Gender and Information Systems Research at the University of Salford

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INTRODUCTION

In this article we showcase the work of the GRIS group at the University of Salford in the United Kingdom. Alison Adam and Helen Richardson have been working in the field of gender and IS for many years and have recently been awarded funding from the European Social Fund (ESF) to research the under-representation of women in the IT labor market in the UK. Claire Keogh and Angela Tattersall are research fellows working on the WINWIT (Women in (North West) Information Technology) and DEPICT (Directing Pay in Information and Communications Technologies) projects and Karenza Moore and Marie Griffiths are research fellows working on the WINIT (Women in Information Technology) project. In this account we discuss the theoretical foundations of our research and our work to give gender and IS research a voice. We then present brief findings from research to date that encompasses the IT labor market, gender and online learning and in particular government strategies purported to encourage women to engage with the information society, gender, and home e-shopping, and the contribution of feminist ethics\(^1\) to IS research.

GIVING A VOICE TO GENDER AND IS

The GRIS group at Salford consists of two faculty members (Adams & Richardson) and four researchers on funded research projects (Griffiths, Keogh, Moore, and Tattersall). In our research, we aim to bring a solidly theorized position based on feminist theory to practical empirical research on women and gender in IT and IS. In taking such an approach we critique work which adopts an often tacit liberal position\(^2\), which does not address underlying reasons for underlying inequalities between the men and women in IT and IS\(^3\). We see such work as having a political dimension, where inequalities should be identified and described.

The Salford approach is exemplified in a seminal paper by Adam, Howcroft, and Richardson (2004), where we discuss a decade of neglect and reflect on the field of gender and IS, hoping to stimulate a new area of discourse and offer insight into the topic of gender in IS. The basic argument presented is as follows. First, the topic of gender is inadequately studied within the IS discipline. This is evidenced in the dearth of published papers on this topic in highly-
ranked IS journals. Second, the concept of gender in IS research largely lacks theorization. IS is a field of research which has its core concern as “the development, use and impact of information technology in business and organizational settings” (Myers & Avison, 2002, p. 3). Within this article we provided a detailed analysis of recent research, which highlights a number of problems as statistical studies often take gender to be an unanalyzed variable. The gender implications of potential transformation, from new information and communication technologies, continues to be ignored. As noted elsewhere (Lohan, 2000; Wacjman, 2000), gender must be taken into account if we are to achieve a fuller understanding of technologies.

When considering the question as to why the issue of gender is largely neglected and under-theorized in the IS literature, one explanation lies in the development of IS as a discipline. The field is comparatively new and many academics are often placed in a minority position within their respective institutions, aligned with a range of diverse disciplines, such as computer science, management science, and organizational science. Many of the disciplines from which IS has arisen have been primarily associated with the functionalist paradigm which focuses on the development and use of information systems in narrow technical terms, often disregarding their organizational context. As a consequence, much time has been preoccupied with resisting technologically deterministic views of technology and by arguing for recognition of social and organizational issues.

This reaction against functionalism has been coupled with a desire for intellectual respectability and the need to create a niche for IS as an emerging discipline. As a result, it is seen as essential that “proper” research topics are established and unfortunately gender does not appear to fall within these parameters. Any claims regarding gender are claims about how we frame our social, political and organizational existence, yet these are seen as potentially threatening to the core of IS. Consequently, this adds to the dearth of research on gender and IS. Hence, we create a self-fulfilling prophecy, as the tacit lack of legitimacy of gender and IS as a research topic results in little or no attempt to progress in the area, and it then becomes viewed as a topic unworthy of publication and projects.

**Dichotomizing Gender: A Problem of Statistics and Alternative Approaches**

In studies which we critique in Adam et al. (2004), population samples are surveyed and gender is seen as a dichotomous variable, where specific differences in the genders are looked for and where corresponding hypotheses are of the broad form: women will do some behavior less or more than men do the same behavior. We argue that this style of statistical analysis forces gender into polarized masculine and feminine categories, therefore emphasizing differences between the two and reinforcing stereotypes. Statistical studies which cite gender differences can be analyzed endlessly, but at some point one needs to consider the deeper, underlying reasons for women’s absence from the technical sphere.

Hence, we wish to contribute to research which goes beyond the traditional commentary of “add-more-women” and are instead pointing towards directions where future research on gender and IS could lead. Members of the GRIS group acted as guest editors for a special issue on gender and IS of the more critically-inspired journal *Information Technology and People* in 2002. This included: an examination of socio-cultural influences on women in the IT profession (Trauth, 2002); a consideration of discourses that represent male and female workers’ social and technical skills in the software development industry (Woodfield, 2002); a study of contradiction and resistance in nursing information systems (Wilson, 2002); and an analysis of the role of gender in the domestication of computers in the home environment (Habib & Cornford, 2002). Similarly, a recent paper by Adam (2002) provides a critique of the total neglect of gender issues by IS researchers concerned with the Habermasian notion of emancipation.

**GENDER AND THE IT LABOR MARKET**

Our research into the UK labor market is funded by three European Social Fund projects. The aim is to consider the underrepresentation of women in the North West UK and throughout England and also to
address salary secrets and pay discrimination in the ICT sector. In this section we focus on the state of gender and the IT labor market. In particular, we report on the key issues and themes raised by a series of in-depth interviews and an online questionnaire which were undertaken as part of our field work conducted throughout 2004.

A recent comparative survey of the IT workforce in Germany, Holland and the UK indicates that women are hemorrhaging out of the UK IT workforce. Although women are making inroads into technical and senior professions, there remains a “feminization” of lower level jobs, with a female majority in operator and clerical roles and a female minority in technical and managerial roles (Platman & Taylor, 2004).

The results of our research suggest that women often have a hard time in the IT industry, including having to accommodate a long hours culture where flexibility often means constant availability (Hoque & Noon, 2004). This culture serves to marginalize and undermine women. Our interviews with individual women in the IT industry enabled us to explore in more depth concerns raised by past and contemporary academic work, such as that of Morgan, Quesenberry, and Trauth (2004) on the existence of “Old Boy’s Networks” in the IT industry—we were better able to understand the organizational and socio-cultural context in which these women’s experiences are embedded.

We report very briefly on some of the issues raised through our empirical work.

**On What Constitutes “Working in IT”**

Our interviewees and questionnaire respondents expressed job satisfaction particularly with the opportunity to combine technical skills and knowledge with “people” and communication skills. However, it is notable that these often highly technically skilled women play down their technical knowledge when talking about their work in general terms, preferring to think of their role as using technology to manage and/or help people. A striking initial feature is the vehemence of women saying “I’m not in IT but…,” “I’m in sales,” “I’m in the people part of the organization,” “I’m a manager”—overwhelmingly “I’m not in IT.”

**On Being an “It” in IT**

The situation of being a woman and issues of self and identity at work in male dominated IT workplaces was often discussed. As one respondent put it:

*I have almost forgot that I’m a female in this business, I’m not denigrating being a woman in any way but I’ve almost had to push aside being a female and get on with the job like any man would do.*

We argue that the ways in which women in our study distanced themselves both from IT and from their gender demonstrates that women struggle to become comfortable with gender identities in relation to IT as IT is so often related to masculine technical skill. In our study this often manifested itself in terms of a loss of confidence in the women we interviewed.

**On Masculinity and Organizational Culture: Exclusion from Masculine Spaces**

There is evidence of male-dominated informal social networks within the IT sector. Women felt excluded from masculine technical work in intangible ways and yet other forms of exclusion may actually be spatial in nature, in terms of women in the IT workplace being discouraged from using certain technologies, or being excluded from particular “male” spaces, as an interviewee detailed:

It took me half a year to gain access to my own training lab, because my guys considered that no girls or females should be allowed in the lab so I asked “Can I just go and see it?” and (they responded) “women are not allowed in the lab, what are you going to do there?” I said “Excuse me there must be a difference as a manager. I must be allowed in even if it is just to look around. I’m allowed in. I’m a manager.”

**GENDER AND ONLINE LEARNING**

Research about Information and Communication Technologies (ICTs) in society is often set in the
context of the “new orthodoxy” (Huws, 2003) using phrases such as the “era of ubiquitous computing,” “information society,” or “global knowledge economy.” In this context from all corners of the globe, the online revolution is proclaimed. The imperative is to connect; to shop, work, learn, be governed, even fall in love online. Government initiatives proliferate globally, stressing the urgency for citizens to “engage” with ICTs. ICTs are being introduced to the teaching and learning process at an increasing pace. E-government ministers are particularly concerned about the “have-nots” and “have-nets” in this “digital revolution.” Yet research in schools and the HE (Higher Education) sector looking at women learning online have indicated barriers. French and Richardson (2005) discuss how gendered relations in the home, work and education go far beyond having access to information technology (IT). They illustrate how these relations contribute to the shaping of the gendered experiences of using technology in education.

Women’s overall participation in Higher Education in the UK has actually exceeded the numbers of males, yet women are choosing not to follow IT and computer science as a degree option. Women lack knowledge of IT and computing as a career and have an image of computer science as nerdy, geeky, anti-social, machine-orientated, mathematical and solitary. The finding that there are relatively few women lecturers in IT reinforces the idea that IT and computing is a male domain. If women students have to consult male lecturers, professors, and tutors every step of the way, then this gives a clear message about the world of IT and technology. Schools and universities reproduce gendered expectations about the use and capabilities of IT (Mahony & Van Toen, 1990) and computer scientists as “experts” have continued to create a “chilly climate for women” (Crawford & MacLeod, 1990).

GENDER AND HOME E-SHOPPING

Helen Richardson began this research in 1998 at the height of the dot-com boom. At the time the literature was divided. In the utopian “hyped” fantasy world, the High Street by now would have ceased to exist (De Kare-Silver, 1998). It was predicted that we would all be engaged in shopping through various media and shopping would have been transformed beyond recognition. On the other side of the spectrum, commentators suggested that e-shopping would have “no impact” (Markham, 1998) and would be an irrelevance. Of course the dot-com collapse in 1999 dented the e-shopping hype; nevertheless, the dot-com myths (Howcroft, 2001) still reappear and reinvent themselves when the next “revolutionary” media appears on the scene.

Home e-shopping though, enables consideration of engagement with ICTs in the very personal and private sphere and how technologies become embedded into everyday life. This research considers domestication of ICTs into the household—a political and contested social space (Silverstone & Hirsch, 1992) where scarce resources have to be competed for (Green & Adam, 1998).

Studies of home e-shopping need to be set in the context of cultures of consumption particularly in an “era of ubiquitous computing.” We are being urged to consume and to engage with ICTs in the home. We are encouraged to use PCs in the home as an aid to study, for leisure, for electronic governance, and to e-shop, using a variety of home-based media.

Home PC ownership also has a strong association with the daily bombardment of digital divide rhetoric as well, demanding an individual commitment and responsibility to “self-help.” In other words, the message is embrace the ICT “revolution” or be a victim of digital “have-not-ness” brought about, it is implied, by personal inadequacy and culpable neglect. Many people are living busy lives with an overload of domestic and work commitments in the everyday struggle to “make ends meet.” Use of ICTs in the home in this context is just another thing to be dealt with.

A clear theme emerging is that household maintenance tasks are not shared equally and so there is unequal access to “spare time.” Households are home to a plethora of technological gadgets associated with leisure and communication. What is absent is the leisure time to use them. Moreover, there are tensions and contradictions evident with home e-shopping where the household is also encouraged to be an arena for individualistic consumption as well as an arena for family life and relationships.
GENDER AND COMPUTER ETHICS

Alison Adam has been researching this area for the last five years (Adam, 2005). Computer ethics research is often gender blind except for statistical studies which look at whether there are differences between men’s and women’s decision making in relation to computer ethics problems. Instead, a feminist approach would de-emphasize ethical decision making, looking instead to problematize gender in relation to topics such as privacy, hacking, cyberstalking, surveillance, and so on, arguing that many of these topics cannot be fully understood unless the gender dimension is analyzed. Importantly, this approach also looks to feminist ethics rather than traditional ethical approaches to emphasize care and relational networks over individual moral agents.

For instance, considering gender in relation to hacking it might be supposed that this involves the question of whether there are any women hackers. Whilst this is certainly of interest, Adam (2005) argues that there are other important issues in relation to gender and hacking. A feminist analysis of the “hacker ethic” reveals that the apparently egalitarian ethic of the hacker serves to exclude those who are not educated middle class males without family responsibilities.

CONCLUSION

In this account we have showcased the work of GRIS at the University of Salford. We intend to continue our research into many aspects of gender and information systems to shape this critical research field in our quest for transformation and emancipatory change.

REFERENCES


ENDNOTES

1 Feminist ethics is an alternative form of ethics inspired by feminism which emphasizes relational moral theories such as maternal ethics or an “ethics of care.”

2 That is, adopting an unspoken or implicit political position which recognizes that there are inequalities but does not explore the deeper structural reasons for inequalities.

3 “IT” is meant to refer to information technologies such as computers, modems, printers, etc. The term “ICT”—information and communications technology—is the broader term and is often used to encompass network technologies. However, “IT” is the older term and many people use this term to include network technologies, even though, strictly speaking, “ICT” should be used. “IS”—information systems—encompasses the study of IT and ICT in social and organizational settings.

4 Salary secrets are the situation in many IT jobs where salaries are kept confidential—often on pain of dismissal—this conceals gender pay discrimination.


6 Old Boy’s Network refers to male informal networks which serve to promote and support men in organizations and which exclude women and so act as a barrier to women’s progression.

7 Computer ethics is the study of ethical problems in relation to computers and ICTs.