

Domestication and Mobile Telephony

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The concept of ‘domestication’ has started to achieve some currency in approaches to understanding how information and communication technologies (ICTs) find a place in our lives. Derived originally from more general studies of the process of consumption, this framework can provide a useful way of bringing together a range of assumptions and perspectives of our relationships with ICTs.

However, the concept was originally used in British studies to provide a framework for thinking about ICTs in the home rather than portable ones. And to a large extent it emphasised interactions between household members. Hence, developing this framework to deal with technologies such as mobile telephony and social networks beyond the home presents something of a challenge.

The first part of this paper provides an outline of some of the key themes of domestication. However, they are by no means unique to this framework and so after each theme a link is made indicating where they can already be found in empirical mobile phone research. This section also notes some of the limitations of the Domestication approach - the type of issues it does not attempt to address.

The second part of the paper then reflects upon how issues raised in mobile phone studies might suggest ways to extend the framework of domestication out of the home - despite the connotations of word ‘domestic’. On the other hand, this framework can in turn indicate further questions we might ask of mobile phones and so this is addressed at the end of this section.

A brief history

The concept emerged at the start of the 1990s from an empirical and theoretical project organised by Professor Silverstone at Brunel University and was partly influenced by the emerging literature on consumption more generally (Silverstone et al, 1992; Silverstone 1994b; Silverstone and Haddon, 1996). I became involved in the second stage of the project, which had by then moved to Sussex University, in which studies of teleworkers, lone parents and the young elderly (Haddon and Silverstone, 1993, 1995, 1996) enabled further exploration of how this approach might be applied and led to incremental development around its key themes.

The concept of domestication subsequently reached a wider European audience¹ partly through the European academic networks in this field which were emerging in the 1990s (EMTEL, COST248 which led to COST269). It was a framework that was employed in further studies for companies (of cable TV for Telewest and of Internet consumption for NCR). And it formed a background to policy-related documents (Haddon and Silverstone, 1995) and discussions of issues such as ICTs and social exclusion (Silverstone, 1994a; Haddon, 2000).

To sum up the domestication approach, ICTs come pre-formed with meanings through such processes as advertising, design and all the media discourses surrounding them. But afterwards households and individuals invest them with their own significance. This includes the effort involved before acquisition in imagining

¹ For a Dutch example, see Frissen, 2000. For Norwegian ones, see Aune, 1996 and Ling and Helmersen, 2000.

how they might find a place in the home and a role in people's lives, the household discussions about the decision to acquire them and the process afterwards of locating these ICTs in domestic time and space. How exactly the concept of domestication has been employed in analysis and with what emphases has depended both upon the researcher and the particular goals of the project. But below I pull out what I see as being some of the main themes from the British research.

Key Assumptions

First, the emphasis is on consumption rather than mere use. So attention has been given to what ICTs mean to people, how they experience them and the roles ICTs can come to play in their lives. To understand both adoption and use we need to appreciate the negotiation and interaction between household members and the politics of the home which lie behind both conflicts and tensions and the formation of areas of consensus. Any understandings or even rules about appropriate use of ICTs which emerge from this process usually have some bearing on what people do with the technologies and services and in what circumstances. We have to be aware of individual, and household, strategies to control technologies, both in the sense of controlling use by others and controlling the place of technologies in one's own life - which in turn relate to the type of life and identity to which people aspire. And if we are to appreciate fully the symbolic dimensions of ICTs, we need to see aspects of consumption such as how technologies are talked about and displayed.

In fact, we already see analyses of mobile telephony which have touched upon some of these points. For example, one study notes parents' resistance to acquiring mobiles for their children for what they see as the unjustified purpose of status display. And the authors go on to discuss how parental control is a process of constant negotiation (Ling and Helmersen, 2000). Meanwhile, another Norwegian study covers strategies used by youth to avoid parental surveillance via the mobile as well as the social currency of the mobile among peers (Ling and Yttri, forthcoming).

Second, adoption itself is seen as a process rather than an event. The pre-adoption process is captured perceptions of technologies and services, in how people imagine potential role of an ICT (or lack of one) in their lives and negotiations around, and sometimes resistance to, its acquisition. If acquired, there are then the processes of developing the above noted understandings about 'appropriate' usage (e.g. about how much TV to watch, what to use a PC for) - understandings which can themselves be challenged. There are the processes of fitting the ICTs into routines or creating new ones. And there are the processes by which usage of technologies spreads both among household members (which may mean lending out a personal phone to others) and in terms of what the technology is used for (e.g. from emergency use of the mobile to its role in organising logistics).

Again, there are already some studies of mobile phones which specifically deal with some of these issues around the adoption process - for example, in terms of showing how household members try to conceive what use the mobile has for them, or specifically seeing it as one more tool to help their children on the road to establishing their independence (Nafus and Tracey, forthcoming). In other cases

we see the resistance to children's acquisition on the grounds that they are too young and the whole process of negotiating how usage will be financed - a negotiation itself influenced by the arrival of pre-payment options (Ling and Helmersen, 2000).

The anthropologist Kopytoff first suggested how we could trace the biography, or what we call 'career', of objects over their 'life' just as we could look at people's biographies (Kopytoff, 1986). He argued that examining changes not only in ownership and use but also how objects are culturally defined and re-defined can reveal much about the society in which these objects are located. The longer term career of an ICT beyond the original adoption had been noted in the earliest formulations of domestication and was developed later in the light of empirical evidence (Haddon and Silverstone, 1994, Silverstone and Haddon, 1996). In one sense, people often acquire ICTs, go through an initial period of experimentation and then their usage pattern appears to settle down. But in that longer term the nature of consumption can alter through the dynamics of technological change, change in wider society and changes within the household. To give a simple example of the latter, children's usage can alter as they grow older or adults usage can alter as their work circumstances change (including the timing of when they are at home or not). And the British empirical studies charted the effect of more radical changes in lifestyle, with the move to telework, with family break-up and with the transition to retirement.

The implications for the longer term study of mobile telephony are addressed at the end of this paper, but this would include thinking about the future career of the technology among (certain) current users.

This leads to a third, albeit related, theme of domestication. The term itself was coined to suggest the 'taming of the wild' as ICTs are acquired from the public domain but then made personal, or, in these early studies of the domestic context, made to be a part of the home. But that should not be taken to mean that this is a once off process. It can be on-going if new circumstances, in whatever sense, mean that the role of an ICT has to be re-assessed.

Nor should one assume that domestication is always entirely 'successful'. People use ICTs but can feel ambivalent about them. ICTs can appear to get out of hand (and this is true of established ones like TV which can seem to dominate life too much, let alone mobile telephony which can make us feel too reachable). Even users can perceive them as leading to a lifestyle which they feel to be questionable, for instance in terms of enhancing dependency on the technologies or actually facilitating more stress². They can be tolerated, but not necessarily embraced - as in the case of people who do not like answering machines, but nevertheless feel the need to have one in their circumstances. Their place in life can be bounded, as when they are only used for certain purposes in certain circumstances compared to what others might see as their fuller potential. And they can be abandoned, or even rejected at an early stage after adoption. Note the concept of 'churn'.

² These two examples came up numerous times in a European study involving focus groups (Klamer et al, 2000)

Hence when considering the domestication of the mobile phone, one might at least consider how fuller integrated a part of life it has become in light of the discussion above. For example, if we look at mobile telephony research, one early French study demonstrated how usage was constrained in terms of when mobiles were not used, under what conditions users still preferred the fixed line (De Gournay et al, 1997). Meanwhile a Norwegian study discussed how users were ‘wrestling with their relations with the device’ in the context of using the mobile in the isolated holiday home, called the Hytte (Ling, et al, 1997).

A fourth theme is that while the relationship between individuals and ICTs is obviously a key interest, considerable attention is paid to those individuals in context. It recognises that beyond ‘end users’, others make some contribution to the whole experience of ICTs. There are non-users who might nevertheless be ‘gatekeepers’ influencing the adoption process. Some ICTs remain communal resources for the household (such as the main TV set, many fixed phone lines) but even ‘personal’ ICTs can be subject to regulation. So in general, individual use and individual strategies of control take place in a context where various household members have both commitments, routines and general demands on time and space as well as values, hopes and concerns which all interact and in so doing shape consumption. And it is here that the later writings on domestication in particular have emphasised questions of power and domestic politics, be that in terms of gender relations or the age relations between adults and children.

In the case of mobile telephony, this observation that an individual’s consumption is influenced by others is already implicit in many of the examples already cited above.

The last theme is that the role which ICTs come to play and their meaning for us is both shaped by the rest of our lives and can be shaping in their consequences. In other words, how we experience them is not totally predetermined by technological functionality or public representations but is also structured by social life. That point should be clear enough from what has been said above. But then in turn the arrival of an ICT can lead to us do things differently, to interact in different ways with others, even to have different perceptions. It does not have to be laboured to note that the advent of telephony itself had consequences and in principle so too does the emergence of mobile telephony. The challenge is then always to characterise those consequences and define their salience - i.e. how substantial a difference has taken place, in what sense and looking beyond individuals and households, what is the wider social significance?

The original British empirical studies which informed the elaboration of the domestication approach certainly noted some changes which ICTs introduced into the lives of individuals and households. But exploring their implications was not the main emphasis of the in that research³. In fact, in some cases more attention was paid to why change does not take place, for example, due to a degree of conservatism through values and lifestyle or the inertia of routines.

³ Although some subsequent marshalling of the evidence has been done to show the implications for processes of social exclusion, for example (Haddon, 2000)

However, we can derive from these studies some ways of conceptualising the ‘effects’ of ICTs, to see this shaping in different forms. For example, ICTs introduced into the home to solve a problem can result in some change in practices (e.g. acquiring a (second) video to preoccupy children and thus act as childminder, or acquiring a cordless phone so that parents can move around and keep an eye on children while having a phone call). ICTs can influence household relationships by virtue of altering the very strategies for coping with issues raised by those ICTs (e.g. as parents re-negotiate with children the financing of phone calls on fixed phone lines, or introduce changes in TV watching rules once cable TV has arrived in the home).

On the other hand, changes do not necessarily have to result from the initiatives of household members, as when some people reported how acquiring a second phone handset or cordless phone had made a difference to their experience of privacy when having phone calls - an experience anticipating what has later been noted about mobile phones. Beyond the home, ICTs, as well as the expertise developed in using them, can influence our relationships with others - family, friends, neighbours, etc. - as they can become sharable resources or at least be used for activities beyond the home base. And in the longer term, changing ICT ‘usage’ - e.g. as telephony and TV watching practices develop⁴ - can have a bearing on such matters as time allocation and the timing of activities or, in the case of telephony, how we manage our relationships with social networks.

Counterparts to these types of consequences exist in the literature on mobile telephony. For example, mobiles are sometimes acquired as a solution to a problem of co-ordinating between household members but then influence how that co-ordination takes place (Klamer et al, 2000) . Mobiles can lead to changes in communications strategies as people, literally, manage calls differently to traditional telephony (Licoppe and Heurtin, forthcoming). The fact that mobile also provide teenagers with a means of escaping parental surveillance was noted earlier. Less has been written on sharable resources, although there are examples of people not only using but being reachable through other people’s mobiles⁵. And time issues and changes in how we deal with social networks through the mobile have also been addressed (Klamer et al, 2000).

Such examples initially suggest that key elements of the domestication approach are in fact already shared in existing studies of mobile telephony. Yet this is not meant to claim that the framework per se addresses all potential issues. There are other levels of analysis derived from those studies which go beyond the type of observations made about domestication. For example, in terms of its effects on the experience of public space, Fortunai argues that the mobile has facilitated a preference for interacting with those distant rather than those immediately present and hence led to a withdrawal from experiencing certain public sites (Fortunati, 2000). A different emphasis is expressed by de Gournay in arguing that the code of conduct as regards ‘communicative’ behaviour in public spaces that had emerged in relation to the fixed

⁴ This can be partly through such processes as experimentation, partly in response to changes in ICTs themselves, such as the changing cost and marketing of telephony, the move to all day, all night TV and the ability to time-shift through adjuncts such as the answering machine and VCR.

⁵ This came out in some British Telecom research known to the author through involvement in that project.

telephone is now disappearing through the 'chaotic and divergent' use of the mobile phone (de Gournay, forthcoming). Such levels of 'effect' have not, in practice been addressed in the British studies.

Finally, in elaborating their concept of the 'appratgeist', Katz and Aakhus argue that changes brought about by the mobile phone reflect a wider socio-logic involving aspirations to perpetual contact (Katz and Aakhus, forthcoming). During their discussion the authors, correctly in my view, note that domestication's focus on social processes means that this framework would not in itself generate an analysis of such as, in the above case, a prevailing technological spirit of the time. But, it can, and should be, seen as complementing a variety of analysis - including, for example, quantitative ones⁶. But, at the same time it provides its own agenda, sensitising research to numerous dimensions of the consumption of ICTs and the issues involved. And, indeed, it can be extended beyond its original base and it is to this task which we now turn.

Domestication and Mobile Telephony Studies

The interrelationship between the home and rest of everyday life was always considered both in the theoretical discussions of domestication and in empirical studies. One example would be in explorations of how work, education or other commitments impinged upon home life. Another would be the way in which ICTs were talked about outside the home as one form of display - a display of knowledge, competence or lifestyle orientation. For instance, and anticipating a development in mobile phone research, this was discussed in terms of how teenagers participate in peer group culture (Silverstone et al, 1992). But it is one thing to register the significance of life outside the home and another to choose to focus upon it as an object of study in its own right. The arrival of the mobile phone prompted an interest in further extending the domestication approach out of the home.

One first attempt to consider what key themes signalled by the term domestication could be applied in new settings reviewed some of earliest European research on mobile phones which were brought together in a COST 248 report (discussed in Haddon, 1998a). Apart from noting how some of the processes noted in relation to the home could be applied to the experience of ICTs outside it, this first review observed that there was scope for more analysis of the symbolism, especially the visual display, of ICTs outside the home as people converted the private and personal meanings of their ICTs into public statements to the outside world (see Sussex MTEL, 1997). Secondly, the rules of public spaces could be analysed, to a degree, as counterparts to regulation of ICTs in the home. Obviously the difference is that we are not dealing with the interaction of just a few household members - in many public settings any such rules are usually less formalised, often more tacit, sometimes ambiguous and more in the form of expectations about appropriate behaviour held by those co-present (see Ling, 1997).

In addition to this extension of domestication outside the home, some of the mobile telephony literature also shows how it is possible to shift the focus away from the

⁶ In fact, some of the questions and analyses in a survey of European ICTs derived from material first brought to light in the British qualitative studies of domestication (Haddon, 1998b).

household as the unit of analysis. The household was originally privileged in the formulation of the domestication concept precisely because home and because household relationships were such an important part of life. Such relationships may not always be harmonious but they are generally profound. So, for example, the study of teleworking asked about the implication for all household members when paid work using ICTs enters the home and those members have a bearing upon the whole experience both work and the technology. Clearly it is still possible to ask the equivalent question about mobile phones and indeed a number of the studies of this technology have focused on its role in the relationships between household members (e.g. Rakow and Navaro, 1993; Nafus and Tracey, forthcoming).

But it was always clear that homes and households are only part of the equation. Indeed, some phenomena such as the origins of the (gendered) popularity of electronic games can only be appreciated by considering consumption in other sites (in this instance, games arcades) and relationships outside the home (with peers) (Haddon, 1992). Studies of mobile telephony use by adolescents similarly indicate that certain aspects of the consumption only make sense when we appreciate non-domestic social relationships. Then we see the importance of 'gifting' calls which serve to cement relationships with peers, the way in which the amount of numbers stored in the phone's memory has itself a social currency, showing you have the (right) mobile phone marks participation in a network and the style of use and placement on the body form part of the appropriate teen behaviour (Ling and Yttri, forthcoming)

As we turn to consider such non-domestic social relationships we move into the realm of social network analysis. But if we approach this domain with the sorts of questions asked from a domestication framework then we have a very different emphasis from the type of analysis when networks are measured in quantitative terms. Instead what is generated is a more textured picture, reminiscent of the ethnological tradition within sociology which charted the social life of particular groups of friends - a classic study being *Street Corner Society*.⁷

To be sure, friendship or the looser relations between, in the above case, youth are very different from the relationship between household members. Friendship networks are usually not so bounded, with fuzzy edges as it is not always clear who is part of a group. While those relations can be intense, they are often much weaker. They have a shorter history and are in many cases more temporary, without the depth which comes when biographies are so intertwined as domestic ones. They do not occupy the same shared space of a home although they may involve the colonisation of certain public spaces. And they do not have financial relationships as households. But like household, these relationships do have some shared histories and to varying degrees elements of shared identities. They have their own politics, understandings of what is appropriate and they involve the use of strategies vis-à-vis peers.

So in this context we might ask how ICTs like mobile phones are domesticated and what are the processes by which they acquire meaning (over and above the marketing of firms)? What, for example, leads mobiles or particular mobiles to become

⁷ The example which comes to mind in relation to ICTs is the study of the lifestyle of group of young Parisian adults and the role of the traditional phone in their lives (Manceron, 1997).

fashionable (or not), what forms of negotiation take place within social networks and how do collective practices (such as those noted above) emerge? Are there rules about use and if so how are they policed? What type of subsequent career do mobiles have within a group context? In general, how is consumption shaped by the collective and shaping in its influence upon it?

The final observations of this paper pertain to how one strand of the domestication analysis which might be applied to the mobile telephone - its career over time. If we consider the wider or public history of the mobile phone, in its relatively short life as a mass market product it has already evolved in certain respects. There are of course the changes in design, most visibly in its shrinkage in size and presentation as a fashion object. In terms of functionality, the addition of text messaging had important implications for its use by youth (Rautianinen and Kasesniemi, 2000). Changes in marketing in terms of the addition of pre-payment cards had a bearing on how the phone was managed within household relationships (Ling and Helmersen, 2000). More generally, mobile telephony has undergone a change in symbolism, moving from the exclusivity of its early days associated with 'yuppies' to a 'must have' - certainly amongst large sections of people in a range of European countries. And there have been some changes in its regulation in public spaces (in terms of when and where mobile use is banned) and in the nature and degree of integration into people's daily practices - it is for many no longer just the emergency phone of its very early days (Wood, 1994).

However, the mobile remains relatively young as a mass market product and if we take a longer term perspective we might anticipate the types of research which would chart how the object evolves in years to come. Over and above the scenario that it may become 'the' phone rather than a mobile phone, we already have a variation in the object studied that has been introduced by WAP (the 'Wireless Application Protocol' which permits some mobile access to the Internet) And we might expect further technical and design developments. In addition, past research has suggested that the sheer multiplication in households of even familiar technologies (like TVs, videos, computers and phone handsets) had a bearing on consumption (Haddon and Silverstone, 1994). Hence we might ask about the implications of moving from one mobile per household, to one per person, to even, in some cases, multiple mobiles per person.

Meanwhile, consumers themselves change over time. In the light of the current studies of youth and the mobile, what happens to the consumption of this current cohort as its members grow older and some of arguments about the mobile in relation to their particular status as adolescents no longer apply? To refer back to an earlier concept, what will the career of this technology be amongst this particular cohort of users. Moreover, this technology took on a role for them partly because it arrived at a particular stage in their life course. What are the differences in consumption for future generations of youth (or younger children) when this ICT has the status of being more established. In other words, what difference does it make to grow up with a technology (just as generations grew up with television as taken-for-granted as opposed to the generations who experienced its first arrival). Still on questions of age and age cohorts, how does mobile telephony consumption change for the elderly as more people retire having used mobile phones when they were younger.

Following from the examples provided earlier of how changes in the households and the circumstances of household members have a bearing on ICT consumption, we could envisage studies of how this impacts on the mobile phone once technology has been around a little longer. Specifically, previous research on call traffic using the traditional phone has shown changing patterns with changing life stages (Smoreda and Licoppe, 1999) - for example, moving from being single to having a partner to having children. Again, what ramifications might this have for the mobile phone?

Conclusions

The concept of domestication is not unique in its assumptions - many are shared in other literature and other studies. But I regard it a useful way of referencing, of signalling to others, the package of understandings lying behind particular studies without the need to explicitly go through them each time as well as of sensitising one to avenues of research.

This paper has outlined some main elements in that package: the stress on consumption over adoption and use, adoption as a process and the subsequent careers of ICTs, how domestication is not simply 'successful', how individual consumption needs to be placed in wider context and how ICT consumption is both shaped and shaping. We have seen how certain of these elements are already being explored in mobile phone research.

The second half of the paper then examined how the concept could look beyond the home to more fully analyse portable ICTs like the mobile - in particular to explore what the questions might be if we consider wider social networks from this perspective. Finally, the paper illustrated how existing work on the careers of ICTs from a domestication perspective could inform the direction of longer term research on mobile phone technology.

References

- Aune, M. (1996) 'The Computer in Everyday Life: Patterns of Domestication of a New Technology', in Lie, M and Sørensen (eds) *Making Technologies Our Own? Domesticating Technology into Everyday Life*, Scandinavian University Press, Oslo.
- De Gourney, C., Tarrus, A. and Missaoui, L. (1997) 'The Structure of Communication Usage of Travelling Managers', Haddon, L. (Ed.) *Communications on the Move: The Experience of Mobile Telephony in the 1990s*, COST248 Report.
- De Gournay C (forthcoming) 'Pretence of Intimacy in France', in Katz, J. and Aakhus, R. (eds) *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*, Cambridge University Press, Cambridge.
- Fortunati, L.(2000) *The Mobile Phone: New Social Categories and Relationships*, Paper presented at the seminar 'Sosiale Konsekvenser av Mobiltelefoni', organised by Telenor, 16th June, Oslo.

Frissen, V. (2000) 'ICTs in the Rush Hour of Life', *The Information Society*, No.16, pp 65-75.

Haddon, L. (1992) 'Explaining ICT Consumption: The Case of the Home Computer', in Silverstone, R. and Hirsch, E. (eds.) *Consuming Technologies: Media and Information in Domestic Spaces*, Routledge, London.

Haddon, L.(1998a) *The Experience of the Mobile Phone*, Paper presented to the XIV World Congress of Sociology, 'Social Knowledge: Heritage, Challenges, Prospects', Montreal, July 26th-August 1st.

Haddon, L.(1998b) 'Il Controllo della Comunicazione. Imposizione di Limiti all'uso del Telefono', in Fortunati, L (ed.) *Telecomunicando in Europa*, Franco Angeli, Milano.

Haddon, L (2000) 'Social Exclusion and Information and Communication Technologies: Lessons from Studies of Single Parents and the Young Elderly', *New Media and Society*, Vol.2, No.4.

Haddon, L. and Silverstone, R. (1993) *Teleworking in the 1990s: A View from the Home*, SPRU/CICT Report Series, No. 10, University of Sussex, Falmer.

Haddon, L. and Silverstone, R. (1994) 'The Careers of Information and Communication Technologies in the Home', in Bjerg, K. and Borreby, K. (eds.) *Proceedings of the International Working Conference on Home Oriented Informatics, Telematics and Automation*, Copenhagen, June 27th-July 1st

Haddon, L. and Silverstone, R. (1995) *Lone Parents and their Information and Communication Technologies*, SPRU/CICT Report Series, No.12, University of Sussex, Falmer

Haddon, L. and Silverstone, R. (1995) *Home Information and Communication Technologies and the Information Society*, a Report to the High Level Group of Experts, University of Sussex, December - published in Ducatel, K., Webster, J. and Herrmann, W. (eds) (2000) *The Information Society in Europe: Work and Life in an Age of Globalization*, Rowman and Littlefield Inc, Lanham, Maryland.

Haddon, L. and Silverstone, R. (1996) . *Information and Communication Technologies and the Young Elderly*, SPRU/CICT Report Series, University of Sussex, Falmer.

Katz, J. and Aakhus, R. (eds) (forthcoming) *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*, Cambridge University Press, Cambridge.

Klamer, L., Haddon, L. and Ling, R. (2000) *The Qualitative Analysis of ICTs and Mobility, Time Stress and Social Networking*, Report of EURESCOM P-903, Heidelberg.

Kopytoff, I. (1986) 'The Cultural Biography of Things: Commoditization as Process', in Appadurai, A. (ed.) *The Social Life of Things: Commodities in Cultural Perspective*, Cambridge University Press, Cambridge.

Licoppe, C. and Heurtin J-P (forthcoming) 'France: Preserving the Image', in Katz, J. and Aakhus, R. (eds) *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*, Cambridge University Press, Cambridge.

Ling, R. (1997) "'One can talk about Common Manners!'" The Use of Mobile Telephones in Inappropriate Situations', Haddon, L.(Ed.) *Communications on the Move: The Experience of Mobile Telephony in the 1990s*, COST248 Report.

Ling, R. (1998) "It's OK to be Available": *The Use of Traditional and Mobile Telephony amongst Norwegian Youth*, Paper presented to the XIV World Congress of Sociology, 'Social Knowledge: Heritage, Challenges, Prospects', Montreal, July 26th-August 1st.

Ling, R., Julsrud, T. and Kroug, E. (1997) 'The Goretex Principle: The Hytte and Mobile Telephones in Norway', in Haddon, L. (Ed.) *Communications on the Move: The Experience of Mobile Telephony in the 1990s*, COST248 Report.

Ling, R. and Helmersen, P.(2000) "It must be Necessary, it has to Cover a Need": *The Adoption of Mobile Telephony among Pre-adolescents and Adolescents*, Paper presented at the seminar 'Sosiale Konsekvenser av Mobiltelefoni', organised by Telenor, 16th June, 2000, Oslo.

Ling, R. and Yttri, B (forthcoming) Hyper-Coordination via Mobile Phone in Norway', in Katz, J. and Aakhus, R. (eds) *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*, Cambridge University Press, Cambridge.

Manceron, V. (1997) 'Get Connected! Social Uses of the Telephone and Modes of Interaction in a Peer Group of young Parisians', in The Future European Telecommunications User Home and Work Group' *Blurring boundaries: When are Information and Communication Technologies Coming Home?* COST248 Report, Telia, Farsta.

Nafus, D. and Tracey, K. (forthcoming) 'Mobile Phone Consumption and Concepts of Person', in Katz, J. and Aakhus, R. (eds) *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*, Cambridge University Press, Cambridge.

Rakow, L.and Navaro, V. (1993) 'Remote Mothering and the Parallel Shift: Women Meet the Cellular Phone', *Critical Studies in Mass Communication*, Vol.10, No.2, June.

Rautianinen, P. and Kasesniemi. E. (2000) *Mobile communication of Children and Teenagers: Case Finland 1997-2000*, Paper presented at the seminar 'Sosiale Konsekvenser av Mobiltelefoni', organised by Telenor, 16th June, 2000, Oslo.

Silverstone, R. (1994a) *Future Imperfect - Media, Information and the Millenium*, PICT Policy Research Paper No.27, Brunel University.

Silverstone, R.(1994b) *Television and Everyday Life*, Routledge, London

Silverstone, R., Hirsch, E. and Morley, D. (1992) 'Information and Communication Technologies and the Moral Economy of the Household', in Silverstone, R. and Hirsch, E.(eds.) *Consuming Technologies*, Routledge, London.

Silverstone, R. and Haddon, L. (1996) 'Design and the Domestication of Information and Communication Technologies: Technical Change and Everyday Life', in Silverstone, R. and Mansell, R (eds) *Communication by Design. The Politics of Information and Communication Technologies*, Oxford University Press, Oxford

Smoreda, Z and Licoppe, C.(1999) *La Téléphonie Résidentielle de Foyers: Réseaux de Sociabilité et Cycle de Vie*. Paper for the conference 'Usages and Services in Telecommunications', Arcachon, 7-9 June.

Sussex Media, Technology and Everyday Life Research Group (Sussex MTEL): Bassett, C., Cameron, L., Hartmann M., Hills, M, Karl, I., Morgan, B. and Wessels B. (1998) 'In the Company of Strangers: Users' Perception of the Mobile Phone', in Haddon, L.(Ed.) *Communications on the Move: The Experience of Mobile Telephony in the 1990s*, COST248 Report

Wood, J.(1994) 'Cellphones on the Clapham Omnibus: The Lead-Up to a Cellular Mass Market', in Mansell, R.(ed.) *Management of Information and Communication Technologies: Emerging Patterns of Control*, London: Aslib.