

The Mobile Office: An autoethnographic account

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ABSTRACT

This paper examines the ways in which women use laptops to construct a flexible workspace in multiple environments. This phenomenon of the mobile office raises questions about the psychology of space with respect to domestic and public spaces, the role 'things' play in creating 'place', and the implications for interior design. An autoethnographic approach provides the stimulus for this analysis.

INTRODUCTION

For many workers a laptop provides an ideal opportunity to balance the responsibilities of home and work, enabling the instant setting up of a pop-up office in the kitchen, living room or en route to the office by public transport. This ephemerality in the way we use a variety of interior spaces to connect to our work place and our work load is clearly reflected in the increasingly transitory and virtual nature of work itself where one can remotely drop in and out of the office for a meeting or an interview, have an overview of the latest statistics for a continuing project or event, or even just to catch up with the latest office gossip – all via a laptop and a wifi connection. This flexibility offers an interesting perspective when thinking about the economies of space: does this ability to be present in the office, wherever we may be, afford a greater economic efficiency and freedom? Or does it merely create more layers of work, especially for women who often choose to work from home in order to manage childcare more economically, thus minimising time spent commuting and enabling them to reclaim time that might not otherwise be put to paid labour?

As academics that use laptops on a regular basis we were intrigued as to the impact such usage has on the interior environment: what is the psychological effect of transforming these spaces? Might there be a potentially liberating or empowering function for users? When is an office not an office, or to turn it around, when is a home more than 'home'¹ and what does this mean for the gendered use of interior space and for the people who are responsible for designing such

spaces? If one considers the changes brought about as a result of homes and workplaces becoming separated in the course of the industrial revolution, one starts to see the enormity of such questions given the economic, social and political changes which accompanied this division.

The key questions we wanted to investigate, therefore, centred on finding ways of evaluating the interplay between lived experience and social context with respect to the laptops – a MacBook Pro and a PowerBook. We were particularly keen to question the extent to which technology individualises our own experience of space and place and to think about the implications for interior design such questions might elicit.

METHODS

An autoethnographic approach has been our main method of enquiry as we wanted to focus on our own subjective experience rather than solely observing the daily practices of other laptop users. Carolyn Ellis defines autoethnography as 'research, writing, story, and method that connect the autobiographical and personal to the cultural, social, and political'.² We therefore opted to each keep a journal of our laptop use from May to August 2011, to be reflected on at the end of the research period. It should be noted that from the start of this research project we were conscious of our own particular socio-economic and employment status (for example that we work in a profession where it is not uncommon for work to be conducted outside normal working hours and in a variety of environments).

We believe that our approach is particularly aligned with Elizabeth Chinn's autoethnographic account of her relationship with consumerism.³ We were concerned with exploring our own experiences of space mediated by our laptops and what we might learn from such an analysis with respect to how women in particular create, use, visualise and narrate this experience. Carolyn Ellis and Arthur P. Bochner argue that autoethnography with its many levels of consciousness is a valid way of connecting the personal to the cultural.⁴ We also believe that Sherry Turkle's use of autoethnography such

as in *Identity and the Internet* when writing about her Apple II worked particularly well in respect to connecting such personal use of an object to wider cultural phenomena.⁵ In this text she argues for the crucial role the internet plays in facilitating a shift in our notions of self and the other, and its ability to change our relationships with machines. Whilst for the purpose of this paper we are thinking about the tangible and physical significance of the computer itself rather than specifically about the virtual world it encapsulates, Turkle's text nonetheless highlights the role autoethnography can have when examining computers in the context of identity, both individual and collective.

Over the past few months our laptops – and the way we use them for work, whether this is checking emails, writing teaching material, marking, research or administration – have become the foci of our attention as we have tried to step outside our 'thoughtless actions' and notice how we use our computers to create a nomadic work place; whether working at home, in transit to work, or in other 'everyday' spaces such as cafes. This autoethnographic approach to our relationship with our laptops has led us to question procedures and processes we normally take for granted, such as where and when we feel comfortable using our laptops; how we reassess the things we store on the hard drive; and how together these elements function as signifiers of who we are. That is, how we use our laptops and associated spaces to promote our identity to ourselves (as an affirmation), and our self-image to others (as an advertisement).

Much has been written about the contingent nature of objects, whose meanings and values are dependent on a range of variants including where they are placed and how they are encountered within their spatial setting. Celia Lury for example writes of our relationship with things: 'It is about what an object might become, how it might evolve, how and with what (as well as who) it might connect, interact or evolve and so on'.⁶ Likewise, spatial theorists and geographers such as Doreen Massey have argued that both space and place are socially and culturally constructed through complex webs of relations extending from the body to the political which render places

fluid, relational and contestable.⁷ One of the questions we asked ourselves in this study is how our use of a particular object – the laptop – fits into this web of relations and how the laptop itself might have an impact on the use and meaning of particular spaces and our sense of place. In relation to this we were also interested to see how our own experiences correlated with some of the findings from literature on the gendered use of information technology as well as women's experience of the home and home-work.⁸ In particular we were interested in the findings of various research studies which suggest that while the gender gap in internet access has closed in relation to overall access and usage, evidence seems to suggest that issues such as time competition with other activities still shape women's use of information technology at home.⁹ What is striking, however, is that in comparison to studies of women's (traditional) domestic roles, which consider the use and experience of space, there appears to be a paucity of research on the spatial use of information technology by women and the implications for interior design or home organisation.¹⁰ Consequently, this became a key focus for our study.

Take for example E's notes about working at the kitchen table (Figure 1):

USE OF SPACE: THE HOME

E:

Working in paid employment 2.5 days a week, the majority of my time in the home is spent as a mother and housewife. In order to aid my transformation from these roles to that of professional academic on the days that I work from home (which are irregular) or the evenings, I have, without (design) intent, constructed subtle rituals through which I pass from one identity to the other. Preparing my workspace and getting my laptop out is central to this. My preferred workspace is the kitchen table, even when I could in theory use my husband's empty office while he is at work. The kitchen is light and the table provides the largest surface upon which to spread my books, papers, etc.

In the mornings – as today – I start this ritual by clearing the table of clutter and go and get my laptop from its bag where I store it. While my laptop is warming up I get out anything else I need and make a cup of coffee. Sitting down at the laptop my transformation is complete. I sit at the table with my back to the main stretch of kitchen counter, the sink, cooker and washing machine. This also means I have my back to the window, which is regrettable, but sight of these kitchen appliances would be too strong a reminder of that other sphere where 'a woman's work is never done' (as countless ads for domestic appliances have told us, cribbing the original reference from *The Works of George Herbert in Prose and Verse* of 1881).¹¹

As I settle down to this routine I am aware of the sociological implications and historical echoes of my position in the kitchen (see for example, Ghislaine Hermanuz, 'Outgrowing the Corner of the Kitchen Table')¹² – but I have to admit that I have now come to



enjoy and protect this reclamation of the kitchen for my own work. I take pride in my subversion of the heart of domesticity and feel like I have taken possession of this space rather than the space possessing me.

The question I ask myself later is whether the presence of my laptop has anything to do with this or whether it is simply 'working' at the table that makes me feel like this. After some thought I conclude that the laptop *is* significant – it makes me feel *connected* to my world of work. Even when I have no real need for the laptop it is still on the table, quietly 'sleeping'. This sense of connectedness brought about by my laptop reminds me of work coming out of material culture studies that has explored the way in which objects enable us to create a sense of place and home. Of particular interest is Zeynep Turan's use of Winnicott's notion of 'facilitating environments' to characterise particular objects belonging to Palestinians in diaspora.¹³ While Turan's application of this term refers to the way in which certain artefacts such as rugs can enable those separated from their homeland to feel at once connected to the old home and at home in their new one, the term might also

Above

Figure 1: At work in the kitchen, 23 June 2011. Images E. Gieben-Gamal

be applied to my laptop. For me it is not just a tool that enables me to access information, communicate with friends and colleagues, record and write my ideas ... it also facilitates a particular frame of mind, a sense of connectedness that shapes my experience of the space in which I inhabit. It enables me to transform my kitchen into an office. What is key though is that it does this at two levels – it transforms my psychological response but it also enmeshes me in, as Massy and Allen put it, 'the spatial form of particular and specified social processes and social relationships.'¹⁴ I am also aware of the gendered position I occupy as a part-time working mother, creating a temporal home office.

This leads us to reflect on the findings of Liff and Shepherd who argue that while the gender divide in internet use is rapidly closing, more subtle issues such as *quality* of access remain important to understanding how women use the internet – and for our purposes, computers – more generally.¹⁵ Reflecting on our own autoethnographies we realise that that the mobile quality of our computers is key not only because of the quality of access to the internet but also the quality of access to our work. Numerous research studies have demonstrated that women are much less likely than men to have their own personal space within their home. In this E is typical. The flexibility that the laptop affords is therefore vital to E being able to make a space for herself that can fit in around her other roles and duties. On days when E is working from home and the children are at school, the home office can exist for many hours, but on other days or evenings, the 'office' may only exist for an hour or perhaps even less. Without a laptop this itinerant office would be more problematic. Furthermore, at those times when the family are present while E is working, the laptop enables E to feel present in the household, and accessible to her children if needed, while also feeling sufficiently removed or distanced to concentrate on the job at hand. The laptop therefore facilitates E in balancing her various, and sometimes competing, roles.

J notes a similar sense of transforming the meaning of space through the act of using her laptop.

USE OF SPACE: THE TRAIN

J:
I live approximately 40 miles away from my place of work so commuting by train is an everyday part of my working life. My laptop is integral to that journey as the time spent on the train gives me a chance to keep up with email and to remind myself of points to raise from key texts for seminars or important documents for meetings. Every morning I load my computer into my rucksack and walk to the station. As I walk along the main road weighed down with my Mac, its plug and other items required for the journey, I often think of a snail carrying its home on its back. After some further reflection I realise that this comparison is not so far-fetched since the hard disc contains documents that relate to my domestic affairs; contact details, photographs of my family and friends at various events or holidays as well as my entire world of work; emails, documents, spreadsheets, lectures, notes for research, papers for articles ... the list could go on. Perhaps a reliquary provides a better metaphor for the hard disc. True, the contents of my Mac are not strange remnants of

saints, but much of the disembodied material is irreplaceable, given that the time to replace most of the material would amount to months, perhaps even years. Eventually I decide that a shrine is the best metaphor of all given that the word itself derives from the Latin *scrinium* – a case or chest, or in Old French, *escrin* – a box or case to contain papers and documents. Little surprise then that I also note that wherever I am working I tend to set up my 'shrine' in a particular way so that I can block out the rest of the world and concentrate on devoting my time and energy to the virtual paperwork within my laptop. My notes from Wednesday 15 June 2011 provide a clear insight into my daily morning laptop ritual:

Having boarded the 8.15am train from Glasgow to Edinburgh I aim, as usual, for a window seat so that I have slightly more space at the gently tapered table. This journey is in Scotland's commuter-belt so I am usually jostling for laptop space but it is very quiet today and I have a whole table to myself (possibly because I have also been taking photographs of the laptop and have been identified as 'the crazy woman on the train', to be avoided at all costs). Despite the wealth of space however, I still carefully position my laptop within a small area on the table so that it will not encroach on any travelling companion's sense of space. I always make sure that the laptop slightly hangs over the front of the table so that when I open the lid it does not enter the 'air space' of the person opposite me. (See Figure 2) I realise that until now I had instinctively thought about the space at the table in vertical and horizontal terms. Once the laptop is in its 'correct' space I am then able to fill up the



Above
Figure 2: Train journey from Glasgow to Edinburgh, Image J. McDonald.

tiny areas around it. My train ticket goes between the laptop and the end of the table and has my iPhone placed on top. If the train is busy then any related paperwork has to rest on my lap so that I can read it and type simultaneously, but today I have the luxury of being able to place the paperwork on the table to my left and can work in peace.

The French philosopher, Gaston Bachelard, took a phenomenological approach in his book *Poetics of Space* (1969), and offers pertinent examples of how spaces might be conceived and imagined, while examining the implications of such imaginings. For me, Bachelard's interest in the imagining of spaces and the psychological resonances of such imagining relates to the notion of the ephemeral office being examined in this article, largely because of my newly formed awareness of my need to create a sense of private space around me especially whenever I set up my laptop in public. I am particularly drawn to Bachelard's understanding that experience is connected to action and that people are attached to context. That is:

... the profound reality of all the subtle shadings of our attachment for a chosen spot. For a phenomenologist these shadings must be taken as the first rough outlines of a psychological phenomenon. The shading is not an additional, superficial colouring. We should therefore have to say how we inhabit our vital space, in accord with all the dialectics of life, how we take root, day after day, in a corner of the world.¹⁶

Without doubt I 'take root, day after day' in a small space on a train, but that space is formed by and because of my laptop.

USE OF SPACE: THE CAFE

E:

Today I am working from home but plan to give myself a change of scene and go out for coffee (with my laptop) after lunch. The establishment I choose is a relaxed 'gastro pub' which is largely open plan in design with a horseshoe shaped bar dividing the dining area at the front from a smaller cosier area at the back, which has a fireplace, sofas and armchairs. Usually when I enter the pub I look for a table with the best view (the pub is located on the promenade and the front dining section has views of the beach and the sea beyond) but when I arrive it is busier than I anticipated and I am asked to use the back section since I am not eating. Here my choice is limited to a sofa with coffee table or small table with two stools, located next to a wall and to one side of a short flight of stairs. I choose the small table and pick the stool that faces the bar so that my computer screen faces away from public view. I wonder if I would have made the same decision had I brought a book to read or newspaper. Certainly, the seat I have chosen affords me a view of the rest of the bar rather than the more limited space to my back, which is more stimulating, but it was a sense of private space – or the need to limit public display of my 'work space' – that was on my mind as I chose my seat. I also noted that as I chose my seat I felt vaguely self conscious about bringing out my laptop since the bar was quite busy and no one else seemed to have one – although the pub

clearly caters for this since it has wi-fi. However, as soon as I opened the screen and the computer hummed into life I felt myself relax. The computer not only gave me a focus but the screen also seemed to act as a barrier creating a sense of privacy or a private bubble around me. I also find that this sense of private space created behind the laptop screen gives me licence to look around and take in the room around me. My glances are longer and take in more; they are less furtive than if I had a book or paper.

Such places become a 'third place'¹⁷ which is neither home nor work but rather functions as both. Coffee houses and small businesses have used this notion as a key marketing ploy providing workers with an interior space which provides a 'sense' of community. What is of interest here is that while this kind of environment works to foster a sense of place, it is the laptop that ultimately provides a personal sense of place, our familiarity with it meaning it can represent both the first space (home) and the second space (work).

In the book *Space Between People. How the Virtual Changes Physical Architecture* (2008), Stephan Doesinger argues that the use of new media and communications technology creates a new kind of space and that tools such as Blackberries, laptops and iPods create 'spaces in transit' which 'are spaces we know that give us a feeling of home'.¹⁸ Unfortunately, Doesinger does not dwell upon this point or explore how this might have an impact on the physical architecture that surrounds us (as the book title suggests it might) but it is certainly pertinent to our own experience of using our laptops and links into that other idea of laptops and other tools functioning as 'facilitating environments'.

DISCUSSION:

Having established that our laptops enable us to set up nomadic offices both in the home and in public places, the question to then consider is how might such places respond to this growing phenomenon? Is the fluidity of function, meaning and experience of place rendered through our use of a particular object (our laptops), something that can be inscribed into the physicality of the spaces we use? Can interior design help to enhance, or encourage this fluidity?

Norman Klein's vision of contemporary culture seems to suggest that new media and communications technology has already had an impact on the physical environment: '... buildings are as deodorized (sic) as computer graphics; the cultural tourism feels like an interface. We bring the true public life along with us, in our cell phones and our iPods; and in a few years, in our Kindle books.'¹⁹ Implicit within this rendering of the city is the idea that our physical environment is likely to become increasingly neutral as our lives are conducted ever more on-line. This view accords with that of critics and theorists who, since the advent of the Sony Walkman, have pointed to the ways in which new mobile communications technology has led to an increasing detachment from our physical environment – or created an individualised experience of the city

as the urban landscape becomes a backdrop to our own sound track.²⁰ Pavlos Lefas for example writes, '... the use of technology allows the individual to withdraw into the closed world of his personal daily experience'.²¹

However, while the kinds of spaces Klein describes may be familiar to us all, our experience of the last few months suggests something different. While our laptops do indeed enable us to disengage at one level from our surroundings as we immerse ourselves in our private worlds, their use also sets up very particular relationships to our physical environment. Firstly, they affected the places and spaces we chose to sit in. Where we had a choice we opted for interiors in which the spatial arrangement was variegated and contained nooks or corners that we could settle into; spaces that felt we could colonise for a short while, aided by props such as pillars, bookshelves, ornaments, or plants which help to contain or enclose space; interiors which sought to evoke a sense of place through the use of detail and design rather than a kind of generic design typical of 'non-places' such as airports and bus or train terminals.²²

This preference for spaces that evoke a sense of place and provide the possibility of creating some semblance of enclosure when choosing where to work on our laptops seems to be backed up by work environments such as the Interpolis Headquarters in Tilburg, The Netherlands, designed by Erik Veldhoen, which remains an example of innovative design more than ten years after its completion. Completed in 1996 and then enlarged and altered in 1998, the design was influenced by the need to accommodate a growing workforce; increasing flexibility offered by communications technology; and user-centred research, which found that many employees spent considerable amounts of time away from their desks.²³ The resulting interior scheme was based on the principle of flexible working, with employees working on laptops and using mobile phones and a system of 'hot desking' throughout the two buildings. The most striking feature however, and what perhaps makes the whole system work, is the 'Club House' on the ground floor of one of the office towers that comprises ten unique areas – each designed by a different design team – for formal and informal meetings, for reflection and concentration, and for socialising and eating. The result is an interior that looks more like a series of chic clubs, bars and restaurants than an insurance company office. While this kind of approach has been adopted before within the creative industries – most often by advertising agencies – what makes this interesting is its application to a financial services company and the resulting impact, which has seen employee satisfaction increase at the same time as greater workforce density and increased productivity.²⁴ What the Interpolis example shows us is that people work better in environments that are not uniform or standardised and which allow for individual agency in the choice of space to inhabit. For this idea to work, the laptop is key.

One question that has arisen out of our research however, is whether gender has any bearing on the way in which we situate ourselves and our laptops, and whether this has an impact on our needs or desires for interior spaces? Does gender play a role in this negotiation of space

and creation of 'spaces in transit'? This possible gender divide was discussed when we both met to go over our drafts for this paper in a popular cafe in the centre of Edinburgh, and as we both became aware of our shared desire to find a seating option that provided some sense of privacy.

E/J:

Always busy, the café's seating includes a long table with chairs down both lengths, smaller tables for more intimate groupings, and a high 'bar' table running along the length of the café's glass wall with high stools. Given the choice of two chairs in the middle of the long table, sharing one of the smaller tables, or two high chairs at the end of the bar table, we opted for the latter since it seemed to give the greatest sense of privacy. Getting our laptops out however, we felt oddly uncomfortable with the screens facing directly into the café area and half consciously used our bodies to block them as much as possible. After a short while however, the laptops were closed and we continued our conversation without them.

Looking for pictures after the visit (we were so busy discussing our ideas we forgot to visually record our meeting), we were struck by the photographs on the internet which invariably contained a man with a laptop sitting at the long table we had rejected.²⁵ Of course, this could have been staged for promotional purposes; we do not know the contextual background to these images, but they seemed to support our observations over the last few months: that when women use their laptops in public spaces they tend to choose seats on the edges of spaces, much as E did in her local café, or bounded in some way by a prop or architectural feature, while the men observed were more likely to choose or accept a seat that is more open.

More research is required to establish whether this tendency is indicative of a more general pattern but, assuming it is, it raises an interesting point. For, while women are more likely to work in open plan offices than men²⁶ and are less likely to have a private space within the home,²⁷ (and therefore are subjected to greater levels of public display than men), when they are in a position to choose the nature of the space they inhabit, they seem to prefer spaces that are bounded in some way – that enable them to create a private space behind their laptop screen.

However, our autoethnographic reflections also raise an interesting question about the way in which we both create a sense of privacy or personal space through *action* as well as through spatial positioning. In E's local café she notes how the act of getting out the laptop, setting it up and then working on it, give her a sense of private space that simply sitting at the table with a cup of coffee would not. Likewise, J's experience on the train is similar. This experience also chimes with research conducted by Moira Munroe and Ruth Madigan who found in their study of owner-occupied households in Glasgow that women often mentioned the ways in which they used small domestic tasks such as washing up or preparing coffee as a strategy to distance themselves from the general hubbub of the household. They explain, 'This 'busyness' creates a space, without the very pointed separation that would be indicated by deliberately leaving the room.'²⁸

The significance of the physical object itself in the subtle transformations that we enacted, whether in the home, on the train or in the café, is another striking point that comes out of our reflections, confirming research by Christena Nippert-Eng who suggests that objects play an essential role in the construction of boundaries between home and work (although she is not specifically concerned with information technology).²⁹ For both E and J the process of setting up the laptop and then closing it or putting it away when finished formed an important part in the transformation of roles. Indeed, as Turkle's research has demonstrated, the psychological affects of relationships with computers is a rich and long-reaching topic. Computers have not only become an extension of the self but they also enable bespoke virtual environments to be created. This blurring of boundaries between the invisible and the tangible is apposite given that in the last decade there has been an increasing focus on the dematerialisation of technology and in particular the idea of the 'invisible computer'.³⁰ In this scenario, our homes and other environments would be embedded with hidden technologies that we could access when desired; turning for example the painting on the wall, or the place mat on the table, into our home computer screen. What this vision ignores is the importance of the material engagement with our (mobile) computers and how this facilitates the shifting roles we have to negotiate. The question, then, for interior designers is whether embedded technology is really so desirable? This also seems to be supported by Norman Makoto Su and Gloria Mark's study of nomadic working practices in which they suggest that practical issues such as locating well placed plug sockets and a lack of visible cues or markers for resources (such as wi-fi) create barriers to mobile working. It would therefore seem that greater technological visibility, not less, is required in the design of our environment.

While the nature of this autoethnographic research might be characterised as an exploratory first step towards assessing the impact of laptop use on the design of interior spaces, the implications for interior design seem to be numerous both for those who might want to encourage, or discourage, the use of laptops, and for those to whom gender-sensitive design is a priority. Despite its open-endedness we nonetheless believe

that our research demonstrates that further investigation is required in order to fully explore the relationship between mobile communication technologies such as the laptop and the built environment, with a particular focus on gender. What is also clear is that the laptop opens up opportunities for flexible working, which can be particularly important for women who are more likely to have to balance work life with that of a caring role, either for children or elderly dependants. Moreover, returning to Liff and Shepherd's claim that quality of access remains a significant factor in women's use of the internet, our experience suggested that access to a laptop (with wi-fi connection) was not only a significant factor in improving our access to the internet but also to our work. Of course we might want to question the desirability of the increasing intrusion of work into home life that this flexibility can bring, as well as associated pressures and expectations that this places on all users, but the laptop nevertheless enables us – as women – to lay claim to spaces and transform the function and psychology of those spaces in ways that can be potentially liberating and empowering.

NOTES

- 1 We also note that while the idea of 'home' as separate to the sphere of work is one rooted in critical writings about nineteenth century modernity (see W. Benjamin, *The Arcades Project*, ed., Rolf Tiedemann, tr. H. Eiland and K. McLaughlin (Cambridge, MA: Harvard University Press, 1999) it nonetheless continues to inform contemporary discourse - even if its application to contemporary domestic life is more problematic.
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- 3 Elizabeth Chin, "The Consumer Diaries", in *Journal of Consumer Culture*, 7(3) (2007) 335-353
- 4 Carolyn Ellis and Arthur P. Bochner, eds, *Ethnographically speaking: autoethnography, literature and aesthetics* (Walnut Creek, CA: AltaMira Press, 2002)
- 5 Sherry Turkle, *Life on the Screen: Identity in the Age of the Internet* (New York: Touchstone, 1995)
- 6 Celia Lury quoted in Guy Julier, "Dialogs - Value, Relationality and Unfinished Objects: Guy Julier Interview with Scott Lash and Celia Lury", *Design and Culture*, 1(1) (2009) 97
- 7 Doreen Massey, *Space, Place, and Gender* (Cambridge: Polity Press, 1994)
- 8 Liff, Sonia, Shepherd, Adrian, Wajcman, Judy, Rice, Ronald and Hargittai, Eszter; An Evolving Gender Digital Divide? (July 1, 2004). OII Internet Issue Brief No. 2. Available at SSRN: <http://ssrn.com/abstract=1308492>
- 9 R. R. Dholakia, 'Gender and IT in the Household: Evolving Patterns of Internet Use in the United States', *The Information Society* 22(4) (2006) 237-239

- 10 Christine Salazar's article, 'Building Boundaries and Negotiating Work at Home', does give consideration to the spatial organization of home computing but the discussion is not specifically concerned with explaining gender difference. Proceedings of the 2001 International ACM SIGGROUP Conference on Supporting Group Work GROUP 01 (New York: ACM Press 2001)
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- 14 D. Massey and J. Allen, eds, *Geography Matters! A Reader*, (Cambridge: Cambridge University press in association with the Open University 1984) 5
- 15 S. Liff and A. Shepherd, 'An Evolving Digital Divide?'
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- 17 Ray Oldenburg, *Celebrating the Third Place: Inspiring Stories about the 'Great Good Places' at the Heart of Our Communities* (New York: Marlowe & Company, 2000)
- 18 Stephan Doesinger, ed, *Space Between People. How the Virtual Changes Physical Architecture* (London: Prestel, 2008) 22
- 19 Norman Klein, "Rules for Migration. After the Birds Go Extinct" in Doesinger, *Space Between People*, 29
- 20 M. Bull "Dead Air! The iPod and the Culture of Mobile Listening" in *Leisure Studies*, 24(4) (2005)
- 21 Pavos Lefas, *Dwelling and Architecture, From Heidegger to Koolhaas* (Berlin: Jovis, 2009) 50
- 22 Marc Augé, *Introduction to an Anthropology of Supermodernity* (London: Verso, 1995)
- 23 Advanced Workplace Associates in association with the British Council for Offices, Interpolis Head Office – Tilburg, Netherlands. Expanded Case Studies from the British Council of Offices report – ICT and Offices; practiced realities and their business benefits? (2006) Accessed 26 August, 2011, http://www.veldhoen.nl/data/files/alg/id40/AWA_Interpolis.pdf
- 24 Advanced Workplace Associates in association with the British Council for Offices, Interpolis Head Office – Tilburg, Netherlands
- 25 See <http://edinburghcafeenthusiast.wordpress.com/2010/11/16/peters-yard-quartermile/>.
- 26 Daphne Spain, "Excerpts from The Contemporary Workplace" in *Gender, Space, Architecture. An Interdisciplinary Introduction*, eds, Jane Rendell, Barbara Penner and Iain Borden (London: Routledge, 2000) 118-127
- 27 Moira Munro and Ruth Madigan, "Negotiating Space in the Family Home" in Irene Cieraad, ed, *At Home. An Anthropology of Domestic Space*, (Syracuse, NY: Syracuse University Press, 1999) 107-117
- 28 Munro and Madigan, "Negotiating Space in the Family Home", 107-115
- 29 C. Nippert-Eng, *Home and Work* (Chicago: University of Chicago Press, 1996)

30 For a discussion of this see, S. I. Hjelm, Visualizing the Vague: Invisible 'Computers in Contemporary Design', in *Design Issues*: 21 (2) (Spring 2005)