critical research. Ngwenyama and Lee (1997) used the critical lens to guide their approach to examining information richness theory. Doolin (1998) argued that a research approach based on critical theory is needed in order to view information technology within a broader context of social and political relations. However, in the 2000s there has been a significant increase in the focus on critical research, as evidenced in an increasing number of publications, conference streams, special issues, and academic electronic networks concerned with discussing critical IS<sup>1</sup>.

It can be argued that the social nature of activities associated with the development, implementation, and use of IS and the management of people who carry out these activities leads naturally to considerations of social and political power. This consideration of power, in turn, encourages critical analysis. In the social sciences the term critical is used to describe a range of related approaches,

including critical theory (Horkheimer, 1976), critical operational research (Mingers, 1992), critical ethnography (Forester, 1992), and critical management studies (Alvesson & Willmott, 1996). Despite some areas of commonality, critical researchers draw upon a broad range of social theories. These include, for example, the Frankfurt School of critical social theory (Horkheimer, 1976), actor-network theory (Latour, 1991), Marxism (Marx, 1974), feminist theory (Wajcman, 1991), and the work of Bordieu (1990), Dooyeweerd (1973), Foucault (1979), and Heidegger (1953).

## BACKGROUND

It can be further argued that the topic of gender and IS is particularly suitable for critical research insofar as it is concerned with power relations and underrepresented voices in the context of gender and information technology use (Kvasny & Trauth, 2002). The choice of a critical rather than a positivist or an interpretive epistemology for research on gender and IS, however, has definite implications for both the perspective on the topic and the way it is researched (Howcroft & Trauth, 2004).

When the positivist epistemology is applied to the topic of gender and IT, the objective is typically to discover *whether* and *where* there are gender differences. The aim is to uncover gender distinctions, not to explain or theorize why these distinctions have arisen and continue to exist. Examples of this include investigations of women's vs. men's use (adoption, acceptance, etc.) of IT (e.g., Gefen & Straub, 1997) and women's participation rate in the IS profession (e.g., Carayon, Hoonakker, Marchand, & Schwarz, 2003; Truman & Baroudi, 1994). Further, the theory

underlying positivist gender research is often essentialist whereby observed gender differences are understood to arise from the dichotomizing of male/female roles that, in turn, are assumed to generally derive from bio-psychological differences (Wajcman, 1991).

Much of this research is predicated on negative assumptions about women (such as assumptions that women are inherently less technologically competent than men) and is not typically informed by the gender literature (Adam, Howcroft, & Richardson, 2004). This type of research is typically motivated by a desire to advance managerial objectives. For example, it might be to consider gender as a factor of production in better harnessing diversity in pursuit of effectiveness and productivity (e.g., Gallivan, 2003; Igbaria & Baroudi, 1995; Igbaria & Chidambaram, 1997; Venkatesh & Morris, 2000). Problems of inequality are viewed in terms of wasted resources, with increased equality being promoted as a means of optimizing efficiency. The main drawback of this research approach is that the investigation remains on the surface of observable and documentable differences. In so doing, it offers an unproblematic treatment of the topic in which the observation of differential treatment in the workplace by gender has a tendency to become the explanation (i.e., that men and women are treated differently in the IT workplace *because* they are different with respect to their relationship to IT and IT work in some relevant, essential way). Further, by offering only managerialist perspectives, positivist gender and IS research privileges one perspective over others. Hence, the gendered aspects of IT use, for example, are not considered from the perspective of those experiencing it.

In contrast, interpretive studies of gender and IS focus on developing a better understanding of *how* these gender differences in IT use and IT work have come about. The objective is to add context to the observations about gender and IT. This research invokes such theories as social construction (e.g., Nielsen, von Hellens, Greenhill, & Pringle, 1998; Tapia, 2003) or individual differences (Trauth, 2002; Trauth, Quesenberry, & Morgan, 2004) in developing theoretical explanations that incorporate social influences underlying inequality (e.g., observable differences) between the genders. The point of view of this research is not just managerialist; the motiva-

tion is also to advance our understanding of the relationship between gender and IT by understanding the point of view of the women IT users. Thus, an interpretive examination of gender and the IS profession might explore the influence of national culture on the social construction of gender identity as it relates to the IT workforce (Trauth, 1995; Trauth, Nielsen, & von Hellens, 2003; Trauth, Quesenberry, & Yeo, 2005). However, a limitation of the interpretive approach is that the focus is on *understanding* the societal influences, not *questioning* them. It is directed at coping with the dynamics of inequality, not challenging the legitimacy of underlying social influences or undoing them.

## MAIN THRUST OF THE ARTICLE

In response, the objective of critical gender and IS research is to investigate *why* gender inequality exists. The motivation is to understand and challenge power relations that reproduce inequality (Kvasny, in press). Critical social theory, postmodernism, and feminist theory (Adam 2002; Adam & Richardson, 2001; Kvasny, Greenhill, & Trauth, 2005), for example, are used to inform the search for the underlying causes of gender inequality. Thus, a critical perspective on gender and IT might concentrate on the gendered nature of the workplace and technological skills (Wilson, 2002). This moves the research away from positivist and interpretive themes of profitability, efficiency, effectiveness, and gender identity, and towards themes of control, resistance, and inequality.

Critical researchers also embrace the social and political influences on their research, rather than negate these assumptions and beliefs. They aim to balance their interest in the people being studied with an awareness of less explicit ideological and structural forces. This is in contrast to what Bhaskar (1979) has described as the "linguistic fallacy," the claim adopted by many interpretivists that subjects, concepts, meanings, and accounts of their actions cannot be criticized. In critical research the spotlight shifts from an exclusive focus on individuals, situations, and local meaning to the systems of relations, which make such meanings possible. This is not to suggest that experiences are ignored; rather they

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