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MAKING THE LINKS: DOMESTICATION OF ICTS IN THE GLOBAL KNOWLEDGE ECONOMY

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Abstract

This paper considers the historical, social, economic, and political context of information and communication technologies (ICTs) used in our everyday lives. Under the pretext of engaging with a supposedly transforming new economy, society, or epoch, we are urged to be on-line everywhere and anywhere signifying new ways of living, loving, being governed, and educated. This paper critiques these perspectives through an investigation of the domestication of ICTs in families and households in the United Kingdom and draws on an empirical study of gender and home e-shopping as an illustration of the gendered consumption of ICTs in UK households. Studies of the domestication of technologies have developed from those concerning technologies of household maintenance to considerations of technologies for leisure in the home. In the so-called global knowledge economy, however, the domestication of ICTs and how they are embedded into the family and households today is a neglected area of research and one that is often rooted in flawed views of technological determinism and gender neutrality. This paper calls for analysis of the domestication of ICTs in the global knowledge economy to be placed in context rather than falling into faddish hype or unwarranted dystopia.

Keywords: Global knowledge economy, domestication of ICTs, gender and home e-shopping

Introduction

When analyzing the global knowledge economy, it is easy to slip into a technophile's fantasy world of intelligent shirt buttons, smart homes, and logging onto lampposts on the urban street. A technological deterministic view of the world—regarding technology as given, autonomous, or neutral—often leads to extremes of revolutionary hype or alternatively deep pessimism. This paper starts from a standpoint of critiquing notions of new and transforming environments, using this critical lens to focus in on families and households in the UK. The household is a complex social, economic and political space that powerfully affects both the way technologies are used and their significance (Silverstone and Hirsch 1992). We know little about the economic or social context of the use of technologies in the home or how ICTs are appropriated and consumed in households, including the gender dimensions of this and the negotiation involved (Green 2001). A feature of the UK family today is the blurring of the private and public as working at home increases and the importance of the home takes on new significance with what is *private* and what is *public* becoming hazy (Huws 2003).

Considering the domestication of ICTs in UK households, the paper draws on an illustrative case study of gender and home e-shopping. E-shopping stands for electronic shopping, meaning purchasing in a non-store retailing setting and in the UK involves home use of a PC with Internet connection or cable or satellite TV and a telephone, also implying access to time, technology, and credit. At once a mundane aspect of everyday life raises questions. How are ICTs domesticated? Who is using what, why, when, and how in the home? Households are dynamic and involve relationships. Within this setting, e-shopping implies consumption of goods and so concerns the political economy of the household and the cultures of consumption of which e-shopping is part.

The paper continues as follows. First, it discusses new and so-called transforming society, economy, and epochs, placing the argument in its historical, political, social, and economic context. Using this critical lens, it focuses in on the domestication of

technologies in UK households. The results of a five-year qualitative and quantitative enquiry into gender and home e-shopping in the UK are analyzed. The enquiry consisted of a longitudinal study based on a focus group of seven households from 1999-2004, six self-selected in-depth interviews of women who were known to use ICTs in the home conducted during 2004, and 216 on-line questionnaire respondents during August-November 2004. The paper concludes by calling for analysis of ICTs in the global knowledge economy to be placed in context rather than falling into faddish hype or unwarranted dystopia.

The Global Knowledge Economy

Castells (1996) describes a brave new world where industrial society has apparently been left behind, knowledge has eclipsed manufacturing, and the human mind is a productive force. On the face of it, it is a consumer-led society where collective identities have ceased to exist (Campbell 1995). Instead, individual patterns of consumption appear important and individual expressions—like that of shopping behavior, sexuality, and many other manifestations of class, gender, ethnicity, and culture—seem to shape our atomized, particularized experience.

Much of the governmental discourse in both the UK and elsewhere is about the inevitability of globalization and invokes new information technology as an autonomous and largely unassailable influence. Bourdieu (1998) suggests that these analyses are a submission to the values of the economy where a return to individualism means not only blaming the victim for their own misfortune but also an attempt to destroy any notion of collective responsibility lest this may interfere with commercial interests. Johnson (2000) notes how technocratic discourse, globalization, and free market economics coalesce into an extremely powerful ideological force.

How is the global knowledge economy defined? Table 1 summarizes the analytical dimensions of contemporary economic, social, and epochal perspectives, the terms generally employed in the literature, stated features, and a critique of these features. Discussing the UK as a global economic player in 2004; then, the model of a so-called global knowledge economy and information society most closely represents the dominant arguments.

Reflecting on the debate, we can observe two conflicting perspectives. On the one hand, we view a prosperous global community living peacefully together as an interconnected human family. On the other hand, ICTs serve as a means to maintain or worsen the gap between the haves and have-nots by traditional socio-economic factors and the digital divide (Nordensteng 2004). Kvasny (2004) suggests that a clearer term is digital inequality and that digital divides cannot be discussed solely on the terrain of IT, where oversimplified constructions of IT and its values leads to social justice being reduced to bottom line calculus and only tolerated when costless. She continues graphically to describe how some sections of society as a result are “catching hell,” in other, words are at the sharp end of social suffering and hardship.

Analytical Dimensions	Examples of Terms	Examples of Stated Features	Critique
Economic	Weightless economy (Quah 1999) Knowledge economy Digital economy	Global competitiveness depends on knowledge. What counts is knowledge and information not manufacturing.	Manufacturing is still crucial. Nation states thrive. Global markets are controlled.
Social	Post-industrial society Knowledge society Information society	Demise of social identity. Digital divide needs to be addressed for global citizens to engage with the new society.	Digital inequality is a more appropriate term than the digital divide. The rich are global the poor are local (Eagleton 2003).
Epochal	Digital age Information age Era of ubiquitous computing	Transformational impact of information and knowledge. Global networks.	Technologies and their infrastructure are not available on a global scale. Localization persists. The current world economic state—global capitalism—has historical roots.

Case Research: Domestication of ICTs, Gender, and Home E-Shopping in the United Kingdom

This on-going research commenced in 1998 at the height of the dotcom 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 be an irrelevance. Of course, the dotcom collapse in 1999 dented the e-shopping hype; nevertheless, the dotcom myths (Howcroft 2001) still reappear and are reinvented when the next revolutionary media appears on the scene.

What discourse about an global knowledge economy reveals is a burning desire to direct the future, regarded by Wacjman (2000) as symbolic and a highly valued and mythologized activity. Of course, there are versions of the future. Moore (2003) describes the corporate versions that seek to produce corporate identities presenting a future that is ultimately knowable through expertise resting on the valued endpoint of competitive advantage. The urge to consume in a domestic setting with such cultures of consumption inevitably linked with domestication of new media and communication devices is very attractive to this corporate vision. However, this paper contests that the future and what technologies we have and how they are used are not inevitable.

Gender and Home E-Shopping in the United Kingdom

For many people, “doing the shopping” conjures a picture of weekly purgatory, a stress-filled domestic chore to be endured. Yet “going shopping,” particularly for women in the UK, is a pleasurable leisure pursuit involving browsing, meeting with friends, and the anticipation of returning home clutching bulging carrier bags. It’s not surprising, therefore, that in the UK shopping for pleasure is the most popular out-of-home leisure pursuit for women (MINTEL 2000). On-line shopping in the UK is far from achieving that status and on-line shoppers are at present technically aware, fairly affluent, and predominantly young men (Richardson 2000).

UK Households

With the urge to home e-shop, the household becomes the focus of enhanced consumption and so the lens shifts to the family. Many policy makers and commentators decry the new family in the new economy in the new global knowledge economy. German (2003) points out that, in the UK, there has been a dramatic increase in single-parent households in the past two decades. However, as German explains, while the family is broken down by the effects of capitalism it is also maintained and reinforced by capital as the cheapest, most convenient, and most socially stable way of caring for the existing generation of workers and reproducing the next generation. The family fulfils too precious a role to be left to free market individualism. In reality, three-quarters of households in the UK are still headed by two-parent families and men and women are moving closer together in terms of work and domestic life but not in circumstances of their choosing. They do so “against a backdrop of continuing women’s oppression and intensified exploitation for both men and women” (German 2003, p. 31). Fitting into these roles is hard work—for women, it means working for less than equal wages, and for men, increased unpaid childcare in the home.

Yet the family is a gendered institution and is often taken for granted. Wharton (2005) describes how the family is viewed as “somehow functional for society rather than a social construction and changing in relation to history and culture” and she continues to observe that although family diversity is a social fact, this is “obscured by a set of taken-for-granted beliefs about the family as a social institution” (p. 105). These include myths of the nuclear family, the heterosexual family, women as mothers and caretakers, and men as fathers and breadwinners. However it is these myths that inform the choices made, including government and employment policies. So in summary, UK domestic households cannot be considered apart from consideration of gender and the role of the family in capitalism today and this includes gendered ways of knowing and being which become an “inextricable part of the intimate details of everyday life” (Silva 2000).

Gender and Technology

Clearly domestic technologies and technologies in domestic settings are “embodied with gendered meanings during their marketing, retailing, and appropriation by users” and the symbolic meanings attached are continually being negotiated and reinvented (Wacjman 2000, p. 455). Although in the domestic sphere many technologies are used by women—from the microwave to the

washing machine—the “world of technology is made to feel remote and overwhelmingly powerful” (Faulkner 2000). Just as technology and society are mutually constituent, so gender and technology are co-constructed. Feminist technology studies conceive of a two-way, mutually shaping relationship between gender and technology in which technology is both a source and consequence of gender relations and vice versa (Wacjman 2002). This argument regards gender as a fundamental way of organizing and classifying our social experience (Adam et al. 2001) and as Suchman (1994) points out, categories have politics. Gender can be a highly politically charged means of classification, as what is classified as masculine is often taken to be of higher status than something that is regarded as feminine (Evans 1994). The argument is put that there is a need to theorize both the construct of gender and the construct of technology (Wacjman 2000). If not, then technological deterministic ideas of technology being fixed and immutable abound and there is also the effect that women and men appear as autonomous categories, de-emphasizing the effects of age, class, and ethnicity (Richardson and French 2002). Further, it promotes flawed discussion about essential or intrinsic male and female characteristics and how these are reflected in attitude to technology acceptance (Adam et al. 2001).

Consumption of ICTs in the Home

How does the domestication of ICTs fit in here then? How are ICTs appropriated and consumed in households? For the purposes of studying cultures of consumption, clearly an issue is how new technologies have impacted not only on home e-shopping but in the household generally. Green and Adam (1998) have observed the gendered social relation of domesticity that surrounds the use of ICTs. Hynes (2002) adds another dimension in terms of how the routines and habits of everyday life are shaped by the use of technology and how in turn the technology is shaped by everyday life and indeed often the gender dimension is ignored. So the concept of domestication is seen as expressing a process of shaping a technology to an acceptable form within the family. Yet homes essentially involve relationships (Habib and Cornford 2002). Indeed, “the new debates on household technologies have begun to engage not only with issues of power and economics, but also with the issues of moralities, choices and strategies *within* the nexus of family and personal relationships” (Habib and Cornford 2002, p. 338).

Research such as the Home Net project has shown how home computers are used predominantly for communication by adults in households (Boneva et al. 2001), although PCs are often bought with children’s education in mind. In this context, women often view the home computer as a shared family resource and don’t prioritize their own use or access to it. Research indicates that men are much more likely to see the computer as belonging to them and therefore prioritize their access (Richardson and French 2002). Home PC ownership 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 in this study are “catching hell,” 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.

Research Methodology

The qualitative enquiry involved seven households representing focus groups who guided the ongoing research. These households were visited on a regular basis over 5 years, enabling observation and developing understanding of the changing dynamics of family life and use of ICTs in domestic settings. Six in-depth interviews were also conducted during 2004 with women known by the researcher to be using ICTs extensively in the home. Prior to the interviews, however, little was known about the extent of their ICT use, their households and family life, or their attitudes and experiences with e-shopping. Respondents of the on-line questionnaire, conducted from August to November 2004, were selected for analysis using the snowball technique. There were 216 respondents during this period, mainly UK-based and living with others; only 14 percent lived alone. The respondents living with others mainly consisted of households with a male adult and female adult and children. Respondents were mainly employed and were spread among the age categories. Nearly all used the Internet and had done so for over 3 years. Half the respondents had more than one personal computer in the home. Only a quarter had a dedicated room for the PC and so it was located in shared household space.

The qualitative enquiry centered on gaining an understanding, in particular, of women’s experiences in the home. With the troubling words *gender* and *technology*, it can be difficult to give voice—and weight—to women’s experiences. However, as McRobbie (1997) states, we can feel the anxieties about essentialism, know the nerves about making “truth-claims,” worry about undermining the status of lived experience in a post-structuralist and deconstructive academic climate, and experience the insecurities of writing for and as women without claiming to be their representatives, and *still* (carefully) undertake research on the lived experiences of sexed subjects-in-culture (Moore et al. 2005). In these terms, Adam and Richardson (2001) stress how

feminist epistemology emphasizes making knowledge through the lived experiences of women's lives and applying feminist epistemology to Information Systems research, in particular, implies that social and cultural context is paramount. In the following, analysis the participants came up with new names to ensure anonymity.

Case Analysis

This section briefly outlines some of the research findings in terms of how ICTs are used in the UK homes involved, experiences and attitudes about home e-shopping, and gender differences in relation to time, household management issues, leisure, and issues relating to gender and technology, and the domestication of ICTs.

Home e-shopping involves having access to technology, time, and credit in the home. All of the homes in the study housed a myriad of technological gadgets and ICTs. In analysis, it was evident that there was not only competition to use the technologies but also competition for the time that children and partners want and expect from the wife, mother, or female partner in the home and this conflicted at times with women's use of ICTs. French and Richardson (2005) suggest that who owns and controls the PC is an important issue in the dynamics of the domestication of ICTs. In analysis, frequently the PC was bought for the woman in the household—for work or study purposes. However, the reality of access was very different. In the in-depth interviews, we had discussions about who “owned” the PC and who had priority use. Amanda and Mary both commented that the PC was bought with their study in mind. In practice as Mary pointed out,

The PC was bought for ME but [husband] muscled in and when I got home there were all these users on it with their own areas and passwords.

Amanda suggested that ideas about ownership soon changed.

The PC was bought for me but the rest of the house sees it as a shared item and I have to get in the queue.

Issues surrounding the political economy of the gendered family are aroused in this comment from Amanda:

I say “I really need to use the PC,” [husband] says “I really need to use the PC”—he ends up using it, he sees it that he should have priority use because he's working and “bringing the money in.”

Where the PC is situated has an impact on family life. These interjections give an inkling of the dynamics involved. In the households visited, childcare is rarely far away for women in the home. Fran talked about an idealized time before the introduction of the laptop into the home.

We're scattered all around the house now instead of gathered together round the fire. He's [husband] doing his work somewhere. I'm in the front room on this [laptop]. Then at the same time I'm trying to stop the kids playing football against the wall.

Laura and Jed's house was chaotic with Laura trying to work in the kitchen and Simon, Matthew, and Mark in and out for food, a chat, to borrow money, and so on. Laura pointed to her kitchen table:

There's the PC on the kitchen table surrounded by mountains of paper—I don't know when we last had a family meal on the kitchen table. He [husband] gets annoyed, he says “I cant see the floor or the table.” Everything spills out onto the floor. Wires are hanging across the doorway and everyone has to step over them and the dog gets strangled. Then Mark shows me his Irish dancing in the middle of it!

Amanda showed me the PC in her dining room. It felt like a huge imposition on the communal space. She said,

It's here in the dining room—it clashes with everything—the TV, people talking. It's in the way but it's the only option.

Although most of the on-line questionnaire respondents had a PC and had used the Internet for over 3 years, there was not a great deal of e-shopping going on. Instead the home PC was used for study purposes, working at home, and leisure, particularly communicating with family and friends via e-mail, sometimes combined with use of other ICTs like web cams.

PC for Study in the Home

Some women face a great deal of domestic pressure when in education and are more likely to have to try to balance study, work, and home responsibilities (Maynard and Pearsall 1994). On-line courses can exacerbate domestic tensions for women.

No open learning pack or distance learning course minds the children, cleans the toilets and does the ironing; rather these educational incursions into the home add further demands which can be very difficult to reconcile with existing home activities (Evans 1994, p. 53).

Maynard and Pearsall (1994) found that student mothers often felt they had to reassure the family of the minimal repercussions their studies would have on family life in order to get approval. The findings of this study agree, as can be seen from Rachel's comment:

Well it's about juggling. Learning becomes another thing you have to fit into your life.

Mary found using the PC for study was essential but very stressful, in particular fitting it into family life.

I find using the PC very stressful—I've got to go on the PC because of study but at home the cry is "are you on the computer AGAIN!"

French and Richardson (2005) found that relationships were threatened because of conflicts between study and domestic commitments and also the changing identity of the student. Women had to resolve feelings of guilt at not performing their domestic role as well as before, whereas mature male students found it easier to opt out of parenting and other domestic responsibilities. Rachel's thoughts concur with this.

You feel guilty because you have to spread yourself between everything. I did spend some time explaining to the children that I was studying and then making it up to them in the holidays—still loads of guilt. After a while, they learn that when you are studying they leave you alone but I don't think husbands understand this.

The lives of some of the in-depth interviewees were changed beyond recognition through going to study. There was habitually a lot of support from the immediate family but often conflict from the wider family. Criticism centered on husbands, who were deemed to be neglected or let down. Not providing regular meals was often a bone of contention, as Erica described:

Before my access course we all sat down as a family for tea at 5:30 p.m. on the dot—access changed all that. It was a big thing to sit down together, now I couldn't [care less]—it's not important to me anymore.

Wajcman (1991) discusses how the housework began to be presented as an expression of the housewife's affection for her family.

The split between public and private meant that the home was expected to provide a haven from the alienated, stressful technological order of the workplace and was expected to provide entertainment, emotional support, and sexual gratification. The burden of satisfying these needs fell on the housewife (pp. 85-86).

The gender politics of the household and sexual division of domestic labor are reflected in surveys of gender and housework. Kan (2001, p. 6), for example, uses the British panel household survey and analyses that, in general, women in the UK spend 18.5 hours a week doing housework with men just over 6.

PC for Work in the Home

Some of the focus group households and in-depth interviewees spend a lot of time working at home and using the PC for that purpose and for women in particular this means juggling working time with family life as can be seen with the following observations. Laura was discussing working at home:

My kitchen is my office but the kids come in like a herd of elephants—in, out, in, out—because you're their mum, wherever you are and whatever you're doing.

Wilson and Greenhill (2004) suggest that home-working “magnifies the conflict of roles that women experience in attempting to equalize the work–life balance” (p. 43). One element of this is providing food at the time the family requires, clearly a role that women fulfil, and this can cause conflict with working at home. Laura discussed the impact on mealtimes.

I get so engrossed I forget everything else. I don't eat when I'm working but the kids are sometimes crying “where's my dinner.” Family life goes on around me; sometimes I'm oblivious, like when the potatoes boiled dry and the pan went on fire!

Erica also discussed how engrossing work becomes when using the PC.

One example, I put an egg on to boil for my son's tea. *Son*: “Is my egg ready?” *Me*: “Yeah in a minute.” I'm clacking away on the PC, then 10 minutes have elapsed, another hard boiled egg. *Son*: “When am I ever going to get a runny egg again?” [Jamie then butted in: “I can do my own eggs now,” and Erica responded] Yeah that's one good thing—they so much more independent now.

Negotiating Time

Women in the family are often leading busy lives and this can result in personal conflicts with a desire to spend time with the family and the pressures from using ICTs at home. The competing demands of labor market and domestic work are associated with a perception of a loss of control over time, often called *time crunch* and research suggests that women with children feel more time crunched than men (Peters and Raaijmakers 1999). Using ICTs in the home makes many feel time squeezed as a result of multiple role conflict and role overload (Peters and Raaijmakers 1999), with a feeling of loss of control over time. “Time just passes,” says Erica, “You never have time for anything.” Laura notes, “Work and home life boundaries blur and time needs to be negotiated.” Fran says, “I feel like I'm sneaking off to the computer, as if they're saying, ‘She's putting on that computer again.’”

Guilt is never far away, as can be seen from Erica's comment:

Sometimes I feel bad because I'm busy—I'm always busy on the computer.

Amanda confirms this:

It gets too stressful and anyway I get sick of saying “yeah in a minute.” I want to play, not be on the PC. I feel guilty when the kids want to use it.

In this analysis of the domestication of ICTs in UK households, women especially feel that they should be doing something else when on-line—guilt that spending time on things they want to do should happen after the household chores and family have been taken care of. Analysis indicated that negotiation is required in the relationships between adults in the household. One resource that is competed for is the time of women in the home and this causes stress if using ICTs take women away from interaction with husbands and partners, as Laura suggests:

When he [husband] comes home from work, he doesn't do anything else and gets cheesed off if I'm working all evening. He says, “Are you coming to bed?” Then he's very annoyed when I get in bed at 2 a.m. with freezing cold feet.

Working or studying at home and using ICTs often interfered with a husband's or partner's view of bedtime. This meant, in some cases, women trying to conceal the fact that they had been working on the PC. Amanda explained:

My PC was in the bedroom—very inconvenient. Sometimes [husband] had to sleep on the sofa if I was working, or I'd work in the dark but he'd complain. [Later she said,] I had to conceal when I went to bed—I'd creep in at 2 a.m. but if he woke up he'd say, “Are you stupid what are you doing still working?”

Home E-Shopping in the UK

Research shows that men in the UK are less keen on shopping and are keener than women to e-shop. Women are more likely to enjoy shopping as a way to socialize with friends and family compared to men. Internet shopping has not convinced shoppers

generally, with only 12 percent stating they prefer shopping on-line (MINTEL 2004). In this study, many more women than men, for example, felt that shopping is a leisurely, sociable activity; women liked window shopping, shopping alone (something no men in the study reported liking) and shopping with friends. More women than men found doing the shopping a chore and thought going shopping enjoyable. From analysis of the on-line questionnaire, many more women than men use mail order catalogs. They reported that when you're stretched for time, catalogs can be picked up and put down with the order sorted out in snatched moments. This proves less time consuming than on-line alternatives and often there is a clearer path to customer services with better after-sales and credit arrangements. This, of course, isn't a universal experience. Women responding to the questionnaire reported "I don't like shopping"; "Busy shops drive me mad"; and "Shopping is BORING." Laura commented,

I can't be bothered to shop on-line, I don't go shopping anyway so I'm not doing it on-line if I don't do it in "real life." He [husband] doesn't let me shop—I buy all the wrong stuff.

Household Management and Leisure

An issue arising from the qualitative enquiry is that there are gender differences in e-shopping with relation to household management. Women are more likely to deal with the whole process of e-shopping transactions particularly, post-ordering (dealing with payment, returns, and customer service). It was not surprising, therefore, to find that women were much more concerned about issues of privacy, trust, after-sales, delivery, and so on. This ate up their time and contributed to barriers to e-shopping for women in the UK. Similar gender differences were apparent in relation to leisure. More women and men talk about the time it takes as a response to what they least like about e-shopping. Research in the UK suggests that families have the least amount of leisure time (MINTEL 2000). This report goes on to suggest that the pace of leisure has also become more frenetic as "it is squeezed between existing commitments of work and childcare." In this context women increasingly have to juggle work, time and money. They have less free time than ever before and the gap between their free time and that of men's is widening: "men retain their ability to do absolutely nothing for longer periods than women" (MINTEL 2000). Leisure is often viewed as a residual category by women but remains an unconditional entitlement for their male partners (Kay 1996). A striking feature of everyday lives from the qualitative enquiry is how little leisure time people have or perceive themselves to have. Leisure time also is often taken in snatched and fragmented moments and at times that precludes preplanning. This concurs with Green's (2001) analysis of women's leisure; the study continues to show time synchronization and time fragmentation dominating most women's lives in the UK, leading them to find snatched spaces for leisure and enjoyment rather than planned activities. In this study, the question of time and unequal access to leisure featured frequently.

Gender and Technical Skills

The final theme raised by the qualitative enquiry relating to the domestication of ICTs is that of technological skill and how this relates to how gender and technology has been theorized. It is important to note the strong link between the notion of skill and masculinity, in particular technical skill and how something becomes defined as a technical skill. Indeed Wajcman (1991) and Cockburn (1985) identify technical skill and masculinity as mutually constitutive. As Grint and Gill (1995, p. 9) suggest, "'Skill' is not some objectively identifiable quality, but rather is an ideological category, one over which women were (and continue to be) denied the rights of contestation."

There were some interesting tales to tell about the skills of ICT use and maintenance that support and contradict ideas of women and their lack or otherwise of technical ability. Gloria, for example, would constantly say how ignorant she was about computers: "I know nothing; I don't understand them." Despite this, throughout the 5 years she managed to install software, set up web cam facilities, work out how to scan and send pictures by e-mail, set up e-mail accounts, upgrade hardware, and troubleshoot printer problems. However when this was pointed out, she would shrug: "Well I still don't understand them."

As Habib and Cornford (2002) discovered, in this study there was no clichéd pattern of male fascination and female avoidance of technology. Gender differences were in the free time available to use ICTs and views on priorities. Although many of the women were more experienced with technology, this didn't always go down well, as Rachel explains:

I've had various situations where men in my company have asked each other questions about the PCs and ignored me completely and they know full well that I have much more knowledge about IT than they do. I've butted in with the answer; it really annoys them. Now I take another tack— just let them talk and smugly gloat or laugh to myself. I don't offer until they ask. I get such pleasure out of seeing them struggle.

Laura also enjoys being the one with the knowledge:

It's great when the kids say, "Mum can you help me with this homework" [it]...feels like I'm a positive role model—you know what its capable of and what you can do.

Concluding the Qualitative Enquiry

Certain themes have arisen from the qualitative enquiry. The gendered family in this UK-based study involves sexual division of labor and inequality in the share of domestic and household management tasks. Gender is shaping the use and domestication of ICTs. There are unequal time demands and competition for the time of women in the home with ensuing feelings of guilt aroused by role overload. There are conflicting uses of ICTs in the home and competition for these resources. Work and study impact in the home with the public creeping into the private sphere. Domestication of ICTs also reflects changes in household spaces occupied by ICTs and their use. ICT use in the home doesn't match up to hype, which is that they will help with the education of kids and others, they will make life easier, and they will enable engagement with the so-called knowledge society. On-line shopping does not live up to the hype, which is that we will all be doing it and loving it, it will save time, money, be convenient and satisfying. Manufacturing and commercial visions and versions of the future, in terms of ICT use in the home, are contested.

Conclusion

This paper discussed how in the so-called global knowledge economy we are being urged to engage with technologies including in the home. It is, therefore, crucial to consider how ICTs are appropriated and consumed in households, including the gender dimensions of this and the negotiation involved (Green 2001). However, an absence of gender analysis—that technologies are gendered and the family is gendered—leaves gaping holes in understanding the future, a future that centers around social and collective realities rather than expropriated into one that is individualistic and consumption-led and yet again fails to appreciate the reality of women's gendered domestic lives.

The case research of gender and home e-shopping in the UK presented in this paper is clearly not an exhaustive enquiry of the field. Issues of class, age, and ethnicity, for example, have not been deeply analyzed in this study. Yet placing the domestication of ICTs and home e-shopping in the UK specifically in its social, political, economic, and historical context has wide relevance in many arenas. There are contending discourses of government, education, ICT manufacturing, and parents in innovation research (Haddon 1992). The analyses are limited if the dynamics of family life, gender, and technology relations are overlooked. Further such analyses would allow essentialist assumptions to predominate—about technologies and those that consume them.

This research fundamentally aims to advance critical research in Information Systems and, to this end, broaden understanding of ICT use in everyday life. To take critical research in IS forward, Howcroft and Trauth (2004) suggest that research should describe the relevant underlying structures of social and material conditions and explain how they shape and determine the nature and content of IS and the ways they mediate work. It should assist in demystifying the myths of technological determinism, enable exposure of taken-for-granted assumptions, provide an insight into the broader social, organizational, and political implications of IS. It should enable both researchers and the researched to see or envision the desired changes. This paper addressed this task set by discussing the political economy of the gendered household and the dynamic relationship and struggle between home and work arenas. It analyzed how ICTs are embedded into everyday life and the gender shaping of ICTs, considered how empirical evidence suggests that, in the UK, ICTs in the home are a leisure and communication tool primarily and analyzes this in the light of government and commercial visions. It provides a rich analysis of ICT use in the gendered family and the contested political, social, and gender politics of the household. It challenges the status quo views of the domestication of ICTs in the UK and the nature of cultures of consumption manifested in home e-shopping. A challenge, therefore, is made for further work in this neglected area of research, suggesting that the links should be made with wider analysis of notions of a global knowledge economy in the historical, political, social, and economic context of our everyday lives.

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