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TELEWORKING IN THE 1990S - A VIEW FROM THE HOME

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Introduction

1.1. Origins of the Study

In 1987 the ESRC awarded a grant under its Programme on Information and Communication Technologies for a project into the domestic environment of information and communication technologies (ICTs). The aim of the project was to conduct basic research into the relationship between families and households and their technologies in order to contribute both to academic and policy debate.

The need for research was premised on the lack of detailed understanding of the social and cultural factors that affected the adoption and use of new technologies and services in the home. It was also premised on the lack of detailed understanding of the dynamics and consequences of that adoption and use. A new generation of ICTs based around the convergence of computer and video technology, advances in telecommunications, new delivery systems and the possibility of new interactive interfaces, all gave grounds both for hope and anxiety. Hopes were focused on the possibilities for integrating families and households into an increasingly sophisticated and responsive world of communication and information. Anxieties were grounded in questions surrounding the possible consequent social isolation and alienation that might result. Manufacturers of the new technologies as well as those marketing new services were also keen to understand the changing market and the likely factors that would affect future demand. Policy makers more widely would need to understand the social dimensions of innovation if they were get a better grasp of future trends and patterns of development both in technological change and in its consequences.

The first phase of the research focused on the domestic lives of nuclear families, all of whom had a relatively high level of information and communication technologies in their home (television, telephone, video, computer). The research involved a detailed investigation of the families' everyday life; its patterns, its antecedents and its consequences. It enquired into those factors that constrained the ways in which ICTs were bought and integrated, or not, into the home. It enquired also into the ways in which they facilitated or impeded families' relationships with the world beyond their front door. Class, gender, and stage in the family life cycle were all seen as important in understanding both differences between families and the precise character of each family's own technological culture. ICTs were not seen as determining changes in family life and certainly not, on their own, destroying *it*; nor was their use itself simply determined by wider social or cultural forces. The research indicated that it was necessary to understand the place of ICTs in the family household as the product of a dynamic set of historical and social conditions, visible both in the micro-sociology of the family and its immediate environment but also in the macro-political economy of changing industrial and technological structures.

This research was based on detailed study of twenty family households in London and in Slough. Families were asked about their biographies, the pattern of time use, their social relationships outside the household, their ownership and use of technologies (all technologies, not just ICTs), and the specific patterns of their use of media and information technologies. They were asked about family finances and household

management, and their use of domestic space. They were also asked about their feelings for the different technologies in the home. Finally they were asked about consumption decisions and their patterns of consumption(1).

1.2 The approach

The first phase of the research provided a basis for constructing a model for further analysis. This model insisted on seeing households as complex social and cultural environments in which new technologies would have to find a place. Households were recognized as being able, with varying degrees of freedom and varying degrees of success, to create for themselves a material and symbolic space from within which they could transform what the economic and social system offered, and in so doing impose something of their own identity and meanings onto the standardised products of everyday life. The significance of this perception was, we argued, that it provided an opportunity to investigate the various ways in which different households (and different kinds of households) could work with information and communication technologies.

Much of the literature considering the place of technology in family life operated with a fairly simple and linear account of diffusion in which technological changes lead with little or no qualification to social and cultural changes. We argued, on the other hand, that households were able, within limits, to impose their own meanings, to appropriate these technologies into their own domestic cultures, and that this capacity would have major implications for our understanding of both the future of domestic ICTs and for the future of increasingly technologically oriented households or families (Silverstone, 1991). It would lead to a better understanding of the resistance to, as well as the acceptance of, new ICTs.

Technologies in general, and ICTs in particular, do not, therefore, have uniform effects on the life of a household or family. On the contrary. New technologies arrive into a complex domestic culture structured through gender and age based relationships, and defined and constrained by material factors such as the level of disposable income or the amount of space available for shared or private use. The culture of the household is the product of a whole range of historical, biographical and continuing experiences: of work, of leisure, of religious or ethnic traditions. The meanings that are created around information and communication technologies are complex, sometimes contradictory and always changing. The ways in which they are incorporated into the household, the changing patterns of their use and their significance through time as both households and technologies follow their different life or career paths, all are elements relevant to an understanding of the dynamics of information and communication technology in the home.

The particular significance of ICT in the home is, then, a product of continuing conflictful and consensual negotiations in which household members lay claims both on the technologies themselves and on the meanings that are communicated by or through them. Televisions, computers, telephones, videos become symbolic as well as material objects. They are marketed, bought and incorporated into households as aesthetic as well as functional objects. They are gendered, controlled, fought over,

discarded, and they are often central in a family or household's capacity to manage, welcome or keep at bay the outside world.

This capacity of families and households to negotiate with the public meanings and pre-defined uses of ICTs was the product of what we called their moral economy (Silverstone, Hirsch and Morley, 1992). The moral economy of the household refers precisely to the capacity of households to define a distinct social, cultural and economic regime for themselves, different from that dominant in the public world. Households are always both economic and cultural units. Their relative capacity to buy, use and display their technologies in various ways is in turn a product of the relative distinctiveness of their moral economy. Similarly, the effects that the adoption of new technologies have on individuals within the family and on the family as whole, also depends on the particular characteristics of their moral economy.

Central to an understanding of the moral economy of a household, and central therefore to an understanding of the place of ICTs in the home were issues of the organisation of space and time, gender and age difference, and the relationship between public and private dimensions of everyday life.

1.3 Aims and scope of the present study

The present study provided an opportunity to focus on a distinct and important kind of household - one in which ICTs were being used for work. Telework, much trumpeted as the way of the future, was beginning to be seen by the end of the eighties and more realistically, as a new form of work which was, slowly, becoming more accepted in British, European countries and the United States.

Much of the previous research that had attempted to come to grips with the phenomenon had been based in concerns, legitimate concerns, of management. It addressed questions of management and control, of cost effectiveness, efficiency or, more critically, questions of isolation and the exploitation of a dispersed (mostly female) workforce. It took little account of the implications of the intrusion of work into the home, or of those aspects of domestic life which might affect the more or less successful adoption of those new forms of work. It did not enquire into the wider social and cultural implications of teleworking, except perhaps in the broadest of either utopian or dystopian terms.

The present study took the home as the starting point. We enquired into the dynamics of teleworking in different household environments. We compared the self-employed and the employed. We enquired into the different experiences of men and women. We compared the professional and the clerical. In undertaking these comparisons we aimed to understand the different experiences of telework as an expression of the moral economies of the households. This involved study of their histories and biographies, and of the household's integration into social, familial or other networks. It also involved study of their resources, the stage they had reached in their life cycle and their relationship to time and space. Our main concern was with the process of telework, its origins, its management, its successes and failures, its consequences - but from the point of view of the home.

The methodology for the present research drew on the experiences of the first phase study. It involved qualitative case-study based research into the daily lives of households which included a teleworker, and once again the aim was not to provide a generalisable or representative tableau of results, but an assessment of the various factors that contribute to the particular character of teleworking within households and an understanding of the generality of the processes that define teleworking as a distinct, or distinctive, form of activity in the home.

This form of case-study based research is particularly appropriate because of the flexible and exploratory form of interview that can be used. Such interviews are conducted on the basis of a schedule defining topics and specific items for discussion but not requiring specific answers to specific questions. This allows those - in this case both the teleworker and the teleworker's partner - who are taking part to give detailed accounts of their experiences or perceptions and to cite instances where these are relevant. They are also encouraged to explore and formulate their attitudes towards the central issues being studied - both those which are predefined and those which are of most salience to them as individuals. And there is the opportunity for them to discuss their underlying feelings and beliefs. Essentially, then, such methods allow the accounts and perceptions of those being studied to enter the research findings in a way that is usually impossible with pre-structured interviews or survey based methodologies. In this case it was precisely the ability of our subjects to negotiate their own agenda and define the particular character of their own experiences of telework that was crucial.

The subject areas covered by the research were as follows:

- household information including family size and composition, tenure, family and household income
- biographies of both the teleworker and his or her partner, focusing on their relationships to technologies in their families of origin, and in their present household, and on their educational and employment histories
- patterns of everyday life, including the use of time and space, and the relationships within and outside the household, focusing especially on gender-related issues
- the history and biography of teleworking and its implications for the social, economic and cultural life of the household
- the management of resources, and the strategies relevant to the financial management of the household.
- the acquisition, ownership, control and use of information and communication technologies

1.4. Design and conduct of the research

The case study field-work was conducted during a six month period in 1992.

1.4.1. The sample

The sample was confined to those households which included a teleworking member, which for the purposes of the selection was defined as being someone who used information and communication technologies to work at home: that is who used the

telephone and the home computer as the basis for their main work activities conducted at home. The sample was restricted to households in which two partners lived in a single household together with children. The decision to confine the study to this particular group was made for a number of reasons. The first phase of the study was confined to nuclear family households and the present study would allow some basis for comparison. But it is commonly noted that the most challenging environment for the pursuit of telework would be one which contained children, and hence a focus on the nuclear family would provide maximum access to the full range of complicating factors in the teleworking experience. Equally the inclusion of nuclear-type households with children at different ages would enable the research to focus on the the implications for the different stages of a family life-cycle for the conduct of telework. Subsequent work on lone parent households and households of the elderly would provide opportunities to study the experience of ICTs in different domestic environments.

The teleworking households were recruited in a number of different ways: from teleworking support organisations; personal contacts; requests to employing organisations and as a result of an article on the research in a national newspaper which elicited offers of participation. No attempt was made to draw a systematic random sample since the purpose of the research was to represent a range of distinctive circumstances, specifically with regard to the level and status of employment as well as the gender of the teleworker. Therefore, and in order to avoid bias, we sought to include both male and female, professional and clerical, and employed and self-employed teleworkers in the sample. All households (bar one) were recruited in the South East of England.

19 households were involved in the main body of the research though we also included two case studies of teleworking households without children for illustratively comparative purposes, making the total number of completed case studies 21.

1.4.2. The research

The two adult members of each household were asked to complete a time-use diary, covering a full week. Details of their activities were sought with reference to location, both inside or outside the house, whether it was undertaken alone or with others, and the use of technologies.

Subsequently in depth interviews were carried out following a predefined schedule identifying the main topics for discussion. During the first visit both the teleworker and his or her partner were interviewed separately. On a second visit they were interviewed together. All interviews were tape recorded and fully transcribed. Interviews were supplemented by photographs of the teleworking spaces of the home and observations of decor and domestic arrangements. All interviewees were given a small gift as a token of our appreciation of their participation.

1.4.3. The analysis

The analysis was conducted on the basis of the production of individual case studies. Each set of interviews were rewritten as an integrated case study which followed a

common structure. That structure in turn was defined by the originating concerns of the research and the need to provide an accurate account of the history of the family and individuals within it, their economic circumstances, their experience of telework and their relationship to information and communication technology. It is on the basis of the completed case studies that the following report was constructed.

2. The problem of telework

2.1 Utopian dreams and methodological nightmares

Telework has, perhaps since 1973, been a constant theme in the writings of those who have seen in new information and communication technologies possibilities for the radical restructuring of the patterns and forces of our daily lives. The idea that technology could facilitate a major shift in the way in which work is organised and as such could have powerful consequences for life at home, the future of the family and the quality of everyday life, has made a regular appearance in the futurist literature. Clearly the dream has been attractive and far reaching. Yet most of the early, and optimistic, forecasts of the rapid growth of teleworking have proved to be disappointed. There have been a number of experiments conducted by national and multi-national companies. There have also been a number of successful schemes in a number of industrialised nations. Yet progress has been slow and also, perhaps, been skewed towards the professional as opposed to the clerical dimensions of telework.

Indeed the numbers of teleworkers have been difficult to estimate, partly because firms have been reluctant to admit, or are ignorant of, the scale (or absence of scale) of their operations in this area, but also because it is likely that a significant proportion of teleworkers would have been, and indeed are, self-employed.

The difficulties of assessing both the quantity and quality of telework are compounded by problems of definition. These definitional issues concern the differences between telework and more traditional (and relatively untechnologically supported) forms of homework; differences between white-collar and professional telework; differences between employed and self-employed telework and of course differences between working 'at' home and working 'from' home. No universally applicable definition of telework was forthcoming from the literature; an indication perhaps that the phenomenon was itself a multifaceted one as much as an indication of any lack of rigour among those trying to study it.

2.2. Approaches to telework

Telework has been approached in different ways depending on the agenda of those doing the approaching (Huws, 1991). It was originally seen as part of a solution to an energy crisis involving, as indeed it does, the reduction of commuting, and this interest has been maintained (Hodson, 1993). It has been seen, equally, as part of a solution to the problem of rural depopulation, though here pilot schemes have involved not a household based but a 'cottage' or 'centre' based teleworking operation. In both guises telework becomes part of, and is expressive of, an ideology of decentralisation.

Telework has also been seen as one element in the emerging enterprise economy of the eighties, providing an opportunity for self-motivated and self-driven young men (it was usually men) to establish themselves as unfettered operators in a technologically intensive environment of instant communication and decision making. It was seen to

provide an opportunity to break free of corporate culture and to release creative energies otherwise frustrated by the constraints of organisations and rigid hierarchies. Teleworking has also been placed at the centre of the arguments of those who advocate increased flexibility in the organisation of work - though the precise location of that flexibility has not often been clearly defined. As Ursula Huws has pointed out, in employer led teleworking schemes it was usually the employer who had the flexibility to define how the employee should fit into a new set of 'flexible' impositions.

Even more critically, teleworking has been seen as a possible new opportunity for the exploitation of a now dispersed and fragmented, and mostly female, workforce. But others, especially those within a `human resources` context, and focusing on the presumed needs of women at home, have argued for a real degree of flexibility in the management of full and part time work at home that teleworking facilitates. This analysis too, however, left the role and status of women unchallenged, and has led to a feminist critique of women centred teleworking schemes as reinforcing the domestic position of women and, perhaps paradoxically, maintaining rather than liberating their position in the home.

In many of these versions of telework the driving force has been seen to be the technology itself. However these perspectives once again ignore those social and cultural factors relevant both to the organisation and to the teleworker. These are the factors which ultimately do define the success or otherwise of such undertakings.

Finally there has been considerable interest in telework expressed amongst those whose products or services are likely to have a bearing upon, or would benefit from, the extension of such working practices.

Very few of the studies have approached teleworking from the point of the view of the home as opposed to its significance for the organisation and management of (corporate) work. Very few have examined the variety of experiences that could be labelled as telework, and very few have enquired into the dynamics of telework; that is into the trajectories that individuals have followed in relation to telework, the pattern of decision making associated with the adoption and maintenance of telework, and the consequences of the incorporation of telework into the home for other aspects of domestic life, both inside and outside the home. They have also not considered the implications of the incorporation of teleworking technologies on the technological culture of the household as a whole.

It is to these questions, questions that provide, we suggest, the baseline for a mature understanding of the present status of telework, as well as a basis for understanding the likely dynamics of future patterns of teleworking development, that this study is addressed.

3. The Heterogeneity of Telework

Telework is by no means a unitary phenomenon. Previous research on the topic has identified various common experiences shared by teleworkers: for example, problems of isolation and the need to manage the separation of home and work. However, it is important to underline at the outset that the circumstances of teleworkers vary greatly and hence so does the exact experience of these issues and response to them. Exploring the dimensions of heterogeneity also serves to question some media and futurological stereotypes as well as assumptions that only people with certain psychological orientations are suitable for or take up this kind of work.

Obviously teleworkers can be differentiated demographically. In particular, it will become clear that gender is a very significant variable. Other major divisions relate to the nature of work: whether it is relatively more clerical or professional and whether teleworkers are employees or self-employed (2). Using illustrations from our empirical research, the aim of this next section is delineate key factors which shape the experience of teleworking. These reveal the various processes through which gender and the nature of work become important. They also have a bearing on how teleworkers evaluate their position and how telework affects their identity and power in the home.

3.1. Key Dimensions Differentiating Teleworkers: Motivation

The question of routes into telework, in terms of prior occupational and domestic activities, will be discussed later. First, there is the different but related issue of the motivation (on this issue, see also Huws, 1991). Why does teleworking appeal or why is it felt to be the best option from the choices available? The rationale involved, the goals teleworkers hope to achieve, is important precisely because it has a bearing on teleworker expectations, what they value about the telework, and what facets of the work constitute a problem. Thus, appreciating the motivation for teleworking can help us to understand teleworker behaviour, their strategies, whether they are satisfied, whether they are enthusiastic, 'get by', or give it up.

3.1.1. Motivation: Domestic Reasons

First, a qualification: child responsibilities are not the only domestic demands for which telework is a solution. Caring for the sick or elderly is another, although very little is known about the number of teleworking carers. In all likelihood it is not a major factor, although caring can be one consideration amongst others. For example, in our study researcher Kay Rahman was mainly interested in telework because of her children, but it also enabled her to see her local invalid mother on a daily basis.

By far the main domestic motivation for teleworking relates to children - which often means a combination of wanting to spend time with children and managing the practicalities of taking them to and picking them up from school, a nursery or a childminder. Although this is more often a concern of mothers relating to younger children, it also can be apply to older ones too.

Emma Townsend: 'My daughter I suppose was...she must have been twelve (when I started), and there's a lot of things they are still doing in the afternoon [after school] that you want to have contact with.'

Two clear divisions arose in our study:

- (a) that there is a major gender difference here: it is virtually always women who take it up teleworking for this reason.

- (b) most of these women have a commitment first and foremost to this domestic role, and then try to find a form of work which fits in with this.

a) Gender and childcare.

Although other considerations, such as a reduction in commuting time, may have played a part in the decision to work at home, virtually all of our sample had taken up teleworking because of the children. And even where there were exceptions, being with children was a major motivation for telework and a major benchmark by which it was evaluated. For example, in the Townsend household, software designer Emma may have started teleworking when she was made redundant, but she was already looking for a means to cut down work to be with the children. And although scientific abstract writer Clare Brown had teleworked before having children, this arrangement was valued because it fitted in well with her domestic responsibilities once the children arrived.

This is not to say that male teleworkers saw no benefit for their children in their being at home. For many years chief executive Jonathan Townsend had been extremely busy with work and often away from home. He was concerned about missing out on the children's development, reflecting that his chance to get to know his children was closing as the latter matured and prepared to leave the home. However, this concern was not the key reason for his teleworking, nor was it for most other males.

In fact, the few exceptions are illuminating because they show the limits to which domestic responsibilities can persuade males to telework. Before setting up his own business, academic director Rizwan Rahman had for some years been willing to work one day - but only one day - at home to enable his wife to study and later work part-time. In the Reid household, childcare was one, but by no means the major, reason for Sam setting up as a consultant and management trainer. In fact, his work had increased so that he only saw a limited amount of his daughter - she was with childminders much of the time.

The biggest role reversal was in the case of computer conference mediator Peter Brennan - where he took over primary responsibility for this daughter in the daytime while his wife worked full-time. However, he did this only because her work was far more secure and better paid, and he would have liked to work full-time himself. In fact, the one case where childcare was central for a male was not from the sample of teleworkers but from that of lone parents. Information officer John Vincent prioritised caring for his son when he was widowed and telework was a means to manage this - but then, there was no longer a female present to take on the prime domestic role.

b) The Primacy of the Domestic Role.

To say that the domestic role was primary for most women teleworkers is not to say that they were housewives immediately before teleworking. For example, programmer Sarah Moore joined a teleworking scheme when on maternity leave - prior to this she had been working full-time. However, had the scheme not been available, she would have been willing to spend some years at home with her young children.

Although a minority, there were some women for whom work came first. For example, in the Lockwood household systems analyst Angela had been commuting and working full-time for some years before teleworking. This was made possible in large part because her husband's timetable as a teacher enabled him to see to the practicalities of dropping off and picking up the children. And programmer manager Lyn Gloster had also been working full-time for a few years. She had tried a purely domestic role for a year when the children were born, but had been frustrated and so had used childminders for a few years while on-site. Besides, in the Gloster household, their son had always related first and foremost to his father. In some ways, Lyn did not feel herself to be so child-oriented. For Angela and Lyn, teleworking was simply an even better arrangement than previously, a more convenient balance between children and work.

Again, it can be instructive to look beyond the teleworking sample to the lone parent one. When technician Michelle Ingham had her daughter, she never considered giving up work, but instead persuaded her employers to allow her to work at home for a year. As the only breadwinner, giving up work would have meant a significant drop in income.

c) The Voluntariness of Telework

Two final observations need to be added about the choice of teleworking for domestic reasons. The first is that it is by no means all decisions to telework are made on a voluntary basis. Accountant Joyce Miller felt she had little choice but to give up office work when her own mother refused to baby-sit for her any more after she had her second child. Like many women, she worked at home because it was not economical to pay childminders and she wanted to work both for the money and to keep open her accounting career.

Joyce Miller: 'I felt that having worked hard to get where I'd got it was stupid to throw it all away. I might as well have left school and gone to work in Boots or something for all the good it had done me.'

d) Escaping Purely Domestic Roles

The second observation is that while telework may be adopted to fit in with childcare, it may simultaneously be a means to escape from the purely domestic role. For example, typist Jill Perry represented these for whom telework appealed because there were limits to their fulfilment with domestic life.

Jill Perry: 'We had always planned that I should stay at home and look after the children and that would be my main job. But obviously I had to find some sort of compromise because it was driving me around the bend.'

3.1.2. Motivation: Work-Related Reasons

Domestic demands are not the only reasons for teleworking. The negative aspects of existing work arrangements can also make telework attractive. A later section discusses telework as a career stage, but we might observe at this point that telework is liable to be a more permanent end stage for those whose motivation for working at home lies in problems or discontent with standard office-based work arrangements.

Here we examine:

- Telework to Avoid Commuting
- Telework as Alternative Work
- Telework as a Reaction to Work Problems
- Telework Forced by Redundancy
- Telework as Entrepreneurship
- Telework as a Preference for the Domestic Site over Worksite

- Telework to Avoid Commuting. It is not just geographers and town planners who are interested in telework as a way to reduce commuting: the costs in terms of time, money and stress experienced, especially in South East England has been sufficient to tempt some people. Chief executive Jonathan Townsend explained his double motive for teleworking at his home near Reading.

Jonathan Townsend: 'Well it's for two reasons. One is that about ninety-five per cent of the customers I have are in either the United States or in Japan, and you just can't interact with people like that unless you have a very flexible schedule. So, for example, most of my interactions with California take place between four-thirty in the afternoon, our time and when I go to bed. Sometimes even I'll talk to them when I get up. I'll get up at six-thirty and hit them at the end of their day. So you just have to have a very flexible lifestyle and you need the technology for that. And the other thing is that the major office I go to is in Central London and it takes me two hours to get there with the current transport infrastructure we have. Which is ghastly. And it can take more than that... sort of one day in four of so there is some problem announced over the loud speaker system and you just stand around for twenty minutes or half an hour kicking your heels, and then a train turns up full of enraged people. And when the system gets congested you can't sit down, and if you are jam packed with other people standing up, you can't work.'

- Telework as Alternative Work. Futurological depictions of telework based on 'alternative' politics had a resonance for some who were students the 1960s and had since attempted to develop non-office based working practices. For example, editor John Foster first started contemplating non-industrial work patterns when he was a child.

John Foster: 'I grew up in what might be regarded as the cradle of the industrial revolution on the fringe of the cotton spinning area. I was thinking, actually surrounded by early cotton mills and weavers cottages and all those things, you can actually see the contrast between the pre- and post-industrial revolution ways of life and I just wondered in fact whether there's some sort of idea in the back of

my mind that I wanted to get back to the pre-industrial way of life rather than all these dark satanic mills.'

These sentiments were later developed through contact with the countercultural ideas which were prevalent in his adolescence.

John Foster: 'I was 21 in 1967, which was the sort of flower power and back to nature and all that sort of thing. And I just wondered whether it was something that was in the air at that time. I knew a lot of people who wanted to...well, not so much to work at home but not to go and work in the conventional sense, not to get stuck in an office or any It was almost anti-manufacturing, anti-big business, anti-corporatism.'

In fact, apart from one short initial spell as a journalist, his subsequent working career never involved working in an office - as was also the case with those contemporaries belonging to John's social circles.

We might add at this point that it is not only the countercultural images of telework which can effect motivation. It is clear both from our interviewees and the comments of members of teleworker organisations such as Ownbase that telework could evoke the sense of being a pioneer. For instance, systems analyst Angela Lockwood was enthusiastic about the challenge of her company's telework scheme and had subsequently become involved in talking to potential teleworkers about her own experiences, providing tips and suggestions about what they might expect. She had featured briefly in a company video on teleworking and frequently found herself praising the merits of teleworking at social events such as dinner parties.

- Telework as a Reaction to Work Problems. This covers a range of issues, such as blocked work opportunities or a negative response to changed working practices. In the Robinson household, for example, ex-publisher Sally had decided that she would have to consider more local work in her small Essex town when childminding costs made commuting to London uneconomic. But when Tom came to the conclusion that he had no future prospects of advancement from his sales manager role, the Robinsons decided to go independent and set up their own book distribution partnership. Tom went back to his earlier career role as a travelling sales representative while Sally provided the back up administration function working at home.

Meanwhile, researcher Kay Lawson decided that it would be difficult for her to return to full-time office based work given her work biography to date. She reflected the sentiments of a number of women whose years of domestic experience undermined their confidence about returning to the workplace.

Kay Lawson: 'I felt if I'd had a career which was very straightforward that I could just turn round and resume, I suppose it would have made quite a lot of sense to do that and to employ a full-time nanny, which a lot of people did. But by this time, having spent you know two or three years either working part-time or being freelance the little bit before, my marketability wasn't so great any more. I didn't have a career. I mean, I don't have a job title as such. I've done lots of different things and I'm very adaptable but that isn't something that you can necessarily sell yourself with.'

So, there was a natural tendency to sort of avoid (seeking full-time office work). There was an element of thinking "I don't think I can face all that again" and "I've got my family and I want to be with the children". Somehow, once I'd retreated from that market place, it just seemed rather threatening. But then there was also an element of positively wanting to be with my children and, yes therefore, work at home seemed like an ideal and a sort of wonderful option if one could organise it in such a way that one would earn reasonable money.'

- **Telework Forced by Redundancy.** Our previous report noted that for many people the recession has meant that self-employment has been embraced with limited enthusiasm. It was often felt to be the only practical option following redundancy, early retirement (Haddon and Silverstone, 1992:15-16) (3). For example, Bruce Lang had been the managing director of a publishing firm before being fired when the company was taken over. For Bruce, teleworking was not an obvious choice, and he outlined the difficulties of taking the plunge.

Bruce Lang: 'I had kind of conflicting voices going on in my head. One voice said "What are you? What are you good at?" What you're good at is actually creating a team of good people and getting them to work hard and enjoy themselves and reward them, and sort out the disciplinary problems such as they are, and have a nice stable structured company". Therefore, that voice said "You'd be crazy to be working at home because you'll be working for yourself and you've always relied on the support systems of secretaries and accountants and legal advisers and people to go and buy your stamps for you, and all the rest of it. And you're going to find that very difficult". The other half of me said "Yes, but, you know, if I become a managing director of a company, even if I were lucky enough to get a job as a managing director of another publishing company, (a) I would have to go to London, (b) I might be working for bosses who might require things of me in a slightly less free way than I had as a free hand in the previous company, where I was part owner, and I may be too old to be taught new tricks in terms of how to do what I'm told. Therefore, working at home is much better because I can be answerable only to myself". But they were very much conflicting views and, I have to say, still are.'

- **Telework as Entrepreneurship.** Evidence for the view that telework reflects a new-found entrepreneurial spirit in the 1980s and 1990s is less clear-cut. Often, negative reasons for leaving the work-site can be more significant than any desire to set up a business. And even where teleworkers did feel very positively about becoming self-employed and being in charge of their destiny, the original catalyst for making the move was often some problem with work. For example, consultant and management trainer Sam Reid had come to hate his previous role as a 'company man'. Meanwhile, Rizwan Rahman who had been the director of a small institute before teleworking described his motives for setting up his own consultancy.

Rizwan Rahman: 'What really made me decide to go homeworking was (a) the sheer enjoyment of it and (b) the opportunity of getting into areas which I could never get into if I continued to work at(the institute). Because the European work wasn't so well paid as the UK work and (the institute) couldn't afford to let me work for Europeans initially. But it was the sheer ability to get into new areas and meet new

people and not be weighed down by the dead weight of the office. For me that was the thing. And ever since I became self-employed, I mean I literally felt like this. I felt two things (a) this feeling of utter liberation and (b) I felt like Concorde on double throttle. I really did. I mean it was just a take off and in six months I wrote two books and both of them did very well indeed.'

- Telework as a Preference for the Domestic Site over Worksite. Whereas Kay Lawson represented those who found the workplace threatening after spending some time at home, for other women office work would mean a loss of what they had come to value about being home-based. For example, Katherine Dennehy established her childminder agency at home because she did not want to return to being an office employee. She had come to value her autonomy and freedom to follow up other interests. And Emma Townsend felt that after years of experiencing the diversity of the domestic role a more focused office-based existence had less appeal.

Emma Townsend: 'If you've been managing your own time and arranging an awful lot of different things, you don't want to go back to just concentrating your mind on one thing, you want to be able to do lots and lots of different things. Also I don't think perhaps you are quite so good at concentrating on one thing all the time.'

3.2. The Status of Telework in the Home

The perceived significance of telework is important because:

- it can influence the very identity of the teleworker.
- it can have a bearing on how teleworkers and other household members feel about the intrusion of telework into the home (4).
- if given a high value, telework can be used to justify exemption from certain household responsibilities or to excuse teleworkers from participation in the social life of the household.
- it may enable teleworkers to gain the support of others in helping with that work.
- the status of telework has a bearing on the power of the teleworker to command space and resources for telework. Of particular interest in this report, this includes the power to buy new or appropriate existing technologies, or determine the patterns of use and the location of work-related ICTs in the home.

3.2.1. Male Primary Earners: Female Secondary Earners

The status of telework is one key dimension which differentiates the meaning of working at home for men and for women. Although some teleworking women in our sample earned the same as husbands (e.g. programmers), women were far more likely to be secondary earners. In part, this reflects the wider marketplace for male and female labour: female labour, such as the clerical work of many women teleworkers, commands more limited remuneration. But in addition, we have seen how women teleworkers are

usually interested in telework because it fits in with looking after children. Hence, a fairly large number work part-time. Amongst our sample, women tended to earn more than men in those cases where problems arose concerning the male partner's work - e.g. where the men were made redundant or their own businesses were going through a slack phase.

In contrast, most males worked, or aspired to work, full-time. They were far more likely to be the primary earners - or aspire to be in the case of those setting up new businesses. 'Aspiration' is the crucial nuance, because the significance of telework is by no means simply determined by the amount of monetary income it generates at any one time. The status of telework is both a psychological issue for teleworkers themselves and an understanding negotiated in the household. For example, where money for buying equipment has to come out of combined household finances there is always grounds for some friction and debate over the status of telework. We have examples involving both male and female teleworkers where such purchases are contentious. But it would appear that males, because of their commitment to work and their ambition to start a career, can get away with taking larger gambles with household resources. Female self-employed teleworkers were often much more cautious and more likely to take on only very limited overheads.

3.2.2. Difference among Female Teleworkers

Having first stressed broad gender differences, it is worth adding that the question of orientation to work also differentiates the experience amongst female teleworkers. Typist Sheila Clark represented those women who are relatively more geared to earning some money here and now: either as additional family income or money for their own independence. But other women are more concerned with constructing a career, building a business, gaining credibility in the home for what they do or keeping in touch with work and technology so that they can move back on-site at a later stage. This last rationale is illustrated by abstract writer Clare Brown, who decided to carry on teleworking when she had children.

Clare Brown: 'I was determined to keep it on. I think that was uppermost in my mind that, however much it was, I wanted to keep contact. I could see that things were changing within the industry. That I needed to keep up to date with what was going on, otherwise I would be left behind, because bearing in mind this was all pre-computers and felt I had to keep in touch. I didn't want to move to a different career. I wanted to stay in information science.'

Moreover, this is not just a clerical-professional divide, in that those doing basic secretarial work can also have very different orientations to their jobs.

3.2.2. Difference among Male Teleworkers

Male experiences were also by no means uniform. For example, we noted how Peter Brennan would have preferred a full-time secure job, but in his field of computer conferencing there were mainly short-term contracts. Since his wife had the secure, better paid job with tenure, they engaged in a substantial role reversal: he worked part-time and was mainly responsible for childcare. In another case, when middle manager Gordon

Taylor took early retirement, his attempt to start a teleworking computer consultancy business faltered sufficiently that he bordered on unemployment. Dave's 'underemployment' meant that he sometimes experienced difficulty in convincing his wife that he was 'really working' - and thus, for example, that he was not available for domestic chores. In these two cases, the males did not necessarily embrace the positions in which they found themselves, where their traditional gender identities were in question. But they experienced forces - the harsh climate for small businesses, job insecurity and increase in temporary employment - which are becoming more common.

3.3. Control over Telework

The previous report on this telework project problematised some of the claims that teleworkers benefit from increased flexibility and autonomy (Haddon and Silverstone, 1992:15-6). The various constraints and degrees of control over work were demonstrated in our empirical research and, once again, constitute key dimensions differentiating the experience of teleworkers.

3.3.1. Lack of Control: Clerical Telework

To take one example, a number of female teleworkers offering word-processing services, operated in a very competitive marketplace. Their desire for income could make them feel obliged to take on any work as and when it came up - which clearly impinged on their ability to control their domestic life. For example, when typist Jill Perry was first setting up her business, she used to act as a back-up service when a firm's normal secretary went on holiday. Hence, she regularly received rush jobs which would keep her up until the early hours of the morning. Several of our case studies showed that this experience could be just a temporary phase in a telework career, before teleworkers managed to regain more control over their lives. But, this was not always so. Typist Alison Hunter had worked this way for years, offering almost a 24-hour service, and hence never knowing when her 'free-time' would fall. As a result, the Hunters found it difficult to plan holidays or synchronise leisure time with others.

Such self-exploitation need not simply reflect the interaction of market for services combined with teleworkers' economic priorities. For instance, typesetter Diana Simons' willingness to 'help out' when asked meant that she regularly worked more hours than she would really have preferred.

Diana Simons: 'I take as much as I can do. I go into the office and I regulate the amount of work that I do. We have a laugh at the minute because when I go in I'll say "I want sixty pages". And she will say "Right, there's seventy-seven here". And I'll say "No, I only want sixty". And she'll say "Well, there's seventy-seven". So I say "Go on then". And then I have to get up at six o'clock in the morning to do that extra seventeen pages, and I think 'I didn't want this and I know I couldn't cope with this' but I always get it done and they always take it back. So it doesn't matter how much I ask for, she always gives me more. It's because I can do it, that's why. She knows that I can do it.'

3.3.2. Lack of Control: Professional/Managerial Telework

Where self-employed professional teleworkers operated in competitive markets for their services, they could experience some of the same control problems as their clerical counterparts. When he first set up as a consultant Sam Reid found himself looking for every business opportunity he could find. The ensuing short-term contracts, sometimes for only a day at a time, meant that his work was fairly unpredictable. Since his wife Anne's timetable was also uncertain because of the short notice she received for her tourist guide work, the Reid household had major problems in organising flexible childcare. Hence, Sam's immediate aim, which he was starting to achieve, was to build up longer term contracts allowing him to plan regular days working at home.

Professional teleworking employees faced different constraints. In particular, managers such as Jonathan Townsend and Lyn Gloster were so concerned with the success of their work that they lowered the boundaries around home life - e.g. making themselves contactable out of work hours. Since executive Jonathan Townsend often acted as a trouble-shooter, he found it difficult to control work in large part because the timing of crises was out of his hands.

3.3.3. Factors Enabling Control

Most teleworkers, however, be they men or women, clerical workers or professionals, had managed to develop strategies for attaining some degree of control over work. This might be because they were in a good position to turn down work or negotiate hours. For employees, stable work flows over a longer period sometimes followed from negotiations with their superiors. For the self-employed, it might follow from developing a close relationship with clients.

The case of typist Sheila Clark illustrates such teleworker strategies to control work. Sheila had originally taken up telework through answering a newspaper advertisement requiring home audio-typists for typing up market research interviews. To supplement this work, Sheila advertised in the local paper, but while she picked up some work typing up student theses she was not so happy with the irregularity of this source. Eventually she attained some daily work from a letting agency, became secretary for a Graphic Fine Arts Society and took on weekly work for a local chartered surveyor. Not only did Sheila's work increase but it became more regular and predictable.

However, the problem facing Sheila was that she was now more likely to have too much work. In some cases, this could be off loaded onto the network of other typists she had come to know. When this was not possible, she was reluctant to be seen to decline work if asked directly, because she is still worried that her current clients might disappear at some stage. Hence, one tactic involved putting the answerphone on even when she was at home in the knowledge that if the letting agency could not reach her straight away they would simply pass that particular work on to others. Since her husband, Roger, used to deliver the completed typing to the office, she would frequently tell him to leave as quickly as possible, before the agency staff had time to pass on more work for her.

3.4. Centrality of ICTs

One last dimension is worthy of mention because of the specific concerns of this project: namely, the degree to which ICTs form a substantial, strategic or necessary part of telework in the home. Some earlier research on teleworkers did not require the use of ICTs as part of the definition of the telework phenomenon (Huws, 1984). Instead, telework was seen as involving some sort of information processing. Nowadays, the use of computers especially tends to form part of the very definition of teleworking, differentiating it from traditional homework. However, such has been the proliferation of micros, especially for basic word-processing, that we now have to question whether simple possession and use of this or other ICTs is a sufficient criterion.

3.4.1. The Range of Use of ICTs

In our empirical work, one end of the range was represented by those using micros or mainframes all the time either for programming, report writing, word-processing, DTP, using statistical packages, accessing databases or computer conferencing. For example, teleworkers such as the Townsends had a substantial number of ICTs in the home: 3 microcomputers, 2 printers, four modems, an answerphone, a fax, cordless telephone handset and three phone lines coming into the house.

At the other end of the range were those such as Katherine Dennehy who used ICTs, including micros, more marginally. She had an agency for arranging childcare and babysitters where only the occasional letter had to be word-processed. Here, the basic phone plus answerphone formed her core technologies.

What emerged was a pattern where ICTs play an essential role for some types of telework. Examples include software designer Emma Townsend, Malcolm Knight programming on a distant mainframe computer via a modem, researcher Kathy Rahman conducting data analysis using a software package and computer conference mediator Peter Brennan. In all these cases, which predominantly consist of employees, the tasks would have been impractical without ICTs. Either the telecoms link for programming, receiving or sending data is vital, or else the growth of microcomputers in the workplace has meant that computer staff can now bring their essential tools home - they are no longer tied to work because of the need to access a centralised facility.

These types of telework can be contrasted with cases where the work could have been conducted from home without ICTs. Examples include secretaries Sheila Clark and Jill Perry word-processing at home, media researcher Kay Lawson, editor John Foster, accountant Joyce Miller, Sally Robinson handling the administration for a book distribution business, systems analyst Angela Lockwood producing feasibility reports, and abstract writer Clare Brown. In other words, these teleworkers, predominantly self-employed, are involved in text production or else clerical or professional forms of administration.

Many of these possess not only computers but also a wide range of other ICTs, such as photocopiers, faxes and modems, which no doubt facilitate their work. These ICTs make the work easier and quicker and they offer some new options (e.g. in the case of Kay

Lawson, consulting distant databases without needing to travel). Indeed, ICTs might have become more essential given clients expectations about the speed of production or their desire for electronic output. Yet, this work could have taken place in the past without the aid of new ICTs. In fact, both editor John Foster and abstract writer Clare Brown had worked for nearly 20 years at home, only starting to use new telecoms and electronic technology as they appeared in the 1970s and 1980s. Before this the only technologies they used were the typewriter and basic phone. These examples represent forms of professional and clerical work - not captured in literature on traditional manufacturing homework - which have always been conducted at home by a few.

In between these two sets of teleworker, there are some people for whom ICTs are more than just a facilitator because of magnitude of task and time pressures involved. For these, mostly but not exclusively self-employed, ICTs make telework a more feasible option. Examples include executive managing director Jonathan Townsend, Bruce Lang as a publisher trading in international book rights, and consultants Rizwan Rahman and Sam Reid producing substantial reports and packages at short notice. In these cases, communication is a significant element in their work, or else they are producing major texts in a short time span which require a professional appearance. The existence of ICTs providing the kind of personalised technological back-up that they might expect in an office had made teleworking viable.

3.4.2. The Significance of ICT's Centrality to the Work

In pointing to this variation in the role played by ICTs in the work process, what is at stake is not just the question of where to draw the boundaries around telework and where it blurs into other forms of homework. The centrality of ICTs to the labour process can have a bearing upon perceptions of the work (e.g. whether it is seen as being 'high-tech'), the value placed on and efforts involved in developing ICT-related skills and the justification for ICTs entering the home or being appropriated for work.

3.5. Conclusion

In this section we have begun our exposition of the complex and varied responses to teleworking that households have adopted. These variations are, obviously but significantly, the product of some of the core sociological variables that define the particular status of a given teleworking household. The heterogeneity of teleworking is therefore not simply the product of any one set of differences as for example the employed and the self-employed, important though these are. It derives from a pattern of historical, biographical and economic factors that variously combine to define both the motivation which initiates and sustains teleworking and an individual's or a household's trajectory through it (of which more in the next section).

Economic circumstances are clearly of great importance, since teleworking can be and often is, especially for the self-employed, an enforced option welcomed with less or more enthusiasm by the newly or about to be redundant worker. Teleworking can be a euphemism for home-based, technologically supported, under-employment. But even amongst those who are fully self-employed or fully employed, as well as amongst the professional and the clerical teleworkers, variations exist especially as a result of

gender differences, in the ways in which the new forms of work are incorporated into the household.

Gender is significant, and it will remain so throughout this report, because it provides a central faultline in domestic life across which differences of power and status, both economic and cultural, are negotiated and worked through in teleworking families and households. Gender affects motivation too, for clearly the justifications for embarking on a teleworking career will be different depending on previous employment status. Those in full-time work can perhaps see the advantages in the avoidance of commuting. Previous experience of working with information technology in the office, both for men and women, encourages incipient teleworkers to take the plunge. But particularly women embarking on child-rearing or continuing a previous commitment to it (as well as those leaving it behind), see in teleworking ways of managing both home and work within a single and familiar, though constantly changing, domestic space.

The management of teleworking also reveals profound differences, where the power of the teleworker to command domestic resources or the support of his or her partner, is crucial. This is dependent, we have suggested, both on the status of the work in the wider community, and on whether the teleworker is the primary wage earner. But in all these cases, customarily, gender provides the most significant differentiating factor.

Two points however emerge from the discussion. The first is that within the primary distinction of gender and also sometimes cross-cutting it, differences of skill, or the stage the family has reached in its life-cycle, offer the basis for further differentiation. No two male or female experiences of teleworking are identical.

The second is that all these factors affect our understanding of the capacity of teleworkers to control their working lives at home. It is not the case that teleworking is merely a recipe for greater flexibility and untarnished control, through teleworking itself can be seen to be an individual or household strategy to attempt to gain such control. In both directions - the control of telework and the use of telework to control a wider range of life chances - the complexity of social relations and the unevennesses of everyday life conspire to challenge any simple view of teleworking. Indeed they open up the possibility of recognising it as a much more contradictory and conflictful experience than it is often seen to be.

4. Telework as a Career Stage

The decision to telework should not be seen as being final. It is a provisional, perhaps temporary commitment to a working arrangement. For some it is a choice taken with relatively more enthusiasm. For others, the decision to telework and continue teleworking is made with some ambivalence, and with at best a partial commitment.

Therefore, for some people telework is indeed the final stage in their career: once they become involved in teleworking they continue to do so for the rest of their working life. This may be a lifestyle choice, a decision to embrace teleworking because of the problems of on-site working, or because of the autonomy it may offer. But equally, this may be because there are few better options: e.g. for the manager made redundant who is unlikely to be employed again because of age.

For others, teleworking is only a stage in their lives, an option like taking a career break, or the decision of many mothers to work part-time while the children are young and return to full-time working later (elaborated in Haddon, 1992:15-16). It may be a fairly short stage, as in the case of one of our interviewees starting a new business and working at home a few months before moving into rented offices. Or it may last for some years, as with a number of our households where women planned to stay home as their children progressed from birth to school age or even teens.

In the following discussion, we utilise the concept of telework trajectory to describe some of these stages because it captures the way in which telework takes place in a constantly changing household environment and remains a potentially provisional arrangement. It also enables us to illustrate the variation in routes into, through and out of telework. Lastly, we can ask how the various trajectories give rise to different issues in households and to different responses.

4.1 Antecedent Factors

Several experiences prior to telework can make the adoption of this new form of working less problematic.

4.1.1 Previous Work at Home

Computer conference mediator Peter Brennan provides an example of a teleworker whose father's work rhythms as a vicar in rural Ireland paved the way for his own later work at home.

Peter Brennan: 'My socialisation was unusual because my father worked from home. His home base was also his work base. He had no separate office outside the home. Secondly, of course, his hours of work were not defined, except that quite a lot of the work he did tended to be done outside other people's working hours because it's difficult to go and see people unless they're at home. Then, because it was a rural area, a lot of the rhythms of the place were not industrial because farmers don't have defined hours of work either. If they're a dairy farmer they do have rather rigid timetables. The cows have to be milked at certain times. But they don't have bosses. They're very independent and so it was very much that kind of more

agricultural life where you tend to get bursts of activity followed by periods of rest... It could be that it's training in a sense that it make certain things less problematic in that I am aware of the drawbacks of not having the day structured for me, of having to do my own structuring. But I do know this is possible because I have a role model.'

Sometimes, teleworkers themselves have a gradual transition into their new work role. Joyce Miller started doing some accounting work at home while she was still working at the office part-time - it was quite common for accountants to take on such extra clients, friends and relatives, on the side. Similarly, Diana Simons had done some typesetting from home 10 years earlier in addition to the day job she had at that time.

Programmer Emma Townsend argued that women's domestic experience was itself a good preparation in that there were structural parallels with telework: the similarity between the fragmentation of domestic tasks and of combining home and work and the self-discipline skills learnt from managing a household.

Emma Townsend: 'Because if you've been managing a household...you're much better at managing your life as well. You know, you don't tend to think "Oh well no-one's pushing me, I'll sit down and read a book all day". There are things that have got to be done and you do them, because no-one else is going to do them if you don't, so you don't need to be pushed to do things any more. You're not in that sort of frame of mind, whereas perhaps when you've always worked for other people, perhaps you do tend to wait until people tell you what to do.'

4.1.2. Self-Employment

Apart from working at home, previous experience of self-employment could make the decision to move to teleworking easier. For example, Joyce Miller and Emma Townsend were among several who noted how their own parents, especially fathers, had themselves been self-employed and thus provided some familiarity with the idea. Prior to being a media researcher, Kay Lawson had worked for several years as an actress. Although the work was very different, this meant that she had been used to being at home much of the time, and using the phone (to seek work).

4.1.3 Locality and Occupation

Typesetter Diana Simons made it very clear that it was easier for her to contemplate working at home because so many mothers had always done so in her local community - as traditional outworkers for the Nottingham hosiery industry

Meanwhile, accountant Joyce Miller noted how it was standard for women in her line of business to move into the home for a few years when children arrived. The same might also be said of typists shifting to work at home.

4.1.4 Telework Literature

Another introduction to and preparation for telework came through the literature on this topic. For example, computer conference mediator Peter Brennan had always monitored teleworking discussions as part of his research and had even joined the organisation Ownbase some years before becoming a teleworker himself. Programmer Malcolm Knight first encountered the idea while following an OU course several years before he had the chance to try it.

Malcolm Knight: 'Ever since I first read about it, I thought that's what I should be doing.'

He therefore leapt at the chance when his firm offered a scheme. And media researcher Kay Lawson had been writing reports on the merits of teleworking for an in-house magazine some years prior to becoming a teleworker herself.

Kay Lawson: 'That was the first time I'd either heard the concept or thought about it. And, yeah, I thought it sounded really good at the time. It wasn't until I became pregnant and I was potentially in that situation myself that I realised that it wasn't just good, it was actually something that I wanted to do.'

In fact, when she approached them at that time her employers were not interested. It was only a few years later that after not working and then doing some part-time office based work that she eventually managed to become home-based, doing research for a US media company.

4.2 Immediate Trajectories into Telework: Previous Roles

4.2.1. From the Domestic Role

One route into telework is from an exclusively domestic role. This usually refers to women who for a time prior to working have been preoccupied as housewives and childcarers. This may have been for a short period of a few years as in the case of typist Sheila Clark and typesetter Diana Simons. Or the domestic role may have been a longer one, as in the case of Katherine Dennehy who noted that after being at home until her children were teenage she was used to being her own boss.

In fact, the transition from domestic role is a useful case for illustrating the significance trajectories can have upon the telework experience. We will elaborate later how this route has implications for the social networks in which these teleworkers participate. But briefly here, such teleworkers have made a break with any contacts through whom they can easily get support for work purposes (e.g. in terms of receiving advice or being passed on work if they are self-employed). Instead, they have moved into the social circles of other mothers with young children. Several of our interviewees then reported the dilemma of wanting to maintain such contacts, but finding it difficult once they took on work which they had to do it while their peers had their 'free time' for social contact.

4.2.2 From Education and Part-Time Work

Similar considerations apply to those entering into telework from involvement in some form of education (e.g. a degree). While this may have some of the temporal rhythms of industrial work in that deadlines have to be met and attendance may be required at certain times during the day, nevertheless there is usually considerable flexibility in terms of choosing the time to study and making time for social contacts. While managers of telework schemes may worry about taking on teleworking staff who have not experienced the time discipline of working on-site, our interviewees seem to have managed the transition from education to teleworking quite comfortably, without major changes in their personal organisation.

For example, Valerie King had returned to higher education as a mature student after her children had grown up. Following a degree and MA, she worked partially at home on behalf of a local authority before going to full-time office-based work for a trust. Peter Brennan was still completing his PhD while teleworking as a computer conference mediator. And programmer Malcolm Knight developed some of his patterns of work while on the OU course prior to his present employment for a financial house. The children and Ruth would normally say hello when they came in, but then leave him to work in peace in the bedroom - just as they had done when he had been studying.

In some ways, moving from limited part-time work can also be an easy transition which involves less adjustment than when the precursors are purely domestic work or full-time office work. For example, part-time researcher Kay Lawson had incrementally increased the hours she worked at home, and software designer Emma Townsend had moved from part-time office-based work into the home.

4.2.3 From Full-Time Employment

The contrast with the domestic trajectory is clearest with those who have come to telework from a full-time office-based environment. In our study, those who continued to work for an employer could often carry on working roughly the same core hours uninterrupted by any friends who expect them to be free for socialising. Teleworkers such as systems analyst Angela Lockwood and programmer manager Lyn Gloster were also locked into working some core hours because of the requirements of their employers (i.e. in order to co-ordinate with other staff).

Where those involved were employees taking part either in a teleworking scheme or a more informal arrangement then there was also some scope for maintaining useful contacts in the office who could help out with work problems. Even some of those who make a break from their previous employers to set up their own business, such as consultant Rizwan Rahman, could still retain work contacts, and often retained much of the time structure of their previous employment.

4.2.4 From Self-Employment in Offices

Another route into the home includes those self-employed who retreat to the home for longer or shorter periods - for example, because of a contraction of business they give up rented offices. In our study, solicitor Paul Miller had spent a few months working at home as a stop-gap between leaving his previous partnership and setting up his own business in a new office. As with those setting up businesses for the first time, those retreating to the home may also bring other staff there to work with them.

4.2.5 From Redundancy and Early Retirement

The case of the redundant has already been mentioned. For these unemployed, teleworking may be not only an unplanned experience, for which there has been limited preparation, but one which is not necessarily welcome. In the face of a massive restructuring by his employer, Gordon Taylor had decided to join many other middle-managers in taking an early retirement package. This was sufficient to pay the main bills, and since he saw no prospect of becoming an employee again at his age, Gordon had decided to try to earn a little extra through computer consultancy and a telephone helpline.

Bruce Lang's redundancy had been very traumatic - he had lost his job as managing director of a publishing firm following a take-over. But after recovering from the shock over the course of a few months, he managed to set up another fairly lucrative business trading in book rights. Designer Bob King actually welcomed his redundancy since there had been a considerable amount of tension in his previous office and he felt relieved of stress. The fact that his wife Valerie had just moved to full-time working helped the finances and, with a work partner, he was able to set up his own business and keep some clients from his previous work. Architectural technician Peter Dennehy picked up the occasional contract after his firm's contraction led to his redundancy. But he continued to show an interest in moving out of the home and back to the office, regularly asking his old firm whether they would expand again.

4.2.6. From Unemployment

Some of those made redundant had brief periods of unemployment before self-employment. Sam Reid took a longer break. Anne described how he gave up his job managing a team developing software systems and what she felt about the period before he eventually starting up a business as consultant and management trainer. She had initially been less than enthusiastic about his decision to risk self-employment.

Anne Reid: It completely freaked me out because at that point he, at least, Sam was on a steady income and we had this enormous mortgage. So I knew that even if my work was a bit sort of erratic, at least he was bringing in enough to cover the mortgage, even if we went hungry one month. But he came back and said he was chucking that in, I just completely freaked out. I didn't let him know I completely freaked out but inside I thought "Oh no!". And then we went away for this long period, this eight months, the idea being he would have himself sorted out by the time we got back and of course he didn't. He hadn't got a clue what he was going to do. In

fact, when he came back from our travelling, he applied to the Foreign Office so he was still not sure at all. He didn't start for another six months. So I supported him for those six months and then he said (again that) he was going to set up on his own. I mean, my heart sank. I thought "Oh no". One of us needs to be stable'.

4.3 Trajectories During Telework

A range of work-related factors can mean that the experience of telework changes over time, perhaps raising new problems and requiring new forms of accommodation.

4.3.1 Changes in the Work

One change simply involves alterations in the number of hours worked, especially moving between full- and part-time telework. For example, abstractor Clare Brown reduced her hours to become a part-time teleworker when she had young children.

Another dynamic involves changes in the balance of working at home and from home, where there might be more or less need to visit employers or clients. The degree to which teleworkers have to be contactable can also alter over time, with repercussions for the choice of hours when they work or how much domestic life is interrupted.

Other changes may involve the very nature of the work being undertaken, for self-employed and employees alike, and changes in the pace of work. This might in itself reflect taking on different clients or a re-organisation at a central work-site such that those on telework schemes are assigned to different departments with new modes of working - as in the case of programmer manager Lyn Gloster. Teleworkers may even move between self-employed and employee status, especially if doing contract work.

The evolution of telework can be illustrated by the case of Kay Lawson. When Kay applied to the American media consultants they started by giving her a few hours administrative work each week, answering the phone and picking up messages for them. Although she was not that keen on what she described as '*odds and sods*', she put up with it and gradually the workload increased. Apart from the fact that the work became more attractive as her income grew, her American firm also started to give her more interesting work. The firm's clients included the various ITV companies, and one service they offered was ongoing constructive criticism of clients' regional news/magazine programmes. So Kay regularly received videos of the programmes for review (one of the few in our sample who used TV-technology for work). As the hours increased, Kay abandoned all her other freelance work to work exclusively for the American firm, although she has retained her self-employed status.

Kay Lawson: 'A couple of months ago they put pressure on me and said they would like me to be an employee but no figure of salary was mentioned to me. I was very dubious because they're an American company and, as such, they're very committed to working 300 hours a week with sort of not taking any holidays.'

Although she was wary about the work becoming full-time, she agreed to a compromise whereby she increased her hours to 15 per week, taking on more childcare. In addition, she would work extra hours for occasional projects - e.g. the week before the interview

she had spent 3 days in Northern Ireland to see focus groups discussing a new news programme. This was an example of the more challenging type of tasks which she was offered now.

Several telework businesses in our sample with multiple clients also evolved as they grew. Rizwan Rahman consultancy, Bruce Lang's publishing business, and Sam Reid consultancies had all grown such that they had to take on some outside support staff. Nor is this a phenomenon only of professional teleworking. Typist Jill Perry had taken on a part-time assistant mainly so that her secretarial business could be permanently on stand-by. It also enabled Jill to take more time off to train as a translator, which offered her potentially more lucrative telework.

In the Robinson household, Sally and Tom had a partnership distributing books. When they had started up Sally had played a limited role. Not only was their turnover low in the first few months, but she felt she needed that time to familiarise herself with both the computer technology and with the details of this particular line of business. Hence, she had worked a few hours here and there during the week entering data and setting up systems. By the time of the interview, her routine had changed - she worked almost exclusively at weekends, handling most of the partnership's administration - although she was available during the week to handle phone calls and pass on messages.

Finally, the changing nature of telework was also well illustrated in the Reid household. Sam started by selling his services for a few hours per week - for example, teaching systems analysis to foreign students. The rest of the time was spent looking for opportunities and developing proposals. By time of the interview he had several clients to whom he offered a variety of services: running a payroll, writing reports on human resources management, counselling individual managers and running management training courses. He had a separate rented office staffed by a secretary, although he himself worked mostly at home. And he hired other staff as and when he needed them.

4.3.2 Changes in Social and Domestic Circumstances

The other major influence on the experience of teleworking comes not from the work but from domestic life. For example, long-standing teleworkers such as abstractor Clare Brown and editor John Foster had ended their marriages and found new partners while teleworking. Hence, the telework was taking place in new households, involving the negotiation of its meaning, of spatial and temporal boundaries etc. with new partners who themselves had different patterns of work from the previous partners. In the Foster case, John's new wife Bridget also brought with her two extra children from her previous marriage.

Certainly one very significant factor, to be discussed in depth later, is simply the growth of children. That process creates a whole host of new demands and considerations that can have a bearing on, for example, the times when work takes place, the location of telework in the home and even, as illustrated in the next section by the Brown case, the very viability of telework.

For example, Sally Robinson was looking forward to the following year when her children could go to playgroup. She could then work longer hours and return to working

during the week. She expected that it would allow her to provide new forms of back-up for her husband in his role as a book sales representative: in terms of sales campaigns and reports for publishers. These would all add value to the service they offered in a competitive book distribution market.

Lastly, changes in social networks can have some influence. For example, although not a teleworker, Ruth Knight found it easier to contemplate returning to full-time work because the other mothers she knew, with children of similar ages, were also returning to work. Hence, the old social circle, involving dropping in to see each other and coffee mornings, was breaking up.

4.4 Trajectories Out of Telework

4.4.1. Domestic Pressures

Even those who prefer to work at home may find that their changing household circumstances render teleworking impracticable. The best and most dramatic illustration we had of this was Clare Brown who had been writing scientific abstracts at home for the past 18 years. When the opportunity arose, she had started teleworking largely as a lifestyle choice even before having children. She had adapted with the arrival of her children, at times cutting back to part-time, and shifting the hours when she worked as the children grew older so that she could always work when they were asleep or out of the house. But it was when they were in their late teens that the main problems arose.

Clare Brown: 'Things changed really when they didn't go to bed early, and when they started coming back from school. They go to the upper school which is just round the corner from there and they started deciding to come home for lunch. And then they sometimes come home at break, and they're always home at 3.30, so they're not away from the house, as far as I can see, for any length of time. And they're up until we go to bed because they're obviously that much older.'

LH: 'Right. So this made working at home more difficult?'

Clare Brown: 'Yes, next to impossible to a certain extent. I had to work when they were around, but it didn't work out. I would shut this door for example and say "Look I'm working". And you'd get knocks on the door. You'd get thumping, you'd get shouting, and you'd get them coming round and knocking on the window and "Mum, can I have an ice cream?". You know, this kind of thing. They just would never understand or would never accept that perhaps it would be better to leave me alone. I used to get terribly cross and frustrated.'

LH: 'This is surprising because they've grown up with you doing some work. Even though they didn't see it, they did know that you worked from home.'

Clare Brown: 'That's right. They've always known but never taken it too seriously because I've always done it when they've not been there. Perhaps if I had done it whilst they were around, when they'd been younger, it might have been better. For example, my father always used to retreat to his study. But then you see I haven't got a wife to run the home, have I, that's the big difference.'

Since this teleworker was unsuccessful in persuading them not to disturb her, she eventually, and with regret, had to give up working at home and hid from her children in a rented office where she could get some peace to do her work.

4.4.2 Problems with Telework

Sometimes, telework was only ever a temporary reaction to circumstances, so returning to office-based work involved relatively little sense of loss. For example, accountant Joyce Miller had only teleworked when there were few other options.

Joyce Miller: 'I don't see my future working from home. I feel I want to have a distinction between home as being somewhere you relax and work as being somewhere else.'

In fact, a problem arose shortly before the interview when Joyce suddenly lost her main client who had been with her for 9 years and provided £500 per month. When the firm changed its procedures it wanted account details delivered in electronic form rather than just hard copy. Joyce's machine was not compatible and so the business went to another home-based accountant who had the appropriate computer. This news came 'out of the blue' and she was 'devastated' because of the loss of income and the effect on her overall work pattern. This provided the catalyst to start thinking about trying to return to office-based work as an employee.

In the Lawson household where researcher Kay was now teleworking, Kenneth had also had some experience of working at home as a consultant for a few months some years earlier. He basically had not enjoyed the experience, referring to the familiar difficulties of separating home and work.

Kenneth Lawson: 'It was difficult I think for a number of reasons. I'd never done it before. I wasn't used to separating myself. It's easy when you leave the front door and you go and there's a period of separation where you're making the transition and you arrive at your workplace and there are people there that you associate with work and there is nothing there that you associate with home. The environment is different. I found it quite difficult to adjust. I would shut myself away but my son, who between a year and 18 months, was crawling around and banging on the door and not understanding why his daddy wasn't letting him in.'

He had also missed the camaraderie of work, especially the 'bubbly, loud, raucous, sometimes tense atmosphere'. The contrast with his quiet home and working alone was therefore quite a large one. And he disliked all the aspects associated with self-employment, such as chasing money owed to him and filling in VAT forms. However, at the time he had been earning a good deal, and since he had not been able to foresee any other employment, the obvious step to get out of the home and acquire some colleagues would have been to form a company, set up offices, or perhaps take on a partner. But before he had chance to follow this trajectory, the opportunity to return to his old company came up and he took that instead.

4.4.3 Career Opportunities

Other motivations for giving up homework included the search for better career opportunities, the straightforward desire to move on, to have a change and take up new challenges and the opportunity for better pay on-site with an employer.

For example, accountant Joyce Miller also mentioned considerations such as the desire for more career progression, the company of the office, the ability to bounce ideas off others which she sometimes missed - and she could take on different types of work if she had the backing of an organisation. Although she enjoyed it, teleworking was only ever a contingent decision for researcher Kay Lawson and she could also see herself returning to the office if a career opportunity opened up. At the time of the interview, it was in the balance whether publisher Bruce Lang would become an employee again, since there was one job opportunity on offer. And although computer conference mediator Peter Brennan preferred his teleworking to office work, the insecurity of the contract work was a constant concern. He was willing to give up working at home if his wife Sian followed up her interest in moving to part-time work and if a more secure office-based job presented itself.

4.4.4 Expanding Businesses

For the self-employed, the expansion of work and the need for greater space sometimes meant that the home could no longer contain work even if, once again, those concerned might prefer to work at home. For example, consultant Rizwan Rahman had initially worked in the attic. But as his work expanded, and he employed his family and then outsiders to help, he managed to expand his space by building an extension. In effect, he worked next to his house, rather than in it. However, even this might not be large enough if he continues to expand, and he could see the next step being to rent offices. A similar process was occurring in the Townsend household, where Jonathan and Emma had taken over an extension originally built as a library for their work - but they too were starting to feel too cramped and were contemplating moving out. Lastly, consultant Sam Reid had expected to spend more and more time in his office, although he eventually changed his mind since it might have made childcare too problematic. But he retained the office for impression management purposes: as a place to meet clients.

4.5 Re-entry into Telework

Whether through desire or lack of better options, those who give up teleworking may always return to it - in which case, re-entry trajectories also exist. For example, researcher Kay Lawson had spent several periods during her life, before having children, when she had done some freelance writing at home using her microcomputer as a word-processor. And when she was initially forced out of the home by her children's demands, abstractor Clare Brown first tried a full-time library job. When the actual work proved unsatisfactory, she tried teleworking a second time before she finally gave up and moved to rented offices. Nevertheless, she thought she might return to working at home when the children were old enough to leave home.

4.6 Problems with Giving up Telework

Lastly, the trajectory out of telework can be problematic, as accountant Joyce Miller noted.

Joyce Miller: 'I felt I wanted to get out of the house. I wanted to get back into the office environment. The first morning I did it it was absolutely exhausting because I was working from 9 till sort of 2. At home you sit down at your desk and then the phone rings and then you get up and make yourself a cup of coffee and you come back and sit down and have a coffee, and you don't realise you're doing it. I mean, they say you get more work done at home per hour, don't they, and I think you probably do because you don't have the office chat. But equally, it's still a lot of concentrating (in the office). You have to do it while you're there, you can't do it when you want to.'

She later contrasted her earlier advice about teleworking with the problems she faced when trying to return to employment outside the home.

Joyce Miller: 'I remember when I had my interview with the senior partner he said "Accountancy is quite good. When you get married and have children you can always do it from home". And whether that planted the seed in my mind I don't know. What he didn't say is that once you've done that, people don't want to employ you. It's as if you've got two heads...(For example) I've been to a couple of agencies and because you don't slot into the sort of "norm" of accepted work experience and career progression they don't know quite how to deal with you...they can't seem to pigeon-hole what I've been doing over the last 12 years.'

4.7 Implications of Telework Trajectories

4.7.1 Instability of Telework: Beyond the Control of Managers

The first point to make in relation to the literature on how to manage company telework schemes is that some aspects of telework are simply beyond the control of managers. This is because the household has its own dynamics. There are various domestic reasons, as well as career decisions, which lead people to take on telework at one stage and give it up at another. If we combine this with the fact that the work may itself be changing, then clearly telework has a certain instability: being less problematic as a work arrangement at some points in time and more so at others.

4.7.2 Appropriateness of Teleworking: Evaluating Success and Failure

Nevertheless, teleworking may be regarded as a 'success', as being appropriate, for a particular period of time when it fulfilled its purpose adequately: even when people give up teleworking as their circumstances change. This has instant implications for any attempts to evaluate the 'success' of teleworking since the fact that people 'drop out' of teleworking can not easily be taken as a measure of its viability (5).

4.7.3 Transitionality of Telework

As regards the practical implications for managing telework, organisers of telework schemes calculating the use of future office space, equipment needs etc. would need to ask what difference it makes if telework is regarded as being transitional, and they can therefore expect a certain proportion of their teleworkforce to want to return to the office.

Also, managers and those advising the self-employed on setting up at home need to think not just about how to handle the trajectory into telework, but also the trajectories through it and sometimes out of it.

4.7.4 Telework as Flexible Option

Turning to a more general observation, future scenarios of teleworking are misleading if they suggest any secular trend whereby teleworking jobs replace on-site ones. If teleworking is transitional for many, the picture is rendered far more complex. Teleworking is no longer simply displacing traditional office-based work. Instead, it is an option open to more and more people as a component in their work career.

4.7.5 Telework as a Route for ICTs into the Home

Lastly, there are the implications of teleworking trajectories for ICTs. Later sections consider how these technologies may enter the home initially for teleworking, but then become established and used for other purposes. The point to make at this juncture is that even if telework is a temporary arrangement for some people, it may still be the route by which ICTs enter the home.

4.8. Conclusion

In this section we have continued our task of mapping the diversity of the teleworking experience, only this time it is diversity through time which has been the focus. Our first section pointed to the differences that could be noted in the routes that individuals took into telework. And those differences are sustained, though by no simple linear route, throughout the experience. Telework does not leave untouched the household into which it enters, and the character of the interrelationship of family life and work activities within the household (of which more in the next two sections) can and does shift.

Some teleworkers, perhaps more than we imagined, referred to forming experiences in earlier life as a justification for their preparedness to see working from home as a reasonable life-choice. Others saw it as temporary step towards a further full-time commitment to office-based work, and saw no long-term benefit from being at home. Yet others saw it as an entrepreneurial opportunity. Yet without belabouring the point, these kind of choices were more articulated by the men in our sample. It is true to say that women also gave up office based work to start teleworking, but it is also true to say that it was only women who began teleworking from a previously entirely domestic involvement in the home.

The second dimension of the teleworking career is related to the changes that take place in the telework itself, either as a result of its success, or its relative failure, as well as a result of changes within the household more broadly. As ambitions and desires change, the initial impetus to work from home, both among men and women, can be replaced, either through choice or pressure. In these cases teleworking is a temporary solution. And it is clear that those who wish to return to full-time work may find it difficult to do so. The desire to return can be for social reasons (wanting to get back to the thick of things); economic reasons (an inability to sustain a required

standard of living); or cultural reasons (the failure to transcend the sense that teleworking, because it is based at home, is not really work).

Teleworking is therefore neither a single option, nor a single response to a single set of circumstances. It is often an interrupted and uneven career. Motivations differ, as we have seen. Trajectories through the experience differ, and teleworking may indeed become an intermittent, tactical response to wider set of life-changes. All of these factors affect the employed as much as the self-employed, and maybe affect the employed more significantly, for the structures which contain their working lives may be less flexible, less responsive, than those - client or family based - which affect the self-employed.

5. Time and Telework

Time and space are two of the key dimensions according to which people structure daily life in homes. Within these frameworks all activity is organised. They are resources to be managed, resources over which there are conflicting demands. And they are fashioned in male and female ways, as shall be elaborated presently. Of significance here, they are structures which both affect and are affected by the introduction of telework.

5.1. The Experience of Time

5.5.1. Industrial Time

A few preliminary comments need to be made about the different ways of experiencing time which have been identified in previous literature. 'Industrial time' is the major axis around which life is organised for the working population in the UK and other developed countries. For the active labourforce, the factory or office day determines when work and non-work time occur - with the various exceptions of shift work and work brought home after the normal workday has ended. Industrial time has a secondary influence on the schedules of other institutions: for example, upon the hours when schooling takes place and when media programmes are broadcast (6). Lastly, industrial time also refers to the very pace and rhythms of work: basically, most paid labour is hired for time periods which are then 'filled' with work.

5.1.2. Domestic Time

'Domestic time' refers principally to the experience of women both as full-time housewives and when their dual role means that domestic responsibilities extend before and after any paid employment in which they are involved. Feminist literature has characterised such domestic time as being fragmented, involving constant movement between different tasks. Activities are multiple and simultaneous (e.g. watching television while dealing with various chores). And women, outside of paid employment, remain constantly on call, their activities interruptible by the demands of others. In other words, their time when not in paid employment is of a different order to that of adult males: female 'non-work' time is not really time free from work, nor a form of leisure where personal interests can be followed with total commitment and attention. It involves domestic work which, temporally, is of a different quality from that of industrial work.

One observation which is illustrated in our research is that domestic time also has its own dynamic, in that patterns of activity change as the children become older. For example, children sleep at different times in the day, with 'bed time' getting later as they grow older; they move through the institutions of nurseries and schools which have slightly different schedules; they become involved in extra activities outside of the home (which may require parental accompaniment or transport); and lastly, they vary in the degree to which they are independent and responsible and therefore need monitoring (e.g. in terms of being willing to play alone, wanting to take separate leisure outside of the home, etc.). Not only does this dynamic have a bearing on the timing of domestic duties. It influences the way in which time for telework alters over the children's life-cycle.

5.1.3. Telework and Temporal Structures

Telework opens up new temporal options: teleworkers often have more choice concerning when to work, how to work and at what pace to work. However, this flexibility can also be experienced as problematic, entailing more decisions and self-discipline than when external time constraints are imposed. Peter Brennan, a computer conference mediator who was also studying for a PhD, noted how this his lack of fixed working hours actually made it difficult to decide how to define time for work, for study and for the rest of his life.

Peter Brennan: 'The main problem, as far as I'm concerned, is the danger of what people in workers' co-operatives I think sometimes call 'self exploitation'. It is very difficult for me to draw clear boundaries round what I'm doing and it's the nature of my research that, I can't at the end of a specific time say well, you know, I've done a day's work. When I was an administrator, quite a lot of the time I was actually employed to be at the office. If you were doing some time working in the college Admissions Office, quite a lot of what they're actually getting you to do is to be there in case someone rings. And so, if you were having an off day, got a touch of flu coming on or really bad Monday morning, you can without too many pricks of conscience sit there a bit slumped at your desk and just react to whatever happens. When I'm working from home, it's not like that. Of course, one can slump but one is not being paid to slump. You haven't achieved anything apart from sitting, staring into space for half an hour.'

Most teleworkers are by no means totally free arbitrarily to choose their working time. As we shall see, they must in practice still take into account (a) the demands of home and social life (for example, where the demands of partners and children still need to be considered), and (b) the mainstream time structures imposed by industrial time. It is to the pressures to reconcile these considerations which we now turn.

5.2. Temporal Decisions Faced by Teleworkers

5.2.1. Synchronising Social Time

The first temporal decision confronting teleworkers concerns the degree to which they wish to synchronise their social time with that of others: with partners, with children and with others outside (or inside) the home.

- Synchronisation with Partners. Anne Reid was an example of one interviewee who lamented the declining social time with her teleworking partner Sam. Meanwhile, Ruth Knight was less than happy about the fact that Malcolm's changed eating habits at lunch time meant that he was not hungry enough to attend the traditional family meal at tea-time. And Sheila Clark also felt that she was missing out when Roger and the children were outside playing in the summer and she had to sit indoors and word-process.

Bridget Foster picked up on a different issue - the fact that John's schedule meant that although they had considerable and frequent superficial contact, they had little sustained time together. She had reflected on this when filling out the timesheets for this research:

Bridget Foster: 'I thought how many things we actually do together are minimal although, you know, we obviously talk to each other every half hour, like "Do you want a cup of tea?"' But we sort of meet up halfway up the stairs and have a quick conversation but now it's only actually physically to go out to Sainsbury's or something else brilliantly exciting that we do anything together except for eating and watching the telly at night. We seem to be able to do that but it's usually quite late by the time I finish dealing with the kids.'

- Synchronisation with Children. We previously noted how Jonathan Townsend felt that because he was out of synchronisation with his children's social time he was 'missing out' on their development. A similar sentiment was expressed by John Foster, who reflected on how he and his previous wife had both worked at home while au pairs looked after the children when they were younger.

- Synchronisation with other Social Networks. The Townsends, especially Jonathan, were also very conscious of the fact that even though they were both at home they could find so little time for maintaining social ties with their communities of friends. Meanwhile, female teleworkers whose route into telework had been a domestic one, such as Kay Lawson, regretted the fact that they could no longer make social time in the daytime when the other mothers were available - and so felt themselves to be dropping out of these particular networks.

Those who do not feel synchronisation to be a dilemma have often already bowed to the pressure to schedule telework to fit in with other people's patterns of work. When this is not possible, as in some of the above cases, teleworkers or other household members can start to feel that the telework is detrimental to home life or that they are becoming isolated from previous social and support groups. This is one consideration that can lead teleworkers to think of abandoning this working arrangement.

The unpredictability of some telework makes it not only difficult to synchronise social time, but also to synchronise household schedules sufficiently to manage everyday household practicalities. For example, Anne Reid's work as a tourist guide often came at short notice, while Sam's consultancy and training telework business was still growing and had not yet settled down into a stable pattern. Hence, organising childcare for their young baby had proved to be difficult. The most extreme case of unpredictability was that of editor John Foster, whose wife Bridget was very critical of the fact that John was simply not dependable.

Bridget Foster: 'Theoretically (teleworking) sounds as if it's useful and I suppose it is. But there are no patterns so you know you can have him three days wandering around not doing anything and then the next three days you don't see him at all, except you know exactly where he is, in front of that funny box in there. Which means that you don't actually know when you can really count on the fact that he is actually going to be around. Which is OK when the kids are just wandering in and out but if you really need him to be involved then it's very unpredictable...'

especially because he's got an unpredictable boss who can at any time create complete chaos just by one phone call. And also because it depends so much on what he feels like. If he's feeling very energetic, he won't stop at 4 o'clock in the day. He carries on indefinitely. He seems to work best at night. It might be because the house is quiet. I also think it's because of the nature of the work that there are weeks where it's seven days a week, fourteen hours a day and then there's a light week where he just disconnects and plods around and drives me round the twist because he's suddenly there. If it was the same workload all the time it would be a bit different but you know when you have... and then if it's a very stressful week then he needs you know a couple of days or whatever to just not have any routine or no work at all.'

Bridget was frustrated by the whole situation, saying that it would feel much better if he had a definite, regular routine. She added:

Bridget Foster: 'I think it would be actually easier if he went out to work. Much easier because then you know and you'd also know that he's not going to come home and carry on working afterwards.'

For instance, the unpredictability of his routines meant that she had to organise the children alone, and could not count on him to have free time if she was not around:

Bridget Foster: 'Not involve him at all. I have to exclude him from that equation.'

One particular problem that emerged regularly was the alternate weekends when John's children by his first marriage joined the two by her first marriage.

Bridget Foster: 'I get very frustrated when he's working and suddenly not just two but four of them are here to be kept quiet, entertained and taken out and it does get to be a bit of a problem, a bit of a sticky point, which I have increasingly reacted to because it seems ridiculous to, you know, during the week spend two days plodding around and then having all the work at the weekend when we're all here. So, and that is largely bad organisation, bad time keeping, or time management rather than anything else. Which is daft.'

LH: 'But that's in part built into the unpredictability of work you were saying?'

Bridget Foster: 'It is partly. I mean, there are things like the deadline weekends which we can't do anything about and they're just there but it could still be that things come in and get sent off, freeing Saturday and Sunday. It doesn't have to be Saturday and Sunday but it always seems to be. That is largely when things have been left to the last minute.'

Synchronisation is by no means a problem for all teleworkers, and is usually a very minimal one for those who are able and choose to conduct telework in roughly the same time slots as normal office work or else who fit in telework around their previous domestic routines. But it is a problem for many with pre-school children and professionals with particular work demands.

- For self-employed women such as Sheila Clark or Diana Simons telework was only possible because their partners could take over childcare when they arrived home from their own place of work. The same was sometimes true of professionals. Sally Robinson could only work at weekends, processing book orders for Monday, when husband Tom could take the children out of the house. The only example of a male in this situation was Peter Brennan, whose main chance to oversee his computer-conferences was in the evening once his wife returned from her librarian work and could look after and play with their young baby. For such people, where paying for childcare, or rather paying for enough childcare, was not economically justified by the remuneration from work, telework often had to take place in the evening and at weekend. However, such teleworkers expect this situation to be only a transitional phase until the children are old enough for nursery and school.

- Professional teleworkers may find themselves locked into hours when others work because that is when they need to contact other staff or clients. Although Joyce Miller would have liked to shift her accountancy work entirely to the daytime now that her children were at school, the only free time many of her self-employed clients could see her was in the evening when they themselves had finished work. Meanwhile, Jonathan Townsend was tied to early morning and evening work precisely because he was managing staff in different international time zones.

5.2.2 Structuring the Pace of Work

A second, albeit related, decision involves how to structure the pace of work. How large should working time slots be? Where should these time slots fall during the week and during the day? And should work be evenly paced, or arranged into periods which involve more or less intensive effort?

Once again, this is a dimension where control may be limited:

- Managers such as Jonathan Townsend and Lyn Gloster had to respond to unexpected situations, including crises. Teleworking programmers such as Malcolm Knight were occasionally involved in on-call work, responding when the system went down.

- Amongst the self-employed, clerical workers such as Alison Hunter and Sheila Clark operating in a competitive market such as word-processing took on the work as and when it arrived.

- Self-employed professionals, too, could find themselves under pressure from the market. The Robinsons felt that they maintained an edge on competitors through their almost 24-hour book ordering service. Sally was willing to take calls at all hours including in the evening and at the weekend. Meanwhile, Emma Townsend commented on the software package she was developing in partnership with her husband.

Emma Townsend: 'There's so much to do. I just can't stop, you know. The deadline in January was because we wanted something to demonstrate by that time, and we are now talking about demonstrating a reasonable system in May, and I'm not going to manage it. There's just too much, so I'm working all the hours that I can get...because if we don't get this out quickly, then someone else is going to have to

do it, and it's just not going to be useful, so...the pressure's building up. You see more and more things coming on the market, and it only needs someone to produce the definitive product, everyone will use that and no-one will get anywhere. You know, that will be it. So we've got to do this.'

Nor were work constraints the only ones affecting the organisation of telework. Since Peter Brennan studied and worked in isolation, he could in theory have arranged the work as he wished. In practice, several time slots were absolutely fixed during the week because he had to stipulate when he would be using crèche facilities.

5.2.3 The Temporal Boundary Between Work and Domestic Life

The third temporal consideration for teleworkers relates to the boundary between work and domestic life. To what extent are domestic responsibilities integrated with or separated from telework?

a) One element of this concerns the degree to which teleworkers' work is disrupted by domestic concerns.

- Disruption by adolescent children. We have already seen how Clare Brown was driven out of her home into rented offices because her children refused to acknowledge the boundaries around her work.

- Disruption by Young Children. While the difficulty of combining childcare with telework means that most female teleworkers work when the children are asleep or out of the house, those with young children doing less well paid clerical work - like Sheila Clark or Diana Simons - sometimes had to fit in work while their children were around and awake. Diana outlined the predicament such mothers could face.

Diana Simons: 'Some days he will play (outside) and I can work and that's fine. Other days, he's unsure. He's at the stage where he wants a lot of reassurance that I'm here and I'm not going to run off or whatever. You see I can be at home doing housework and he doesn't bother me at all. But the minute I put my glasses on to start typing, that's it - he wants my attention. He knows that when I'm typing then I don't do anything else, and he doesn't have my attention at all. He gets hold of my face and pulls it round to look at him and he'll say "Glasses off". He thinks that if my glasses come off, that's it, he's got my attention. For eighteen months old, I think he's quite astute. He knows when it's work time.....I don't know how it's going to fit in as he gets older. I don't know whether he'll be able to understand that "Mummy's working and we can do things when she's stopped working." I think he's beginning to realise because now he's say "mummy's Puter, mummy's work, glasses on" So he's got it all together but he doesn't realise that the sooner you leave me alone and let me get on with it, the sooner I can come and play with you, you know. I think that might come as he gets a bit older, or he might become more demanding and I will be able to do less, I don't know. I have to take it as it comes.'

Although this was mainly a problem for female clerical teleworkers, it affected some professionals. Sally Robinson felt that the funds from the book distribution partnership she managed with her husband were still not sufficient to justify a child-minder. So she

also faced the problem of her young children wanting attention when she tried to work at the computer.

- Disruption by Partners. Diana Simons explained how her husband, although supportive of her typesetting telework, nevertheless tended to disturb her whenever she worked as weekends.

Diana Simons: 'I can sit there for three hours but I don't get three hours typing done because I'm continually interrupted with "Where's this Diana?" or "So and son's on the phone" or just "Oh by the way...", and I think "'just leave me alone".'

LH: 'That's Dennis saying that?'

Diana Simons: Yes. He'll just come in and he'll say "Where's James' vest?" or "Have you seen his shoes?" and you have to stop. Then you have to sort of get going again, you know what I mean? So I probably only do two hours typing in three hours.'

- Disruption by the Home Environment. While female teleworkers may find it more difficult to erect and maintain boundaries because of their gender roles in the home, males too can be distracted in the home. This was shown in Bridget Foster's critical comments about the way her husband managed his editorial telework.

Bridget Foster: 'I think he'd get a lot more done if he had to physically be out of the door by nine because he wouldn't have the distractions, you know. He couldn't just pop up and put up a few tiles in the bathroom or do under the gooseberry bush in the garden. That's become a bit of a standing joke; that the gooseberry bush out there, he still hasn't planted it but he's looked at it an awful lot. He would just be away from all those distractions and he'd get a lot more done.'

b) The boundary between home and work can also be more or less permeable in the other direction: the extent to which work interrupts time set aside for home and social life.

If anything, the infringement of social time appeared to be a more frequent complaint, suggesting that in balancing home and work, greater emphasis was placed on carving a place for work. Teleworkers were very conscientious about creating a suitable environment for the work to be successful - and this was as true for female teleworkers as for male ones. But certainly male teleworkers and their partners were more liable to refer to work eating into social and domestic life than the other way around, arguably reflecting the centrality of work in male lives.

The difference in how boundaries were maintained can be shown in the case of the Townsend household, which was extremely work-oriented. Both Emma and Jonathan had defined clear times when the children could not disturb their work.

Emma Townsend: 'There were a few times when I got a bit nasty because they kept interrupting me, so they've learned not to.'

Meanwhile, Jonathan used a 'Do not Disturb' notice on the front of their office.

Jonathan Townsend: 'They learn that I'm working. They don't come in. So they won't ask unless I sort of send them a signal saying I'm ready to take input.'

However, the Townsends were very aware of how work displaced social time, with Jonathan commenting that it was *'very easy to fall back into the routine of working all the time'*. Both Jonathan and Emma indicated how they were enticed into work, how it was intrinsically attractive for them: for Emma because she became deeply involved in the software she was creating and for Jonathan because of the business he was building. But the nature of the work also meant that it was difficult to contain. We already saw Emma comment on the pressures to innovate quickly, and Jonathan also referred to the demands of his other role as a managing director.

Jonathan Townsend: 'It pollutes your home life, unless you are extraordinarily self-disciplined and you say "I'm going to walk out of that library at such and such o'clock, and I'm not going to go back in even if I hear the phone go in there or the fax machine ping, or what have you, I'm not going to go back in". Now you cannot do that. I have businesses in America which depend upon me and which, if they go bust and I'm a director of them. So mission critical things drag you back in. So perhaps that's another excuse, but I don't have the discipline to shut that door.'

Emma added further comments on the way in which work spilled over into domestic events.

Emma Townsend: 'Because Jonathan and I are both working on the same thing we'll tend to talk about that at the table, when we are having supper on the table, and that's bad, especially if the kids are around. Because, you know, if you are having a meal and you are together as a family, you shouldn't have two people just talking about something which doesn't interest the other two. I try to stop myself talking about problems at work'

5.3. Structuring Telework Time

Given the decisions, constraints and pressures outlined above, what strategies do teleworkers employ to organise their time? The answers are, of course, varied. But there are some common patterns in which teleworkers more or less adhered to or departed from industrial time.

5.3.1. Utilising Existing and Other Temporal Markers

One strategy involves the latching on to existing or external time structures to replace those imposed by the organisation time of the office.

- Adhering to Old Routines. This strategy involves sticking approximately to the normal working day, even where there is some latitude as to whether this is necessary for the work - as in the case of designer Bob King. Most of the teleworkers in this study also maintained the previous mealtimes as temporal markers.

- Using External Schedules. An alternative or supplementary tactic entailed utilising schedules external to the home such as those of broadcasting to mark the temporal boundaries around work: for example, taking lunch or other breaks to coincide with the news. The most common external timetables were, as might be expected, those of schools, nursery and playgroups. As Sheila Clark, one of the word-processing teleworkers, commented:

Sheila Clark: 'It's the discipline of having to get dressed, go out and come back, and it's quite nice actually because I get back maybe by 9, 10am. I'm dressed and ready for the day. Whereas before when they weren't at school, we could still be stopping around at 10.30 or 1.00 pm in our night-clothes. It's getting more structured because of the school. Usually I come back and do the housework and clear up. Get the Hoover out and that sort of thing, and try and aim to be up there (in the bedroom) for 10 o'clock and start work.'

Meanwhile, John Foster found that when the children started school it introduced a new, and welcome, time regime to the day.

John Foster: 'What it did was to impose a little bit more of a timetable, certainly when they started going to nursery school. There was a time in the day when they had to be picked up, taken and picked up and it provided a sort of regular punctuation.'

- Synchronising with Other Workers. The other external timetable through which teleworkers could impose a temporal order on their work was that of co-workers or else of ex-colleagues who still worked according to organisational time. For example, Bob King negotiated regular time slots in the day when his business partner would call round to work in his home. Angela Lockwood frequently played squash in the dinner hour with colleagues who remained on-site. And Bruce Lang would often meet old colleagues in the pub during their lunch break.

5.3.2. Pre-Industrial Work Patterns.

While the above strategies help maintain self-discipline and synchronisation with industrial time, by no means all teleworkers chose, or have open to them, these options. We have already observed how some women can only manage evening work, and the school day, while providing a useful framework, can also be a constraint.

Where there is more choice, one motive for shifting outside of industrial time is because the teleworkers found that worked best at hours different to office ones. For example, systems analysts Angela Lockwood discovered that her 'prime time' was at 7am and so started her day earlier than she had when on-site.

Apart from simply shifting the boundaries of the normal office day, a different strategy involved a more radical departure from industrial time. Here, teleworkers varied their pace and timing of work, sometimes putting in more intensive bouts, sometimes changing their hours of work during the week. Some, such as typesetter Diana Simons, even varied the pattern of work on a seasonal basis, taking on more in the winter when the nights are longer and easing up in the summer when they can go out in the evenings.

All these latter strategies bear something in common with a pre-industrial pace of work, where people took longer weekend breaks, did not work set hours, worked at different pace in different seasons or worked only when the job needed to be done (ref...?).

- Working Intensively at Deadlines. One such approach, not necessarily adopted enthusiastically, involved work taking over teleworkers' lives whenever a deadline neared. For instance, John Foster, the editor, regretted that he had fallen into this pattern.

John Foster: 'Over the years (self-discipline has) been one of the biggest problems. And it's why deadlines are crucial. If there's a deadline coming up I can start work at half past seven in the morning and carry on till three next morning. If there isn't, you know, I'll start at half past ten and you know knock off in the middle of the afternoon sometimes.'

- Completing Work Early. Teleworkers tended to feel more positive about the reverse, 'credit' approach to telework management - i.e. completing as much work early on so that there is less pressure when the work has to be ready, or at the end of the week. Sheila Clark explained why she adopted this pattern.

Sheila Clark: 'I like to keep on top of it. If I don't I just lose it all, so I have to sort of sit down and do it and that's why sometimes...I mean, half the time I might not have to work all night to do it...I could probably do it without working that long, but once I've started I just want to keep going and finish it. So in that way I'm probably not very good at properly organising my day. I can't sort of say "Well, that'll take me x, that'll take me that." I don't think I'm very good at that.'

Meanwhile, Malcolm Knight, the programmer, explained why he always preferred to worked longer hours at the start of the week.

Malcolm Knight: 'Because if I've done them I've done them I don't fancy the idea of getting to the end of the week and finding I've got a lot to do to make up the hours.'

5.4. Organising Temporal Boundaries

The issue of pacing work is also related to the questions of how much telework is integrated with domestic time. Although some qualifications need to be added, strategies amongst our interviewees tended to be at one of two ends of a continuum, characterised by whether industrial or domestic temporal patterns predominated.

5.4.1. Industrial Time Imposed on the domestic Space

At one end of this scale, teleworkers had a very low level of integration. Blocks of time were allocated to work, often corresponding somewhat to the 9-5 day, with fairly rigid boundaries between work time and non-work time. For instance, although Malcolm varied his times over the week, he still stuck broadly to this core day.

Malcolm Knight: 'I think if I tried to work outside of those times, then I would have difficulty getting the work done...because I see the daytime as time to do some work

and night-time as not to do the work and I think I would have difficulty going to work during the evenings or the early hours of the morning.'

In other words, teleworking simply allowed some flexibility around the edges of the normal working day. This might mean a few extra hours of leisure during the industrial working day hours, as with one or two teleworkers, including Malcolm, who fitted in some golf during the day. Or else it permitted a little more flexibility, for example, to pick up children from nursery or school.

This type of strategy was more likely to be a male telework time structure, simply moving the time schedule of on-site work into the home environment - although perhaps modifying it slightly. In other words, industrial time was imposed on the domestic space, and household had to accommodate to it. As in the case of Malcolm, it might mean daytime work - but other males were willing to work in the evening. The point remains, even with evening and weekend work, that work-time stayed distinct and the boundary with home life was kept clear-cut.

A first qualification, though, needs to be made about over-emphasising gender distinctions. Working in synchronisation with industrial time was also likely to be the schedule of most employees of telework schemes. This was sometimes because of the need to liaise with colleagues who are also working core hours, sometimes because the very monitoring of telework assumed the work was performed in distinct blocks of time (i.e. the employer was buying so many hours, the only difference being that the work is taking place in the home). Hence, women taking part in such schemes also tended to broadly stick to industrial time.

Second, although many males may have wished to keep work bounded, we have already seen how it was often too tempting to leave alone. Hence work did not so much intermix with domestic time, so much as take over the time slots that teleworkers or their partners were expecting to be allotted to home life. Anne Reid observed Sam's tendency to drift off to his work upstairs.

Anne Reid: 'In a way that's a very negative thing because his home and his office are in the same place. It's quite difficult. It's a bit too much of a thin line, demarcation point - where the one starts and.... He'll say "Oh I've just got to pop up and write a letter". And three hours later he comes back down again because he's got distracted into something else. So I'll often sit here on my own all evening as though he were out of the house and he's as good as out of the house really, because he's in the study.'

5.4.2. Telework Accommodated to Domestic Time

At the other end of the spectrum were teleworkers who had a high level of integration between work and home life. Work was fitted in here and there between childcare, domestic chores and social life and there were sometimes frequent shifts between work and domestic responsibilities. At its extreme, telework was just like another chore, inserted into a domestic time structure. Work time was accommodated to domestic time, and hence performed in a fundamentally different way from work on-site. This mode of working was more likely to be a female telework time structure, especially for the self-

employed and where the work could easily be split into small units (e.g. word-processing). For example, Diana Simons' diary showed that she constantly changed between work and chores, especially when the computer made back-up files.

Diana Simons: 'As soon as it cuts out to back up, I can't type into it, you see, I have to wait, so when it gets to the longer backing up period, I tend to jump off my chair and stick something in the washer and then run back and work like that. And I'm sort of thinking 'Next time it backs up, I'll make myself a cup of coffee' or 'Next time it backs up I'll put the kettle on' and then ten minutes later it'll back up again and I'll make myself the coffee.'

Typist Jill Perry had a very similar timetable. Even though she blocked out some days for work by having a childminder, she would still find herself with occasional rush jobs when work had to be '*fitted in*', taking place late in the evening, in the early hours of the morning and throughout the day in between domestic tasks.

Jill Perry: 'The fact that sometimes you feel as though you're working 24 hours because you're doing an hour here, then you do something else, then you do a couple of hours, then something else, then in the evening. You feel as though you've been working all day and, in fact, when you actually go to the file and analyse the number of hours you've worked, you haven't actually worked eight hours but it feels as though you have.'

Sheila Clark was another good example of a teleworker with this experience, commenting on the contrast when work was now at a domestic pace instead of taking place within an office temporal framework:

Sheila Clark: 'You know, sometimes I feel as though I've got less time, even though I'm at home, than I did when I was at work. I'm always rushing. Every day is always rushing around. That's how it feels. I never felt like that when I was at work. I suppose because you are there and that's it.'

Reflecting a theme expressed by female teleworkers in previous research (Haddon, 1992), Sheila was constantly juggling responsibilities, always thinking about the time demands of work, those of family and those of other social contacts: whereas in the office the pace and structure of the day had been less under her control.

5.5. Teleworkers' Availability to Others in the Home

Whether trying to hold a tight boundary or allowing a looser one between home and work, teleworkers constantly faced dilemmas over whether and how much they were really available to other household members when they were in the home. The Clark household provides a good illustration of what a teleworker's availability in the home can actually mean. Roger saw Sheila's presence at home as the main benefit of telework and was very positive about it.

Roger Clark: 'It's nice having her around. I mean, I like being on my own to a certain extent, but I prefer to have Sheila around if possible...whereas before I used to get

home at 12 (and) because Sheila worked up town I could be pottering around here (alone) until 8 o'clock at night.'

But in practice, he only saw her in passing for much of the time. When he refers to having her around, he means that she was in the house, nearby, but not necessarily with him. Like other teleworker, she was really only available for certain categories of interpersonal interaction such as emergencies, special events or crises, and perhaps queries about domestic matters. Much of the time Roger spent keeping the children away from Sheila so that she could word-process, leading her to comment:

Sheila Clark: 'Sometimes for them I think it must be as bad as a mother that goes out to work, because even though I'm only upstairs, they still don't see me and they're still not allowed to get near me. But on the other hand, they know I'm up here and it's not so bad.'

5.6. Fragility of Telework Time Strategies

One last point needs to be made about these various teleworker strategies: the time structures designed by teleworkers are usually less robust than those schedules imposed by on-site work. One of the general problems discussed in the telework literature and reiterated in our research is the on-going issue of self-discipline. Part of the rationale for latching on to pre-existing schedules and ones external to the home is that teleworkers sometimes fear that if the timing of work was always left to when they felt like doing it, this would be a recipe for disaster. Indeed, one reason people such as John Foster only work near deadlines is not because they choose to do so much. It is because any plans to work at a more even pace fail.

But even set routines which work under normal conditions, they may be easily upset by new circumstances. For example, when accountant Joyce Miller lost her major client, she also lost the incentive to do any work - even that which remained.

Joyce Miller: 'I mean, because half my work has disappeared I find it hard to get motivated to do what I have got because there's no pressure to do it. I haven't got to think "well, I've got to do this today, that tomorrow and that the day after". I've only got one thing to do and I've got three days to do it in. It's harder to get motivated when there's not so much work to do....(also) I don't know what to do (in the daytime) because I'm not used to doing housework all day.'

Crises such as a death in the family, or domestic discord can also reveal the fragility of work routines. Whereas the demands of being in an office often force people to work and even take their minds of problems at home, this can be harder when teleworkers are in charge of their own time at home.

5.7. Conclusion

Time and (in the next section) space are the central coordinates for the organisation of domestic life. And time is not just a matter of chronology, of the synchronisation of activities within the household, though this looms large in the daily lives of teleworkers and their households. Time is also a matter of quality, and teleworkers

have problems of managing it, bounding it, protecting and defending it, as well as valuing it, just like anyone else.

The particular circumstances of teleworking, however, throw up new and significant challenges for the management of time for teleworking households. Routines associated with the conduct of work and those associated with the conduct of family or household life differ and have in some measure to be synchronised if domestic life is to be sustained. But the capacity to do this effectively, once again varying across teleworking households quite considerably, is also affected by the dominant forms of temporality that are manifest in industrial society.

Teleworkers are, through the management of time (since information technologies are often seen as more significantly space transcending) confronted by the constraints and demands of an industrial order which require accommodation to forms of time established for the management of production and the coordination of large workforces. The great appeal of teleworking that it will facilitate greater flexibility in the management of time is compromised both by these external pressures and the no less insistent demands of the established patterns and routines of everyday life.

Once again there is a significant gender difference to note here. For women at home, at all stages of their lives and careers, are almost certain to have to come to terms with constantly competing forms of temporality. Their domestic lives are subject to a form of time that is, relatively, outside their control, and absolutely, fragmented. The demands of child care, for example, impose a daily routine which make it extremely difficult to sustain a pattern of work that is synchronised to the nine-to-five rhythms of the world beyond their front door. But even such successes as are achieved are then disrupted during school holidays. Male teleworkers, demonstrably, have much less of a problem, supported as they are by the wider culture in their capacity to impose their times on those of the household and family life. However women can and do occupy 'male spaces and times', that is they are able in some cases, and especially when they are employees (or employees at a professional level), to impose their own temporal demands on the household. They can also of course, fund child or house care, with the income generated through their work.

Synchronisation is a problem, but so too is the quality of time that the teleworker spends with the family. Equally important are the ways in which teleworkers try and bound their own commitments to work in time. Evenings and weekends are not easy to protect if you happen to be one of the 'self-exploiting'. The pollution of domestic time is the consequence.

As a result it seems to be that teleworking provides in many households, and for many individuals, only a marginal degree of temporal flexibility; though this will certainly be significant for individuals who now have time to play a guilt-free game of golf on a Friday afternoon, having restructured the working week to make it possible. But it is also the case that the capacity to hold the line in time is vulnerable to exceptional (or maybe just unanticipated) demands - those of other family members as well as those from clients or employers.

Running through all of these discussions is the question of availability. Synchronisation is not just a matter of meeting and sharing activities, but of participation in those activities in a meaningful way. Teleworkers can recognise that the distractions of work at home, even when on the face it well managed, nevertheless undermine the quality of their leisure and family time. It is not therefore only teleworking which needs to be paced, but the whole new and often unstable and conflictful temporal regime which teleworking introduces. What results in some, but by no means all, households is a version of time and time-keeping still dependent on the structures of industrial life, but accommodated also to other, more domestic rhythms, and echoing - though by no means reproducing - forms of temporality not seen since pre-industrial times. This is what we might term, following Walter Ong (1977), secondary temporality.

6. Space and Telework

6.1. Geographical Location and Telework

Where telework involves limited face-to-face contact, teleworkers were clearly not tied to a particular geographical location by the work itself. For example, in the Townsend household, virtually all of Emma's software development could be managed wherever she lived. Meanwhile, a good deal of Jonathan's work involved telecommunications, supplemented by periodic visits to the groups he managed and to meetings. Hence, one possibility which the Townsends were considering was that once both children had left home they might alternate between two homes: one in England for the summer months, and one in France or the US to avoid the colder winter weather. Jonathan noted that maintaining a social life in such circumstances would probably become even more difficult.

Jonathan Townsend: 'Yeah, it does get fractured but ours is fractured anyway so it is, as I say, it's broken.'

Emma Townsend: 'What one would hope is that you can build up the sort of social life which can be taken up at six month intervals or whatever, in both places.'

Jonathan Townsend: ' But it's bound to be more superficial though, isn't it? I mean, the reality is if you don't see people on a monthly basis then they become acquaintances rather than friends and, but that's the price you pay for, you know, that's the trade off. You either stay locked into the community and all the clubs and this, that and the other but then you're relatively immobile and you have to tolerate a political or, you know, climatic environment 100% or you decide you're going to cut free from it but then you lose the contacts.'

Ultimately, Jonathan was willing to take the plunge and give up his final community links in order to be mobile. Emma was less sure that she wanted that lifestyle.

The Townsend family, however, were unusual in that they were both teleworking. Peter Brennan reflected on the constraints on location when one partner worked outside the home.

Peter Brennan: 'In theory, I could live anywhere. In practice I could live anywhere in the UK and get local call access to the cluster. (But) because my wife works for Parliament, we have to be in Central London so that one advantage of teleworking, which would be to move to a place where the space would be cheap enough, is lost because of the loss of flexibility as to where we live. So I think the notion that teleworkers will sort of instantly decamp to the sticks is probably a little naive because it assumes that only the teleworker's interests have to be taken into account.'

On the other hand, teleworker did provide some flexibility:

Peter Brennan: 'I think that does make it easier because normally when you have two people working, you've got this awful problem of juggling the two jobs and where people live. We know of other couples who, you know, the husband gets moved or the wife gets moved and then someone ends up with a hideous commute. That in fact is not a problem for us.'

6.2. Finding Space for Telework

6.2.1 Professional versus Clerical

The difficulty of finding space for telework has already been discussed in the existing literature. The key point is that much of the housing stock is basically designed with the assumption that work does not take place in the home (elaborated in Haddon, 1992:38-8) (7). While there is some correlation between teleworker income and the space available for work, the difference in experience between clerical and professional teleworker is by no means straightforward.

Professional and managerial teleworkers are more likely to have a separate space for telework, but our research indicates that this but not guaranteed. For instance, teleworkers such as researcher Kay Rahman, accountant Joyce Miller and publisher Bruce Lang had their own had 'offices' and 'studies' - although in the later two cases these were fairly cramped, ex-storage rooms. Consultant and management trainer Sam Reid and designer Bob King shared offices part of the time with other work colleagues: hired staff and a business partner respectively. Emma and Jonathan Townsend shared an office - which Emma found to be sometimes disruptive to her work.

More often, even professionals made use of multipurpose rooms. Systems analyst Angela Lockwood and editor John Foster worked in the room which also functioned from time to time - sometimes weekly - as the dining room. Architectural technician Peter Dennehy drew up his designs in his boys' bedroom. But it was also quite common, as with clerical workers, to find professionals working in a corner of the bedroom. Programmer manager Lyn Gloster worked in this way, as did programmer Malcolm Knight and computer conference mediator Peter Brennan - the latter working in very cramped at the edge of the bed. Both Malcolm and Peter were examples of teleworkers desperate to find larger accommodation, but hindered by the collapse of the housing market.

The total housing space available to clerical teleworkers depends on factors such as the cost of housing in that area (e.g. comparing the Southeast with North of England), the previous on-site work of the current teleworkers (e.g. some, held reasonably senior secretarial posts), whether they had access to cheaper mortgages through their own previous work or that of partners and, crucially, the income of partners. For example, the fact that Richard Perry was an estate agent enabled the Perrys to have a larger house than the rented accommodation of the Clark family, where Roger Clark was a postman. Hence, Jill Perry had enough room in the house to allow he to take over the dining room, whereas Sheila Clark had to work in a corner of the bedroom.

When typesetter Diana Simons had lost her separate room she was relegated to working on the kitchen table, with meals being eaten around the microcomputer. She described

some of the dynamics which had led her to fulfil the stereotypical image of the low paid teleworker.

Diana Simons: 'Before we moved, when Mark was a baby, his cot was in our room and I wanted it that way. I think it was necessary. We only had two bedrooms so the computer went in the second bedroom. Then Mark was getting too old really. He ought to be in a room on his own but we hadn't got one for him to fit in, so we'd just got this dilemma: Mark and the computer vying for space, if you like. And then we moved here, and until that extension is sorted out, I'm having to type in the kitchen. Not really convenient. It's not really the right atmosphere for the computer either. It's always crashing out. It's either too hot or too damp, but if I typed out in the conservatory, in the winter it's too cold and then it wouldn't work either.'

6.2.2. Spatial Problems

Sharing space can cause persistent clashes of interest, as was illustrated by Peter Dennehy, the architectural technician who had been forced to work in his two sons' room.

Peter Dennehy: 'It can be difficult at times. I mean, obviously I can't work very late at night when the boys want to go to bed. And our boys have got a Sinclair computer in the bedroom as well and they might want to use that and bring their friends in. If I'm working in the room they can't, so it becomes a problem. It's not easy. Space is very limited as well really. I've got a drawing board but I haven't got a desk - well, I share a table that the boys use as well for doing their homework. But drawings I have to spread out on the bed and then clear that all way at night-time when the boys go to bed - so it's got its problems.'

But even the more occasional the problems of accommodating telework may still be significant. For example, programmer manager Lyn Gloster worked in the guest room while a childminder looked after her son Michael downstairs in the living room. She pointed to the problems whenever they had guests visiting.

Lyn Gloster: 'When people come to stay they feel, even though they know the score...I'm teleworking and I can basically work what hours I need to work to fit the work in... they still feel they've got to bound out of bed and get out of the room for nine o'clock. They can't sort of relax, which is a shame, you know. And they think because the telephone's ringing I've got to go in there and sort it out. And we've got relatives who come and stay...they're elderly and in the afternoon they like to go and put their feet up and because Michael's here with Jane they can't do it down here, and they can't sort of dive up to the bedroom and lie down because I'm in there.'

Meanwhile Ruth Knight found herself forced out of their bedroom because Malcolm had to deal with the odd crisis on a distant mainframe.

Ruth Knight: 'Once he had a call at about 11 o'clock at night and it was 4 o'clock in the morning before he'd finished. I couldn't go to bed because (the micro) is in the bedroom and although it isn't noisy as such, in the middle of the night it is very noisy. So I was in here (the living room) most of the time nodding off...trying to get

some sleep because I had to get up and go to work...I thought "He'll be finished soon"...but I'd have been just as wise to have blown up one of the air beds and laid on it, I expect.'

6.2.3. Segregated Telework Space: Being Shut Off from Family

However, the availability of space for telework which is totally separated from the rest of the home is by no means every teleworker's ideal, as our previous research had noted (Haddon, 1992:40-1). These themes were supported in the current study by cases such as the Brennan household, where Sian explained how Peter, the computer conference mediator, did not like to be shut off from his family.

Sian Brennan: 'Peter likes working with people around him. He hates closing the door. He can work with people and with noise which I can't at all. He can concentrate and do something. I need a room on my own to work. I have to keep reminding him to close the door to stop Angela getting at the Mac and he hates to be closed out from people he likes. He likes the sound of her moving around and he likes the sound of people doing things. His father was exactly the same. He had a study which he filled with papers and couldn't get into barely and always sat in the sitting room where he could talk to Peter's mother People were coming and going and he'd sit and write his sermons and still does.'

John Foster's desire to be accessible to his family was his motive for not closing doors. But as with the Brennans. it was his wife who thought that it might be a good idea to enforce a stronger boundary between home and work.

Bridget Foster: '(The children) all feel (John's work demands are) a bit of a restriction, on one hand. On the other hand, they always know where he is. He's very dependable and I mean he's very good to the extent that I think he's too good at leaving the doors open, leaving usually all four of them thinking he is accessible at all times, where I'm saying it's much better to shut the doors and say "I am now working, concentrating hard for the next two hours and I will be available for an hour" rather than wandering in and out. But he doesn't like being shut away from the rest of us even when he's working. He's got to feel part of the household. Even if I do go and shut the door every so often, he'll open it again. (I shut the door) partly because I think if he can concentrate then, he can then come out and really be with us rather than sit there all the time and be half here and half there.'

6.3. Competing Demands on Space

Work itself can make increasing demands on household space, for instance through the acquisition of more and more equipment. We noted earlier how the Rahmans and Townsends both expected that they might well have to move to rented accommodation in the near future because of this consideration (cross-ref.). When their book distribution business grew, the Robinsons only coped by managing to swap houses with their immediate neighbour - which doubled their space for storing publishing materials.

But household dynamics also play a large part in shaping the availability of space. As Diana Simons' earlier comments demonstrated, telework has to compete for space with

changing requirements of various household members. This can include the arrival of elderly relatives (which might well happen in the future in the case of the Lockwood household), or taking in lodgers, au pairs etc. However, the commonest factor relates to the growth of children.

The immobility of very young children makes them more controllable, but as they learn to move around the home telework may have to move as well. For instance, in the Brennan household, David used to work in the living room, but had to retreat to the bedroom as his daughter became more mobile - both for her safety and for that of his computer.

As noted in the case of Diana Simons, if they do not have separate rooms from birth, children are usually given them as they grow older and if there are several children in a house, they may eventually each have their own rooms. This can mean that telework has to be relocated, moving around the home as the children appropriate its old base.

So in a particular household, a teleworker might start with a separate room, then be forced to retreat to a corner of bedroom or of the living room, perhaps regain a room if the family moves house, but then lose it again as the area given over to children increases. Of course, space problems can ease when the children leave home - although for those who took up teleworking to fit in with children's schedules, this might just be the stage when they are thinking about progressing out of telework.

Either the decreasing space for work or increasing space required by work is one factor which sometimes forces teleworkers to give up working at home and seek rented offices. But at least one of our case studies, the King household, provided an example where the extra space taken up by telework was actually seen in a very positive light. Although by no means adopted simply for this reason, telework gave the Kings a rationale for asking their long term lodger to leave at a time when they were finding her presence a strain. This instance reminds us the dynamics of households always have their own particularities, so that what is usually a problematic feature of teleworking - finding space - can have positive side effects in certain cases.

6.4. Regulation of Space

6.4.1. Regulation: Boundaries

The boundaries erected around work are not just of a temporal nature: when teleworkers try to avoid disturbances that means signalling the fact that their workspaces are out of bounds at work times. Systems analyst Angela Lockwood used a strategy similar to Jonathan Townsend:

Angela Lockwood: 'I've got my little thing on the door which I forget to turn round but on one side it says 'Do not disturb' and they're not meant to come in at all. On the other side I think it's Garfield saying 'Hi, have you met my hamster?' And if it's that way round, they're allowed to come in and interrupt me. But I tend to just leave it up on the Do not Disturb and they don't come in much.'

Admittedly, it took a while before children got the message.

Angela Lockwood: 'They did used to come bursting in. You know, if I was on the telephone, they'd still come banging and crashing in and talking all over you and I'd tell them to go away.'

Typist Jill Perry had to resort to more extreme measures when her children were younger.

Jill Perry: 'One problem I've found with the au pairs was that the children were playing them up quite a lot because they knew that mummy was in here, in the house. They wanted to be with me rather than with the girl, and they used to be quite naughty and try and get in here. I sometimes had to ask her to lock the door to lock me in so that they wouldn't come running in.'

And accountant Joyce Miller indicated the problems of policing work spaces which were not so self-contained as Angela's office.

Joyce Miller: '(The work area) was almost closed off but not quite. It did get a problem with the children climbing all over the desk and writing all over various bits of paper...I mean, you can teach your own children to respect your space, but you can't teach other people's children to take care of it...the little horrors climbed all over my desk. So I think I stuck that for two and a half years. And when we moved here I had a study and it was wonderful. I could shut the door on it.'

6.4.2. Regulation: Telework and the Domestic Sound Regime

One way in which telework can effect the whole home, beyond the space specifically allotted to work, is when work-related visitors call by, as colleagues, clients or intermediaries delivering or collecting work. Other parts of the home then become, for a time, public spaces. This may mean that these areas are kept a little tidier than before, as in the King household. In addition, other household members have to be willing put up with visitors, acting as receptionists or otherwise behaving appropriately.

On the whole, this does not appear to raise many controversies: certainly our interviewees were able to cope with this, and it was hardly a noticeable change in those households which had always experienced outsiders passing through. However, the influence which telework could have on the whole sound regime of the home was much more of an issue.

Regulating sound may mean requiring the children to be generally quiet when the teleworker is working or at least quiet when in the vicinity of the work area or a telephone (8). But also, the use of noise-making ICTs may be increasingly regulated (9). The Foster household provides a good example of the domestic battles which can take place around this issue.

Bridget Foster: 'As soon as the children come home they usually switch the telly on of course and we have these very interesting battles where he puts the music on in there, they turn the telly off because they can't hear it. He turns the music up and then they turn the telly up and in the end it turns into a very noisy house.'

LH: 'In other words, the music's less of a distraction than the telly is as background noise?'

Bridget Foster: 'Yeah, he can cope with the music all right but he can't cope with the telly, especially with the children's cartoons and all these sort of things.'

LH: 'There's no way to arrange for the TV not to be adjacent to the workroom then?'

Bridget Foster: 'We've got two TVs upstairs, but the kids want to be down here. They don't want to be shut upstairs. And they moan they can't tune it in properly. In the winter there's the gas fire (in the living room) which is nice and cosy for them.... They just don't want to watch television in their room. They feel they're being displaced and ignored.'

LH: 'They've said this, have they?'

Bridget Foster: 'Well in as much, yeah. They haven't quite used those words but that's the implication, yeah. You know, "We want to be where you are" sort of thing.'

Bridget later added further comments about this situation when describing how she constantly had to try to keep the children quiet so that John could write his editorial copy.

Bridget Foster: 'I always know when they're getting to him because the CD player will suddenly start blaring in there and I think "Right, OK, fine".'

LH: 'That's the signal, is it?'

Bridget Foster: 'That's the signal that that telly is getting on my wick, man. And I think that when it's just my two I feel very obliged to sort of take them out or get them to go somewhere or at least be moderately quiet when he has to work, afternoons, evenings, nights.'

The fact that noise can be a controversial issue is further illustrated by the Knight household. Ruth commented on the effect of Malcolm's programming telework.

Ruth Knight: 'I used to play incredibly loud music when I was doing housework....(but) now I can't do that. I find it a pain really because I get on much better if I'm sort of listening to music. And also if people come or children. I have to sort of allow (for his being at home) and they can't be too noisy. So I have to keep them as quiet as I can, which isn't easy because when they get together they just sort of wind each other up. (The telework is) restrictive in that sense. I think Malcolm also had to realise that (the children) lived here too and their friends still came. He had to realise that there would be a bit of noise.'

In other words, there were limits to which Ruth was willing to accommodate to the demands of telework on domestic space. This was reiterated when she discussed Malcolm's concern about the impression he might be giving to colleagues who phoned.

Ruth Knight: 'He had somebody ringing up one day and he said this bloke had said "It seems that every time I ring you...how can you work with all this noise?" And I said "Well you want to tell him that he shouldn't ring at the same time if it bothers

him." So I go a bit stroppy because I thought "Well, these children live here, and they've just come in and they've gone in to see their father". I mean, they've just come in from school, and it didn't last long.'

6.5. Redefining Spatial Identities

6.5.1. Space Dedicated to Work

Although some teleworkers can quite happily use the areas where they work for non-work purposes, for others those spaces can become so associated with work that it becomes difficult to spend non-work time there. Typist Sheila Clark first outlined her feelings both about work at home in general and about the bedroom where she sat at her microcomputer.

Sheila Clark: 'I like working from home. I find it difficult though. I mean, you just can't get away from it. At least if you work in an office...you leave it until the next day and forget all about it, come home and do what you want to do. But when it's at home, it's always there. It's always on my desk and it's always got to be done. It's easier in winter than in summer...because the windows are open in summer and you can hear everyone in the garden....and I want to be sitting out there as well, and I wander into (the children's) bedroom to gaze out of the back window and look at them in the garden. I think "I must go back" and I go back and try to start again. Especially if it's horrible work, which market research is, and you don't want to be there anyway. I really don't want to be doing it. I really dread going up there to do it.'

Because of the meaning of going up to the bedroom to work, she could not bear the thought of spending any unnecessary time there. Because her knitting machine was there, she had stopped using it. And although she would have liked to experiment a little more with the facilities of the computer since it might assist her work, she could not bring herself to go up to the bedroom any more than the minimum time to complete her tasks.

Programmer Malcolm Knight, for whom computing had previously been a hobby, also found it difficult to pursue his interest in his work space.

Malcolm Knight: 'When I leave the desk, I've gone home, I've finished. And that's another reason why I want to move (to a bigger house). I don't play with PCs anymore and I think the reason is I would have to do it "at work"...I need to sit somewhere else to do my own stuff, to mess about. It wouldn't have to be another room. It would just have to be looking at a different wall in the same room. '

His wife Ruth added that as far as they were concerned the work space in the bedroom was no longer really seen as part of the home - Malcolm even slept with his back to it at night.

6.5.2. The Whole Home as Workplace

Sheila Clark's feelings about home (see above) voiced a theme expressed by many teleworkers: that the whole home can begin to feel like work space because work is

always there, 'hanging over' teleworkers, or else work communications always threaten to interrupt domestic life. For example, Tom Robinson commented:

Tom Robinson: 'You can never get away from the business here. The fax will suddenly go or the phone will go, they won't take no for an answer'

Hence, the Robinsons purposely went away for their main holidays to away get away from work. Programmer manager Lyn Gloster had also changed her weekend leisure patterns because of this consideration: she and Robert now went away more for the weekend to get away from their home.

Several others, such as accountant Joyce Miller, mentioned the importance of going out into the garden physically to get out of the workplace. She added;

Joyce Miller: 'The worst thing was not being able to get away from it. You can never shut it off. You are sitting there and there's a desk in the corner and it might be piled up with work and sort of looking at you and saying "you shouldn't leave me too long, you should come and get on with me". Whereas now I can just shut the door and I don't have to look, apart from what's on (the sideboard in the dining room). I think that's what I have found the hardest part of working from home. Unless you are physically out of the house, you haven't left work, and even technically if you're on holiday, unless you actually go away the work is still there and you might not do it, but it's on your mind because you can see it.'

Meanwhile, consultant Rizwan Rahman pointed to the tension that could arise from not having spatially and temporally defined work and leisure.

Rizwan Rahman: 'I don't know where is the line between work and leisure. I really enjoy my work but I also get very tired with it because I usually do a twelve/fourteen hour day and I don't find home a place to relax any more. Which is not to say that I'm very tense of unhappy, but in my previous job I left London and that was it. I'm less able to enjoy what one might call "formal leisure" but I enjoy my work so much, you know, and the freedom that it gives me, I enjoy those things but I don't get tense, I don't get up-tight.'

LH: 'How much is it a problem?'

Rizwan Rahman: 'I don't think it's a problem at all. My wife probably feels otherwise. She tells me that I need more time to relax and so on.'

6.6. Gender and Spatial Issues

6.6.1. Gender Identities and Domestic Space

Although both male and female teleworkers made comments that their work at home was sometimes not appreciated by outsiders, this was experienced differently because of the gender identity of the domestic sphere itself.

It was easy for women's telework to become invisible in the home because the home was seen as being their 'natural' place: their telework was not seen as employment because the other identities of housewife and mother predominated. So, for example, researcher Kay Lawson observed that her other women friends always thought of her first and foremost as a mother like themselves.

Kay Lawson: 'The friends that I have around here tend to be people like me who made it a conscious choice not to work. I suppose they still see me as somebody who doesn't work despite the fact that my hours are gradually increasing all the time. In fact, one of my friends was discussing that with me today. She said how nice it must be, when you go away on your business, that somebody actually sees you as a person. She said: "Because even we don't see you as... I mean, we see you as a mother or our friend Kay up the road, mother of Tony and Steven. We all see each other in those terms'. We don't see each other as isolated from our children...as sort of individuals with worthwhile... of course we see each other as worthwhile, but you know, as having anything else." So I think that's how friends see it.'

Scientific abstract writer Clare Brown expressed a similar sentiment, this time about the perception of acquaintances.

Clare Brown: 'Over that period, especially when the children were younger, you would go to sort of social functions at school as the accompaniment of your husband, and they say "What do you do?", and you say "I work from home", and they think it's a posh way of saying that you stay at home and look after the children. And however much you try and explain, they sort of pat you on the head and say "Well you're making the best of a good job", you know. And you never get to explain exactly what you do, and you sort of shy away from it in the end because you find it too embarrassing. I think that's a common thing with women, especially women with children that work from home.'

Typist Sheila Clark added that her telework was sometimes not seen as a good enough excuse for withdrawing from socialising.

Sheila Clark: 'I find it a drawback as well that people don't take you seriously...people with children that are at home, but they're not working doing anything, and they think that I can just go out when I want...(and) if I go round (to the nursery) some of the women round there will start sort of chin-wagging and all that and I just don't get away. I say "I must go because I've got work to do" and...they probably think "It's only a little bit of typing". They just don't realise that there's so much and you've just got to go and do it. It would be totally different if I turned round and said "I've got to work".'

Meanwhile, accountant Joyce Miller described the difficulty she faced in getting clients to pay on time, because they assumed that her husband Paul was the primary earner - when in fact she was the main breadwinner some of the time.

Joyce Miller: 'They think that because you work at home, you are probably not earning very much. It probably doesn't matter. I mean, clients tend to feel...they've seen me working at home in a nice house and you can see they're thinking: "Well, she

probably doesn't need the money, so we don't need to pay her bill on time". It hasn't actually been said but it's been implied once or twice. I think it's the little woman working at home for pin money, which I don't like because it's not true.'

Typist Jill Perry actively fought against this perception by impression management.

Jill Perry: 'I always dress smartly during the day. And even if I've got house shoes on, I always have a pair of good shoes tucked under the table so I can change them before I go to the door. No because I think your image, especially one does not want to be thought of as housewife with a word processor in the back bedroom, you know. I do prepare formal accounts, I do have my proper letterhead and I do see myself as running a business not just doing a little bit of typing. Maybe you put across certain vibes by thinking certain things about your work, I don't know. If you go out to meet people thinking 'Right, I have a business to run', I mean some people may think it's a bit overrated but I think your attitude has a lot to do with that. You know, if you appear in jeans and a jumper and say "Oh, thank you very much for giving me some work", it's not quite the same thing is it?'

While male teleworkers occasionally talked of not being perceived as really working, they thought others saw them as being 'unemployed' - i.e. the 'typical' reason why they might be assumed to be 'unnaturally' at home. Computer conference mediator Peter Brennan noted how he concealed the nature of his work from parents because of this perception.

Peter Brennan: 'Well to be quite honest, I have not been very clear with both sets of parents, simply because they wouldn't understand. They know that I'm working for the Open University. What we've tended not to be explicit about is quite how little I've got to be there and also we've slightly fudged the issue as to the extent to which I've taken the role on of looking after Angela. I think that they would probably suspect me of being really unemployed but not quite being prepared to discuss it. Whereas as you will see from the time sheets, I'm actually far too over-employed.'

Publisher Bruce Lang had come to telework following a brief period of unemployment. He was a little concerned that because of this trajectory and the incremental increase in his work that his children did not fully appreciate his telework. This may well have reflect his own anxieties and doubts about being at home.

Bruce Lang: 'I suspect there's still a part of them that feels Dad hasn't got a job yet. Although they've never said that, so I'm guessing slightly. But I suspect in their head it's a slightly phoney situation. But I can't honestly say that I know that for a fact.'

Even the partners of male teleworkers sometimes exhibited ambiguity about the status of teleworking. This was revealed in Ruth Knight's reaction when her programmer husband expected more domestic labour from her because of his presence in the home.

Ruth Knight: 'Malcolm used to say when I came in "Have you put the kettle on?". Especially if he'd been here and I'd been out the whole day, I used to find that extremely irritating, because I was the one who had just come in. I'd say to him, he's just sitting around.'

6.6.2. Male Teleworkers and Domestic Responsibilities

A second point follows on from the early section on differences in how males and females organise time. For many females, teleworking is always to be combined with domestic labour and childcare. Spatially, this means that they may be moving around the home throughout the day, fitting in chores during breaks. Certainly, male teleworkers were more likely to prefer to treat the home as a place used exclusively for work during their working hours. In fact, for some, one 'problem' with working at home was that they might be expected to take on more of the domestic chores by virtue of being around more. Architectural technician Peter Dennehy noted that he found that his worked lasted longer into the evening because of the pace of domestic time.

Peter Dennehy: 'I find at home we normally come downstairs and have lunch in the back room, and that's all got to be got out from the kitchen and got ready, and afterwards its all got to be cleared away, and the process takes much longer than if you were just eating sandwiches at work...so you get involved in a lot more chores I find at home...and it's a bit of a nuisance.'

In the Miller household, accountant Joyce reflected on the period of a few months when her husband Paul had managed his legal work at home while waiting for new offices. She recounted how she had been tempted to involve him more in the childcare.

Joyce Miller: 'It was awful. I found it very hard because the twins were still quite small and I felt I wanted to say: "Will you just look after the twins so I can go and do such and such". Whereas if he hadn't been at home I would have done it and got on with it. I mean, he didn't mind particularly, but I thought it was wrong because he was supposed to be seriously working from home. Because he was available I sort of took advantage of it.'

Given that her work was supporting them at this stage, it is interesting that she nevertheless saw his work as being more 'serious' and 'uninterruptable', whereas she was constantly managing to combine her work with domestic responsibilities.

6.6.3. The Partners of Male Teleworkers: Loss of Personal Space

Lastly, male teleworking can represent a loss of personal space for their female partners. These partners may still see advantages in teleworking: in terms of being able to spend more time with their partners, or the fact that their male partners are more available for the children. But a few of the women interviewed also talked about how they had previously been used to being totally in charge of the home during the day and 'free' to use that space. Admittedly, children may have been around some of the time, but often they had not had the same power to make demands on time and space as another adult. For instance, Joyce Miller recounted her feelings about the time Paul was at home:

Joyce Miller: 'It was strange I wasn't used to having somebody at home all the time. The children were different. I was used to having some time to myself and when he was at home I didn't get it.'

Part of Bridget Foster's freedom when alone in the home involved being able to make more noise. She temporarily regained this freedom when editor John went to see colleagues every Tuesday, the only chance she now had to deal with some of the housework.

Bridget Foster: 'I feel quite inhibited about just thrashing away. I know the Tuesdays when he isn't here it's like excitement, "I've got the house to myself. I can do what I like now".'

LH: 'Right. Because you'd like to play then music while you're about the house?'

Bridget Foster: 'I hate housework and I've got to have something to cheer me up, preferably something I can sing along to, you know, very terrible voice. Of course, I can't do that when he's trying to concentrate in there.'

For Ruth Knight this same experience first came when Malcolm gave up his work as a long distance lorry driver to spend a year at home unemployed. This was the time when Ruth had faced a major readjustment, making it easier to cope with his move, a few year later, from programming on-site to teleworking.

Ruth Knight: 'Well, I had my space and I actually just felt...well, I was here alone and I just ran things and did as I pleased and it didn't matter if I didn't want to do any cooking or cleaning because there was only me here and I could go off and do what I liked. So for a while it was a bit difficult because he was invading my space...now I had to start considering somebody else. I think all women feel that when they're on their own with their children they can get on and do things differently than when their partners are around. Things do change, and it isn't even a conscious thing.'

6.7. Space and Display

Since there is often a limited choice of space where telework can take place, the work may be more or less 'on show' or 'hidden away' not because of teleworkers wish to display or conceal their work, but because of other factors. Even under these circumstances, teleworkers may still have thoughts about the display implications of their work. For example, systems analyst Angela Lockwood considered herself a pioneer and telework was often a major talking point with friends. Hence, she took pride in the fact that dinner parties could be held in the midst of her high-tech office.

Angela Lockwood: 'When people come to dinner they just look at all the technology ranged round them. I mean, they're impressed or think we're mad. They're definitely impressed by the number of computer screens we have.'

Others also mentioned that having their micros, faxes, photocopiers, etc. on show when people called around sometimes helped them to convince outsiders that they were really working. For example, editor John Foster noted:

John Foster: 'Somebody who works in the building society as a marketing manager came in the other day. He'd never been in here and he looked and he said "God I could do with some of this stuff". And it makes it look like work. You know, if you're just

sitting at a table writing, you could be doing anything. You could be unemployed and you know if I pop up to the shop, "Oh dear, still unemployed". I don't (know)... maybe they don't say that). Maybe they know. But having this (equipment) around does actually make it look like work.'

Display could also be important for teleworkers' self-image, as observed by typist Jill Perry.

Jill Perry: 'I started off with a projector table. I had the computer on the desk beside it, the keyboard in front of me, the printer on the second part of the table the keyboard was on and, once I got the computer designated table there and the special table for the fax and then the special little trolley for the laser printer. It felt more like an office because one had certain bits of office equipment...office furniture rather.'

The display of work-related ICTs was not the only dimension to impression management. Setting aside a sufficiently large work space could also be important, as software designer Emma Townsend: *'It looks like an office...you're not working at the kitchen table.'* Apart from the amount of space, presenting that space by keeping that area in order, and perhaps raising the whole standard of tidiness in the home played a role in convincing clients or employers that the telework could be adequately, and indeed professionally, managed in the home.

Lastly, the Brennans provided the clearest illustration of the point that display of high-tech is not always valued. Their whole home was functional but had 'make-do' appearance. The furniture was old, the black and white TV set on a chest of draws in a cramped bedroom which also housed the microcomputer. A second-hand assembly of audio equipment was located in the living room, from where a long phone cord trailed to Peter's modem in the bedroom. The quality of their technologies and the make-shiftness of the phone arrangement reflected some economic constraints since the Brennans were saving for a new house and spent very little on consumption goods. However, they arrangement also reflected their values:

Peter Brennan: 'I'm beginning to realise there's a pattern to the technologies I use, which is that they tend to be extraordinarily cheap. (The extension cord) was three metres of flex that I got in Argos for sort of a fiver and it's my little joke that it's my portable phone because it has, you know, three metres of flex on it and it's quite portable...this line literally reaches anywhere in the flat. I mean, it is a small flat so I think the reason for not having extensions is that it would have been gilding the lily to say the least.'

Sian Brennan: 'Yeah... I mean, people object to it. I've had a lady in to clean since I was in hospital and she looks at it askance. I don't quite know why but I think she nearly tripped on it and people think it's messy. It looks messy. I think that's probably why people wouldn't like it normally. I didn't like it at the beginning. Peter had to sort of convince me that it was very useful, which it is.'

Peter Brennan: 'Well, the first time you got a phone call in the bath, you became a convert.'

The Brennans' aesthetic values were also reflected in the fact that they had kept the old style rotary dial phone which was already there when they moved in - both liked the look of it. In fact, Sian had more sophisticated phones at work, and used 'camp on' features and some of memory-dialling. But she did not like their design and did not at all mind dialling manually. In addition, Peter had a particular desire for a 'Micky Mouse' phone in his office.

Peter Brennan: 'Well, you have everything else that's absolutely conformist, you see. You have filing cabinets and things on your desk, all the things that you normally have in an office and you're wearing a suit, the whole business. But what you have is a Micky Mouse phone.'

LH: 'Isn't this sort of trying to destroy the image you're creating?'

Sian Brennan: 'Yeah'.

Peter Brennan: 'I think that's what appeals to me'.

Sian Brennan: 'The element of child or anarchist in it is still somewhere alive.'

6.8. Conclusion

Just like time, space has both a material and a symbolic significance. Much of our contemporary housing stock has not, as we have noted, been built for working at home. Space is often at a premium, both absolutely: teleworkers do not often have dedicated spaces for their machines and their work; and relatively: even those spaces that are occupied are often compromised by competing demands on them and the inability or unwillingness to hold boundaries around them. But equally the space itself is not always unambiguously defined. Computers on the dining room table, or laser printers on the side-board, are sometimes quite self-consciously placed to impress the dinner guests, as well as being justified as Hobson's choice. So the struggles over space are not just over occupation, but also over their meaning, and here it is the quality of space, and the status attached to it and its occupier, that is crucial.

But space is not just a matter of domestic location. Teleworking is supposed to have freed the teleworker from the constraints normally imposed by the need to be close to office or clients. Technology is supposed to have released the teleworker from the hold of geography. But as we have noted, and as one of our teleworkers himself identifies, while it may be easier to relocate as a result of teleworking, the constraints of partner's work, children's schooling, neighbourhood or family ties and networks, as well as the need to attend head office or see clients, severely compromises the limitless freedoms the technologies are supposed to provide.

Equally the boundaries between home and work, as well that between the private and the public spheres, are much mediated by the technologies that sustain teleworking - without, that is, necessarily being undermined by them. While all teleworking households are connected by phone to client or employer, very few have modem based network links, and only one has the kind of international space-time transcending

telecom and computer network prefigured in the techno-fantasies. The status of work conducted at home relative to the status of work conducted at a 'proper' place is one that constantly preoccupies teleworkers. We have just seen how they adopt a whole range of technologically mediated strategies to disguise the fact that they are working from their bedroom or on the dining room table.

Overall therefore working from home changes the quality of home as a place. Some of our teleworkers embrace that, or at least do not find it a problem. Others, perhaps most especially women (both teleworkers and their partners) find the challenge of keeping the two worlds spatially and symbolically apart too daunting. What they define as their personal space is perceived to be at risk. They have, by virtue of their domestic responsibilities to be more flexible and mobile within the house in any event. But for some of them when work is in the household it is clear that another form of pollution is released.

Yet not all, for the teleworking home is, both for professional and social visitors, something to be displayed. Technology here is a index and symbol of the work that is taking place in what is now a transformed space.

7. The Significance of Relationships and Support

The response of others to telework, and potential support relating to it, have a huge bearing upon how that telework is experienced. Here we look first at the responses of others within the household, and then at the significance of support networks outside the home. Both dimensions draw attention to the fact that telework is not an isolated activity carried out by an individual, but is a social activity, 'doubly social' because of the significant roles played by others inside and outside of the home.

7.1. Telework: Responses of Other Household Members

When looking at the considerations which people take into account when choosing any form of employment, it is important to look beyond that individual to the rest of the household. The presence and age of children, and, crucially, the particular gender roles negotiated within the household are essential to the way men and women formulate their work identities: as having careers, as being joint 'breadwinners', as having to fit in work alongside a primary responsibility for children.

Various work options can be made more or less easier, or possible at all, by the partner's existing work schedules. For example, some career structures assume a level of involvement which leaves little time for domestic life, including the practicalities of child management. The abstract ideal worker is simply assumed to have a 'wife' in the background enabling such a substantial commitment to paid work. Hence the common comment from women, including women in this study, that they wished they had a 'wife' in the background as well!

Such comments often refer back to the division of domestic labour, including childcare. But important though the question is of how domestic work in the home is handled, it is not the only issue affecting work choices. The reaction of partners is also a factor, as has been noted in particular in feminist accounts of male partners' response to the women's work choices - e.g. whether certain kinds of work are seen as being acceptable.

'Response' means more than just a positive or negative evaluation of work options. If we return to the case of teleworking, coping with paid work can be made more difficult if demands are made on the teleworker because they are physically available in the home and not 'out at work' (Haddon, 1992). For example, we have already seen cases where the work of women teleworkers is made more difficult if they are interrupted all the time to answer domestic-related enquiries and deal with the demands made upon them by other household members.

7.1.1. Gender and Childcare: Female Teleworkers

The most important factor differentiating the experience of female teleworkers is the age of their children. Where children are old enough to go to nursery or school, teleworkers can work when the children are out of the house. Hence, these households do not need to buy pay for someone to look after the children during the day. This is a saving for the teleworkers themselves because where childcare support is bought, it is often female

teleworkers themselves meet this cost, since many, such as Kay Lawson, still conceptualised childcare as their responsibility and therefore their expense. As older children go to school, this also means that these teleworkers no longer rely so much on support from partners or other social networks.

The exception for women with nursery and school-age children is where telework spills out of those core daytime hours, either because of the amount of work involved or because some work has to be synchronised with other people: as when accountant Joyce Miller met some clients in the evenings. One last qualification needs to be added about the bearing older children have on telework. Although they may be more independent, they can make different and equally intrusive demands. We saw how in the Brown household, Clare was driven out of the home to rented offices because of her role at the centre of domestic life.

Where very young children are present, the clerical/ professional divide become important. Professionals such as programmer Sarah Moore, programmer manager Lyn Gloster and researcher Kay Lawson could afford to buy in childcare. In contrast, the remuneration from much clerical work would not justify paying a childminder. It should be added that for some professionals, such as publisher Sally Robinson and accountant Joyce Miller, money was also tight, and so they too had chosen to look after the children themselves.

It follows that for female clerical teleworkers and a minority of professionals, there is a phase in their telework career (sometimes substantial if they have several children) when work is fitted in when the children are asleep, when they are awake but playing on their own and when partners can take over childcare. In the Clark household, typist Sheila used to work at the weekends and in the afternoon and evening of weekdays when husband Roger, a postman, took over the childminding shift. The same was true in the Simons household, where typesetter Diana worked mainly in the evenings once Peter, a builder, returned from work. These cases show how their partner's work timetable is important: the fact that Roger's job finished at mid-day had enabled Sheila to work in the afternoon.

Amongst our case studies, most male partners were ready to 'help out' in the above circumstances, although both partners expected the women still to retain primary responsibility for childcare. This was true even in the case of Diana Simons, who had always insisted that husband Peter should take a significant role in childcare. (She also thought he should also do more housework, which remained a bone of contention in their household).

Back-up from male partners was particularly important when exceptional circumstances emerged. For instance, programmer Robert Gloster had taken several days leave to look after their son when his wife Kathy had to go on courses. In general, males such as solicitor Paul Miller saw a limited extra involvement in child-minding as not particularly unwelcome - even as a chance to be with and take part in the development of their children.

However, not all males were so positive. For example, in many respects the Lawson household was not child-centred. Both Kay and Kenneth were professionals with careers

in the media and were very aware of how the arrival of their two children had curtailed both their leisure activities and their work interests. In the value-system negotiated within this household, children were often somewhat of a hindrance. Although Kenneth would sometimes help out by picking them up from the nursery or from school, when Kay had to go away for a few days, his mother usually come to childmind.

Kenneth Lawson: 'I suppose we would fall back on my mother. And I think it's probably fair to say that I don't look to spend days looking after children. It's not something that I... I mean, when it happens, I quite enjoy it quite often but I don't look to do it, you know. It's not something that I would say "Hell, I'll take care of the children" and relish it with enthusiasm because I don't.'

7.1.2. Gender and Childcare: Male Teleworkers

Childcare per se not was not such an issue for male teleworkers. In fact, their children were often older, reflecting the fact that males had usually taken up telework for reasons other than managing or being with their children. In fact, consultant Rizwan Rahman and manager Jonathan Townsend observed that they could not have considered teleworking had the children been younger - the distractions would have been too great. In practice, the pressure Clare Brown experienced from her older children was less likely to be repeated with male teleworkers since males on the whole did not have that core domestic role.

However, as already demonstrated in the sections on time and space, partners of male teleworkers can have an important role helping to maintain a suitable working environment, especially by keeping the children quiet, rescheduling housework, etc. Here, the presence of male teleworkers can mean not so much a slight shift in responsibility for childcare, but more work for the women.

We have already noted exceptions. In the Brennan household, computer conference mediator Peter did not mind the fact that he had taken over the role of chief childminder, commenting that this role reversal was easier than it would have been had he still been living in his rural Irish community:

Peter Brennan: 'Well I think the anonymity of the city is very important and I think that it would have been seen as most unusual in my home village and you wouldn't have had the privacy that you have in the city. So I'm not aware of being in a role that doesn't fit other people's constructions of it. I'm just me and I'm just doing what I do and I don't feel terribly odd about it.'

Peter could mainly work when Sian looked after their daughter after she came home. But this may be temporary: she was thinking about reducing her workload to part-time in order to spend more time with the child.

In the Reid household, consultant Sam and tourist guide Sarah shared the childcare, although she could adapt her schedule more because of her more flexible timetable. Again she was considering cutting back to part-time work, which would enable Simon's telework time to expand. So even with the exceptions, it was possible to see more traditional roles threatening to re-emerge.

The most extreme case of a female partner supporting male telework was in the Lang household. They had four children, two from Susan's first marriage and two who stayed a majority of the week with them from Bruce's first marriage. Susan described Bruce's response to being made redundant from his managing director post:

Susan Lang: 'He was in deep depression, there's no doubt about it. He did nothing. Didn't go anywhere. He sat in front of his computer all day playing computer games. I don't care what he says, that's exactly what he did. He didn't do any bloody washing up. So that's when (my) life became hectic, because I did everything in the house. I looked after the children. Looked after the house. Did the shopping, ironing, cooking. You name it. Did school runs. Worked full-time. Yes, it was very, very hectic, and continues to be so. For the first few months he did absolutely bugger all. We had a huge break up because I could no longer carry everybody. The strain was intolerable, and then I guess in about November last year he started taking more responsibility around the house because he had no choice. He did, or he had me in a mental hospital (laughs).'

Bruce's depression and non-involvement in domestic life had been in part a response to his unemployment, but the period Susan described also related to his attempt to build his own business. In the end, the strain she referred to proved too great and although his work career improved their relationship ended during the course of the interviews.

7.1.3. Gender and Domestic Labour

Although in the above example, Susan referred to the chores as an extra strain, these were for most teleworking households a less significant factor compared to issues around childcare. This was true in various senses:

- a) Where there was to some degree an equitable division of domestic labour beforehand, this did not particularly change because of telework.
- b) Where female teleworkers had previously the main role of doing and organising chores they often retained that responsibility: either doing them while teleworking, at different times, or buying in labour.
- c) Male teleworkers (such a programmer Malcolm Knight) often did not change their involvement in domestic labour, or else only marginally adjusted to being at home (e.g. cooking more)
- d) However, telework was in some cases a catalyst for roping older children into doing more of the chores.

The Langs provide an example where, at Susan's insistence, Bruce eventually moved from no involvement in domestic labour to helping out to a limited extent.

Susan Lang: 'Bruce now does an awful lot more. He never did anything at all in the house when he (used to have) a job. He excused it in terms of "Well' my mother never taught me" and "I've always had women to do it." His wife never worked, so

he always had someone to do it for him. So he didn't know how to load a washing machine and he didn't know how to make a cup of tea. He's much better about it now. I mean, he now knows what a vacuum cleaner looks like. Once or twice made supper.'

John Foster represented a majority of male teleworkers who had always done a little more of the domestic chores. His editorial work influenced that involvement in two ways. Less urgent chores such as ironing were synchronised to fit between his twice monthly deadlines. More urgent ones, such as washing, were fitted into the frequent breaks when writing short news items. Hence the nature of his work allowed his domestic labour to be more akin to the arrangements described by a number of our women, clerical teleworkers.

In the past, this domestic workload had been lightened by the use of other people's labour. He and his first wife, also teleworking for the same publisher, had employed au pairs since their first child was 18 months. These had been responsible for at least some of the jobs. Later, a cleaner had also been employed. At the time of the interview, John had been divorced and remarried. Now Bridget did much of the work, (she described herself as '*plodding*' around all day doing one thing or another - from walking the dog to putting the children to bed), and organised household chores.

Bridget Foster: 'We had this funny conversation; Peter wants to write this book about the 'New Man'. I kept saying "Well, can't you try to be one first". No it just doesn't seem to... he's very willing and very capable. Well, he (cleared up)in here before you came. But I had to tell him because I was rushing out and I said "That floor could do with being hoovered". And it was hoovered when I came home. He is very domestic. He's just not very organised about it. It will be very inconsistent and, I mean, he still doesn't know where the children's clothes live. I don't quite know how it got to be like that but in his previous existence he was surrounded by au pairs and cleaners, I'm afraid. He was spoilt rotten, so it's just not something he thinks about automatically. If you tell him, he'll do it.'

Bridget noted that John had done a considerable amount of the cooking when she was working as a nurse. This was beginning to change now that she was on maternity leave and about to take up a university place. Now she was home as well, she was taking on a majority of the cooking - a 'traditional' gendered pattern of domestic labour was even here reasserting itself.

Apart from questions concerning changes in the division of labour and amount of domestic labour, the Foster household illustrated other ways in which telework can affect the management of household tasks. We noted earlier in discussing sound regimes that the timing of some chores were affected by the presence of (male) teleworkers. But that presence can mean that domestic work routines are themselves interrupted and hence prolonged:

Bridget Foster: 'We always have one crisis or another, always. I don't know what we would do without our constant problems. There's always something that needs to be discussed and we go away and do something and think about it and meet up again. It's just a never ending story. (This constant discussion) interrupts everything. You know, I'll be going upstairs for something and he will suddenly

appear out of his room and half an hour later I can actually go upstairs. It's very nice but it does mean everything takes an awfully long time. Which in fact is why on Tuesdays, when he's not here, things get done. I don't get interrupted and nobody stops me and talks to me.'

Turning to the experience of female teleworkers, in the Perry household, teleworking typist Jill occasionally resisted Richard's expectations that she do all the housework, but in nevertheless did most of it.

Jill Perry: 'Well I think sometimes he was a bit cross because supper was a bit late. But then there would be times when I'd just say, "Well shove a couple of chops under the grill and do it yourself and give me a shout when it's ready". Not that it caused any particular rows or problems. It would be very gently mentioned that one was getting a bit hungry and was there anything that one could do and I'd say "Well, yes, in fact there is!" So there were times when he did sort of cook supper because I wasn't around to cook it.'

Meanwhile, Richard described the limits of his willingness to change this involvement in domestic labour.

Richard Perry: 'Yes a little bit. Especially during the early days, I mean, it's easier now that, say six months ago more when, particularly in the evening I'd be - I do the washing up anyway, but I'd be doing more of it because perhaps I'd be doing the lunch stuff that perhaps she hadn't had time to do or the children's tea stuff. And I'd be preparing more of the suppers than normal because she'd be busy typing. So, yes there was more domestic work that I'd take over doing. I'm quite happy to do it but, you know, not all the time, you know.'

The Hunters were also typical of households where there was a fairly traditional gender division of labour and where telework had a very limited impact.

Ian Hunter: 'I think Alison basically tries to do as much as she can do, so she hasn't tended to leave things for me to do unless there's been a situation where she's been forced to and then I will do what's necessary to try and help her out.'

7.2. Non-Labour Issues

In a majority of cases, partners of teleworkers were fairly positive about the telework and provided 'moral support'. For example, in the Clark household, postman Roger explained why he was in favour of Sheila word-processing at home.

Roger Clark: 'It's nice having her around. I mean, I like being on my own to a certain extent, but I prefer to have Sheila around if possible. Whereas before I used to get home at 12 (and) because Sheila worked up town I could be pottering around here (alone) until 8 o'clock at night.'

Roger was also keen to point out that her flexibility means that they can more often go out as a couple now - if only to do the shopping. This is important for them because they shared ideals of family life which valued 'doing everything together.'

However, Jill Perry described the initial unenthusiastic response she received from husband Richard when she first suggested starting up a teleworking typist business:

Jill Perry: 'When I told him it was gloom and doom and "Oh small businesses never get people to pay them", and "oh this, that and the other"... which, in a way, was just the right reaction, you know, it really makes me more determined. I think he likes the idea of his wife being at home. It's wifey at home getting the slippers out when he comes in.'

In this particular case, her husband's perceptions changed over time.

Jill Perry: 'From having not been keen about the idea at all when I first mentioned it, he's actually now turned round full circle and actually carries my business cards in his wallet with him and actually recommends me. I think he's quite proud in a way.'

Not so in the Lawson household. Kenneth would not have teleworked in Kay's position but would have opted for a full-time career back in the office.

Kenneth Lawson: 'There's still a part of me which says to her you know "What do you want to do this for? Why don't you go and go back into the world?"'

And this stance was perfectly clear to Kay.

Kay Lawson: 'He sees it as a fairly awful life that I've chosen for myself but he feels that I've chosen it, you know, and if it were him he'd be going out to work full-time and having a nanny. So, that's quite difficult for me because he doesn't actually necessarily give me moral support in the sense he doesn't make me feel good about the choice that I've made. I'm not sure that he actually feels that I've made the right choice anyway. He feels that a nanny would be just as good at looking after the children, if not better, than I am. So, yeah, I think that's a little bit demoralising at times.'

Apart from the moral support issue, Kenneth actually applied some pressure for Kay to move from part-time to full-time work, possibly giving up the telework. He very much aspired to returning to being a dual-career household, with sufficient funds from two full incomes to facilitate a high consumption lifestyle. Although Kay shared some of these aspirations, she felt that their current earnings should be enough to be financially 'comfortable' and that wasteful spending was more the problem. She commented on these pressures indirectly by describing her friends' and Kenneth's comments:

Kay Lawson: 'I think they felt that I was being pressured by Ken to do more work than I was ready for...to earn more money. He kept saying we were broke and we were poor and if I wanted to buy new clothes, I had to earn the money for them. I'm not sure that... you know, he on the other hand says their husbands must be incredibly indulgent just to let them you know spend excess time not really contributing to the family income. I think the truth is sort of probably in between both those positions.'

In earlier sections we have detailed the various ways in which telework can have a significant impact on the whole household - for instance, via spatial and temporal re-ordering of the home. So one dimension of moral support was that partners usually had to consent to such changes, even if only tacitly. But sometimes support meant more, where partners were more actively seen to uphold new rules in the home (e.g. relating to the use of ICTs, or not disturbing the teleworker).

One issue which chiefly affected the self-employed was where household resources were used for telework - usually in the form of expenditure of ICTs. In the discussion of the heterogeneity of telework, we saw how this could involve more conflict - for both male and female teleworkers (see below in the section on ICTs).

Lastly, where telework involved increased contact with the outside world of work, this too might require some consent from the teleworker's partner. Usually this was not a problem, but at least in the Perry household we can see some of the concerns which Richard initially expressed when Jill was thinking of starting her secretarial business at home.

Richard Perry: 'I mean other small things that I thought might be a problem would be people coming and going in the evening, collecting/picking up work. Well, apart from one particular client, who seems to call or ring up at the most awkward times in the evening or early on Saturday morning when she's not supposed to be working, it generally fits in quite well. They do it during the day, so I don't'

LH: 'What, you'd been concerned that it would be very disruptive?'

Richard Perry: 'Disruptive, yes and that you don't really want to be sitting down eating a meal, watching the news, you don't want people coming collecting work and stuff at nine at night. Given that when I've got quite a long day anyway, when I get home I don't particularly want to be involved still with more work of a different, although it's of a different nature.'

7.3. Labour Directly Supporting Telework

Teleworkers often received some form of help from their partner and sometimes from other household members which directly assisted the work. Although this was true for males and female, and clerical and professional workers the type of support depended very much on the nature of the telework, the partners own line of work, and their skills.

The Townsend household provided an example of the way that enrolling other family members in the telework could be contested. The problem was that executive Jonathan Townsend would slip into the habit of relating to Emma and the children as if they were his workforce.

Jonathan Townsend: 'I had to be very careful not to action (Emma. You know it's a great temptation to treat her as an employee, and employees you put actions on. You can do it very politely, but there's still an action. For instance, I say "Oh could you make sure this bank account gets moved from there to there". And she'll say "Yes". And I'll say "Can you make sure that's done by the end of tomorrow?". That's

actioning her, you see, and she doesn't like that because she knows that I'm clocking up. I've got a little time manager and I write down "Move bank account from A to B and action Emma Townsend, due date such and such", and she knows I'll progress her the following day.'

LH: 'You mean you follow up on this?'

Jonathan Townsend: 'Oh yes, yes. I mean that's how I run my life. I place actions on people and I accept actions. The whole business diversion is about making promises and then keeping them, so the whole thing is a whole network of promises, mostly not kept sadly in reality, and managing those promises, and having people report on the status of their progress towards achieving the promises they've made.'

LH: 'So this way of organising is spilling over into every day life as well.'

Jonathan Townsend: 'Well that's what happens. You see, when she's here and I'm here, and we've had to sort of carefully work to avoid that because it's a fairly heavy and intrusive method of management. So you mustn't let that get into the family, because it just pisses everybody off. And that applies to the children as well.'

LH: 'Has it started to creep into....?'

Jonathan Townsend: 'Well yes it does, you see, because you've now merged the home and work, you see. And I manage indirectly hundreds of people and you have to use these very rigid conventions to achieve that sort of managing process. And if you focus all that power down onto your poor little son and daughter or your wife, then it's very unpleasant, so you have to be very careful not to let that happen.'

LH: 'But you find yourself slipping sometimes do you?'

Jonathan Townsend: 'Yes, I do. But they shout at me back, so it's self-limiting.'

7.3.1. Involvement as an Auxiliary Worker

a) One very common means of supporting telework involved partners helping to deliver work (noted also in Haddon, 1992). In particular, these was one way in which working-class male partners could help, given that they often could not assist with many other aspects of the production process. For instance, postman Roger used willingly to drive several times per week for up to an hour at a time in order to drop off Sheila's typing work.

b) The other most frequent form of involvement was acting as an interface with outsiders from the world of work. Sometimes this meant simply being willing to receive and be sociable with visiting clients or co-workers. Even more frequently it meant acting as an informal secretary, taking phone messages for the person teleworking.

Taking these calls could entail far more than just noting down messages. For example, in the Foster household, Bridget acted as buffer between editor Peter and his boss.

John Foster: 'Bridget answers the phone but she will just give the number and she is sometimes referred to as my secretary, or receptionist...She'll take messages and she has actually intervened in disputes, shall we say, with John to try and calm things down a bit. She's been invaluable in that respect.'

In Bridget's version of events, we see her wider supportive role:

Bridget Foster: I suppose I help him in as much as helping him deal with this wonderful boss of his by blocking him half the time or trying to get some sense into him...which is useful. And I suppose when the crisis is on, which it usually is once a month - horrendous - just, you know; kids out of the way, keep the cups of tea coming, feed him at the right times and just keep him perky, keep him smiling, not let him panic too much.'

But for some answering the phone for teleworking partners could itself be a disruption. In the Dennehy household, both partners teleworked once Peter was made redundant and had work as an architectural technician at home. Katherine certainly thought his presence had some advantage over the answerphone in that he could personally take calls if she was out. Peter, though, saw these calls as interfering with his own work:

Peter Dennehy: 'They can be a nuisance, especially when she's out I've obviously got to answer the calls coming in for Kathy. Often you get people ringing up and they want to know all the details about the agency, and it's really better if Kathy deals with it. You find you have a whole series of calls. If you are in the middle of working on a project and looking up building regulations and trying to sort something out in your mind, and then you get a phone call and then you go back to your work. You have to start all over again.'

c) Partners can also take part in the actual labour process. For instance, in the Clark household, typist Sheila usually had to print off single sheets and had no sheet feeder. So Roger used to set in the bedroom by the computer and do all the printing off - usually while Sheila went off to do some other chore in their flat. In the King household, Bob was familiar with desk top publishing from his design work, and so had tended to DTP Valerie's reports during the time when she had worked part-time at home for the local health authority.

In the Rahman household, it was not just the teleworker's partner but also other family members who became involved in the production process. When Rizwan left his post as the director of a small institute to set up a consultancy at home he found himself busy from the start as he continued to work for many of his former clients. His wife Kathy, who was herself doing research as a teleworker, joined the family business in a part-time capacity, acting as a secretary, editing material and analysing survey data. Their eldest daughter, then 18, had some computing skills and so learnt desk-top publishing. She used to DTP the reports until she left for university at which point the eldest son too over this work. Meanwhile, two nephews who worked in the computer industry helped chose and then set up Rizwan's equipment.

However, such assistance was not always volunteered and sometimes a certain amount of manipulation was involved. For example, consultant Sam Reid had tried to enlist Anne

into supporting his telework a little more, especially when he was under pressure - indeed, with the possibility of her becoming a more permanent assistant. She had helped out under duress, but resisted becoming too involved.

Sam Reid: 'She has helped me with the odd report, helped me typing stuff up. I put her on a WordPerfect course - a hundred and something pounds it cost me - so she actually understood how to use it and she can do all the nice tables and fancy graphic-on-type things. (It was) as much for her own use but I also wanted her to help me should it be necessary. I mean, she's a bit loath to though, she's not very willing sometimes. I tend to have to say "I just can't do it. You know, we're not going to be able to get together this weekend unless you help me". I'm not quite sure why that is. I don't think she feels fully involved in what I do, partly because I don't think she understands it, partly because I think she sees it taking more of my time and so she's got some emotional difficulty with it. But yes, if Anne did want to help, there is a job there for her. I know with her ability that there is in what I do work for her. But she enjoys the independence, she likes her own work, she likes the particular type of work she does and that's fine. I've got no problem with that at all.'

And from Anne's perspective, commenting on the word-processing course she attended.

Anne Reid: 'Well he told me it would be a good idea for me and funnily enough, as soon as I'd done it, he suddenly had all these wonderful things I could do for him. It was all a bit of a con.'

d) Some professional partners were able to provide access to equipment and services from their own place of work. In the Miller household, the arrangement was formalised, with teleworker Joyce editing the accounts of her husband's legal business in return for some of his secretary's time for word-processing documents. But more often, arrangements were informal.

For example, in the Lawson household, Kay benefited from the fact that Kenneth worked in the same media industry as she did and was in a senior enough position to command some resources at his firm. So when she was under time pressure to get some tapes dubbed, Kenneth had them made up in his company's studios and then delivered by courier at his company's expense. Another time, when Kay needed some tapes of different European news programmes, Kenneth phoned the company's international bureaux and arranged for them to be shipped over. Both these occasions helped Kay to impress the American clients.

e) When partners worked in the same fields, or at least shared a similar training background, they could act as sounding boards for ideas. This occurred mainly among professional, for instance in the Lawson household and others such as the Moore household where Sheila and Joseph both worked for computer firms.

7.3.2. Technical Support

Technical support, setting up equipment, problem solving when something would not work, or repairing the technology was mainly the prerogative of male partners of female

teleworkers. But it was by no means just an experience of the self-employed. Although Sarah Moore worked on a telework scheme as a programmer the technical back-up she received was poor. If it had not been for Joseph's constant help she would have had some significant problems carrying out the work.

7.3.3. Keeping Informed

The Moore household also provides an example where partners who work either for the same firm or for the same industry can play a useful role keeping teleworkers informed of developments which they might otherwise miss through not being involved in the informal (and sometimes formal) information networks of the workplace.

Joseph Moore: 'One of the things probably being at home is that you do miss the later technologies and stuff. When software is upgraded or hardware's upgraded, it's very often that the old stuff will still work but there are now new and quicker ways of doing things. When you're working on your own, you don't always pick them up. It's only when you're in an office environment that some smart ass has read the manual or it's announced.'

7.4. The Significance Of Household Support

While the reaction of partners can be important for whatever type of work people choose to do, it is particularly significant for teleworking because of the extent to which the entry of paid work into the home can change the whole domestic environment. In some cases, support in terms of taking over child-care was a vital factor. And in most of our case studies, partners were clearly acting as unpaid labour to varying extents - sometimes their contribution made a considerable difference to the whole experience. While they may also do so when their partners work on-site, the scope for 'helping out' is increased considerably once work takes place in the home. In some cases, such support has been, again, vital. There are instances where telework is, formally, a family business. But even where it is not, the degree to which telework can enrol other household members bears some resemblance to a pre-industrial work form.

7.5. Social Networks

The telework literature documents the 'problem' of 'isolation'(ref.). While this term is often taken to mean lack of social contact, teleworkers can also be isolated in terms of lacking external support. Working on-site provides not only a social life, but back-up, in terms of technical help, advice - and occasionally domestic support in terms of crèche facilities - to facilitate the working experience. What can replace these in the case of telework?

But first, there is the question of sheer social contact. While some teleworkers in our study did experience periods when they lacked company, on the whole they were no different from others in regards being involved in various social networks and communities. They were to greater and lesser degrees members of formal and semi-formal groups such as sports clubs, churches and voluntary associations. They had varying degrees of social contact with extended family and social circles of friends and acquaintances. And they often had social contacts outside the home via their children.

Feeling 'isolated' from time to time because work is not conducted in a group setting does not mean that teleworkers are devoid of social networks in their social life as a whole.

However, there are some particular questions concerning how telework and these various social networks interrelate. The experience of telework can be more or less a privatised one. That is to say, households can cope with telework relying principally upon their own resources: in terms of managing work, managing the practicalities of domestic demands, and managing the psychological and interpersonal consequences of work's entry into the home. In fact, some of our teleworkers were happy to cope with very privatised forms of telework. But more often, teleworkers looked outside the household for various forms of help from existing and new social networks, thus de-privatising the telework experience.

The following section charts the key dimensions according to which telework can be privatised, and, as a corollary, the key ways in which different social networks can be utilised to assist and re-socialise that telework. However, telework itself changes the households relationship to the wider community. We have already noted the significance of time issues, whereby telework restricts or enables the teleworker's availability for participation in social circles outside the home. But in addition, to the extent that telework leads to the cultivation of new networks, new demands on existing networks, or itself provides new resources for those networks, then telework has implications for the household's location in the wider social world.

7.5.1. Networks Facilitating Control of the Teleworkload

Social networks can help control the teleworkload in two ways: by acting as a route through which teleworkers can actually find work and by taking over any extra work which teleworkers cannot manage. In both cases, such networks are of value to the self-employed rather than employees. Usually, employees do not have to find their own work and they have to some extent a predictable pattern of work. If for some, perhaps personal, reason that load becomes too great, they are often in a position to negotiate so that co-workers can take on some of that work. In cases such as teleworking managers, work may be less predictable because of crises. But then the nature of the work is such that it may not be easy to pass on that responsibility to others.

Social networks can be an important source of work for both professional and clerical self-employed teleworkers. Where teleworkers have long standing and regular clients, such as typesetter Diana Simons or researcher Kay Lawson, finding work is not a problem. Nor was it a problem for editor John Foster, who had been working on the same journal for many years. In practice, such teleworkers enjoy a similar situation to employees, working mostly for one client. But for various reasons they have maintained self-employed status. However, for teleworkers whose work is less predictable, word-of-mouth can be a significant source of obtaining new custom.

Hence, one of the chief roles of homeworker organisations such as Ownbase or Network North London is to provide a structure whereby teleworkers can informally advertise themselves to others working at home. While bodies such as Chambers of Commerce also perform this role, the teleworker organisations identify the particular problems facing the home-based community, including teleworker's need to make their services visible if they have no separate office. But some teleworkers have, in addition, joined other bodies

- such as the local Chamber of Commerce or even Sports Clubs - partly or largely in order to find potential work.

Teleworker organisations, as well as other social contacts made informally, can also provide a means of reducing excessive workloads which self-employed teleworkers can experience. For example, typist Sheila Clark reflected a common sentiment in that she did not like to turn work down from her regular clients for fear that they might turn to someone else. Hence, she had built up contacts with other typists to whom she could pass on some work if the burden became too great. The same was true of typist Jill Perry. Apart from actually hiring someone else (at a lower rate of pay) to cover some of her weekly work, Jill had found someone else to take on her work when she went on holiday. However, she referred to the common worry that in a competitive market these sources of support might always become competitors for business.

Jill Perry: 'One other freelance secretary who I met through the local Chamber of Commerce covers my clients when I'm on holiday. She's not as convenient to my clients as I am, which is nice, because when I come back they'll be in a rush to come nearer. They've all been quite happy with her but I've got the impression they were happy that I was back as well, which is nice. Because, it did slightly worry me. You know, you're farming out your clients and it is But it hasn't seemed to have been a problem and she, for the last three years, has been covering all my clients and I do the same for her. But there is another mother like myself, whose husband is a marketing consultant. He works from home and she is his secretary. But I know that she's hoping to pick up a little bit of business as well so she hasn't got as much time as I have for individual clients. So, if it's a small piece of work that I don't particularly feel that I can cope with, then I pass it on to her.'

In contrast, typesetter Diana Simons regretted the fact that she did not have that sort of network to pass on some of her work - and hence she felt in this sense more isolated. Diana lived near Mansfield, which had a tradition of homeworking for the hosiery industry. She compared her situation to that of outworkers who had built up a support network.

Diana Simons: 'The other (homeworking) girls more or less work for all one employer and so what they do is they say "I'll work this morning and you can work in the afternoon, and I'll have your little one this morning and you have mine this afternoon". Whereas I don't have anyone to share that...I just wish that someone else did on the same sort of level that I could share the responsibility.'

In fact, the company she worked for had other typesetting teleworkers, who lived within 3-4 miles of the office and who had also set up mutual child-minding arrangements. They even had their work delivered and collected. But, living 10 miles away, Diana had to drive into the office for her work and was too far from the other women to conveniently join in their network.

7.5.2. Networks Supplying Complementary Services and Skills

Another way in which social networks can directly facilitate telework is where they provide some service or skill which a particular teleworker lacks.

One form of support of special interest in this study is where social networks provide technological assistance - with advice about buying ICTs, setting them up, sorting out problems when they go wrong or using new features. Perhaps surprisingly, such networks were absent in most of our case studies. Sometimes, teleworkers such as designer Bob King had been computer hobbyists and general techno-buffs before teleworking and so needed no help. Others, such as typist Sheila Clark, had learnt to operate machines when they used to work in the office. But many others, such as Katherine Dennehy, who ran a childcare agency, and accountant Joyce Miller simply struggled on their own to learn word-processing and other software packages. Of the self-employed, only the Rahman household made use of the skills of their extended family when acquiring and using new computers.

It might be thought that social networks would only be needed for technical support in the case of the self-employed, since with employees it is the employers who would deal with all issues concerning equipment. However, while employees may supply equipment, technical back-up for off-site workers is not always so forthcoming. We noted earlier how programmer Sarah Moore would have struggled without the technical assistance of husband Jeremy. But he not only helped her - he had also been phoned up to sort out problems experienced by some of the other teleworkers who were employed by the same company.

Sarah Moore: 'He used to have a sort of separate little job as a homeworkers' technical support!'

The second form of support is where social networks can provide complementary business services. For example, accountant Joyce Miller used to employ another teleworker who lived across the road to word-process letters. Again, one motive for joining home- and teleworker organisations is to facilitate these business-to-business services.

The Reid household illustrates how business and other motives can be mixed together when drawing on the support of wider social networks. Bookkeeping was not Sam's strong point, but it had been his mother's profession. After struggling for a while with the accounts from his management training business he had asked his mother if she would do them. However, there was a second reason for this request.

Sam Reid: 'I had hoped that she would do the books on a monthly basis because I wanted her to come down here more regularly...partly because I don't like going up there. I don't particularly like where she lives (in Telford). She's got a two-bedroomed house and we would have to sort of sleep somewhere. I don't like it basically. So I wanted her to come here. I'd pay for her petrol and all that sort of stuff and that would bring her down here because she's got Sarah and my sister's here as well. But it hasn't worked out. So it was really job creation, because I could do the books quite easily myself. But it would take something away from me which I don't particularly enjoy doing the books and she does.'

7.5.3. Networks for Domestic Support

The significance of childcare support for female teleworkers with young children has been noted earlier. Some like programmer manager Lyn Gloster or programmer Sarah Moore bought childcare on a regular basis. But both they and the mothers who looked after children themselves would often still find themselves needing extra domestic help on an ad hoc basis: for instance, when they have to go away on courses or when there was a work crisis or extra workload.

In most of our case studies, it was extended family, principally the teleworkers mothers or mothers-in-law who came to the rescue. For example, researcher Kay Lawson used to draw on both sets of parents when she needed to go away for a few days. Systems analysts Angela Lockwood and programmer Sarah Moore had been aided several times by their respective mothers. The only male for whom this applied was Peter Brennan, whose sister-in-law would sometimes look after his daughter if he had to do something urgently.

In only one case did other social networks play any role. Typesetter Diana Simons lived in a very traditional northern working-class community where families had lived for generations. Her mother lived locally and looked after Diana's baby every week when she went to Mansfield to pick up work. In this community, the relatives and friends of local homeworkers often helped them out, and so Diana knew that she could also call on neighbours and other mothers from the play group to take care of her son if she needed them.

7.5.4. Networks of Others Working at Home

Contact with other people working at home does more than just help overcome loneliness. Apart from offering the type of the general social interaction described in the next section, it enables teleworkers to get practical advice on coping with telework and to share problems as common experiences. Accountant Joyce Miller discussed a familiar experience when attending local Ownbase meetings.

Joyce Miller: 'We talked about the isolation, and the fact that people don't take you seriously. And I'd say "Yes, that rings a bell". It was just so nice to find out that other people were struggling doing the same thing and feeling the same way, the way I felt about it. It wasn't just me.'

Joyce, like a number of those participating in the study, eventually stopped attending meetings - in this case, when their timing became inconvenient. Nevertheless, she, like others, retained an interest in the homeworking community by subscribing to the national and local bodies, and hence taking their newsletters.

Organisations such as Ownbase cater mainly, although not exclusively, for the self-employed. Employer initiated telework schemes often have some form of system for arranging contact between teleworkers - at least when they first start teleworking. Several of the teleworkers in our research came from two firms who had set up just such networks. Initially, the teleworker had seen and talked to each other frequently, but this

soon diminished. This, plus the Ownbase experience, raises the question of whether such networks have their greatest salience at the start of a telework trajectory.

In addition to providing moral support, the employee networks sometimes had other, more functional, benefits, as programmer manager Lyn Gloster explained:

Lyn Gloster: 'The other thing that we started to do was...we felt that there were things going on that we didn't know about that other people knew, and I don't think that was actually true with hindsight. I don't think anybody else knew any more than we did. But we felt a bit isolated being teleworkers and so we started to phone each other up and say "Have you heard anything about so and so? Have you any idea what's going on there?" And when we went into the office we spoke to different people and got back together again. Not as a deliberate, you know, snooping sort of thing. But it's just a network that if we'd got anything, we could keep each other abreast of what was going on....I think even the person in Folkestone, you know, I've occasionally phoned him up just to have a chat, but not very often because I mean I don't work with him, he doesn't work in the same area as I do. But occasionally I've phoned him up and asked him about things and we've had a general chat. So I think no matter where you're working from as a teleworker, you've got to try and keep yourself on some sort of network over and above what you get from the electronic mail or what your team are feeding you. Because they do forget to tell you things and you can feel a bit cross and, you know, "Why the hec didn't they tell me that?">'

7.5.5. Networks for Social Interaction

Such networks can play an important role in compensating for the missing interaction of the work site. Extended family can be important here - although moral support is not always forthcoming. For example, not only did researcher Kay Lawson fail to get appreciation from husband Kenneth: her own parents would also have liked to have seen her working in a 'proper job'.

Socially, Kay relied more on her immediate neighbourhood for day to day contact. Hence, when her immediate boss asked her to become a full-time teleworker she was very aware that this would squeeze out the time she needed to remain involved in that community.

Kay Lawson: 'I said one of the problems that I have with that (proposal) is that you would expect me to carry on working at home full-time. I would give up the community that I have with the sort of friends that I have from my children's school and nursery and everything else. I said there's nothing in it for me, there's no culture. I need to have somewhere that I can go and just sort of feel that I'm part of a team. I think I'm more aware of that now than I was then. Because it is quite isolating sitting at home in front of your computer terminal.'

If she did take on full-time working, Kay argued that she would require more social contact from work. However, even this was not totally satisfactory since she particularly valued the presence of other women,

Kay Lawson: 'I think what matters is that you have a circle of people with whom you feel you have something to discuss and a shared experience. If there's no time for that, for that life, then I expect more accordingly from my work life and I would have to sort of supply some of that sort of human contact. One problem for me was that all the people in the London office of this particular firm are men. I feel that I like to have women to relate to as well. That's quite important to me. Wherever I've worked, there's usually quite a few women that I've been friendly with.'

When her children were very young, accountant Joyce Miller had worked in the evenings. While this had been inconvenient for her family life, it had meant that she had time for meeting other mothers during the day, often involving spontaneous 'come round for coffee' meetings. As the children went to school and Joyce's work hours shifted to the daytime, contact decreased to once weekly prearranged visits to or by friends.

Joyce Miller: 'I think that adds to the sense of isolation because 4 days a week you are at home working and unless you've actually got a client to see that week, you might see nobody.'

Eventually Joyce was able to take a slightly more substantial role in the a new social network when she and a friend set up a club for mothers with twins, producing its newsletter, on her microcomputer. Hence, here was one example where telework allowed and provided the incentive for her to become a resource for the local community.

The same was true for editor John Foster. He saw his involvement in his local school as a compensation for his lack of social interaction and social contact in work.

John Foster: 'It's not enough just to telework. You can't just leave people in their homes in isolation. There has to be some sort of community and I think that's where School Governing comes in for me. It gives me a place in the local community. It's totally unrelated to work in the sense that the two operate with no obvious direct contact. Although I think that what I get out of being a School Governor, because I've been fairly active in that, does feed back into the work in terms of keeping me stable and sane and giving me satisfaction that I'm not always getting from my work. It also diminishes conflicts of personality within work and so on by giving it another dimension. It gives me a different frame of reference.'

The school benefited as well, as Peter was willing to produce reports for them on his equipment at home, attend numerous meetings and generally carry out his Governor role with some enthusiasm.:

John Foster: 'I get some satisfaction that I wouldn't be getting if I were simply going out to work every day and coming back and not doing anything else. And I think I get more out of being a School Governor than the ones who do that, who do just come along to a meeting, you know, every couple of months and that's it.'

7.5.6. Disruption to Telework

Although social contacts outside the home can be a resource for teleworkers, they may also be a source of interruption. Typist Jill Perry commented:

Jill Perry: 'I found in the beginning, I would say to some friends "well I'm in the middle of a piece of work at the moment, can I ring you back?" "Oh yes, all I did was to ring just to let you know about ...". And I would say "Look I've got to go because, you know, in half an hour I have to pick up my children from school and I won't be able to recoup this ten minutes later on, so I've got to do it now". And I found that one or two friends just didn't appreciate that. Well, if they're not in my situation, how could they? (These were) single friends mainly who were ringing in the slack period at the office. They think that you spend your day doing nothing at home, I think.'

This problem is more acute for women whose trajectory into telework has been from a mainly domestic role: i.e. they have built up community of contacts through being at home for a period - especially through their children. For instance, we noted earlier how typist Sheila Clark found it difficult to get away from the other mothers when she went to pick up the children from nursery, because they had become used to always talking to her. In fact, if work was pressing she would send Roger to pick up the children to avoid having personally to deal with this potential demand on her time.

Meanwhile, the Lang household illustrates how previous social networks could become more demanding with the arrival of telework. Bruce had a hobbyist interest in vintage cars. Partly because he was now being paid by output, he had become more conscious of the demands on his time from this non-work interests.

Bruce Lang: 'The major pain in the arse at the moment is to do with this car club I belong to where I'm responsible for doing this monthly magazine. The problem there is that the members of the club, knowing you are at home, they'll call you any hour of the day, and there are times when I've had seven or eight of those in a day. It's blocking the phone and also sometimes it's a query which I've got to put another file on screen for. And I'm actually answering a private personal query when I'm in the middle of another document which is earning me money. I think I can honestly say I haven't had to be rude to someone because they've abused in any way the knowledge that I'm working from home and have tried to make undue demands on either my time on the telephone, or personally. That could change.'

7.5.7. The Difficulty of Sustaining Networks

It can be a problem finding enough time, or the right time, to stay a member or various networks. This was a major issue in the Townsend household where the telework of programmer Emma and executive Jonathan was privatised telework all the dimensions outlined above. The Townsends found that they had continually to make an effort to keep in touch, to see people once a week, just to '*keep plugged into the community...to keep your nose above water*' (Jonathan). But even this could be difficult.

Jonathan Townsend: 'Well, even when you make an effort to have contact, like last Saturday, I flew back from Tokyo and I got into Heathrow at six o'clock in the evening and we went out for drinks with some friends that evening because we felt it was important we saw them. But of course I'm sitting there and I've been awake for, like, I don't know how many hours, but a huge number of hours and I wasn't

very good company... and it strikes a slightly discordant note when you drag yourself in and sort of sit there trying to socialise with people. But anyway, we did our best.'

Emma added how she consciously scheduled in meetings with her friends because it was too easy for her to become immersed in her work all the time. As part of that process of maintaining contact, the Townsends had decided to give social arrangements the same priority as any other commitment in order that social life would not be totally squeezed out by work.

Jonathan Townsend: 'As a general personal and business principle, if we make a commitment to do something, then we do it almost regardless of how inconvenient it may become later. And that's worked pretty well, actually, because it means people can rely on you when you say you'll do something. Conversely, we get driven mad by people who change arrangements, you know.'

Typesetter Diana Simons also noted that social time had to be carefully organised, and could no longer be spontaneous.

Diana Simons: 'If it's someone's birthday or whatever or Christmas and we'll say "Right, we're going to go out " And we'll say it's such and such a date or write it up two or three weeks in advance. But other than that they can't sort of drop in and say "We're going to the pub tonight"... because I can't do that. I've planned my work for that time you see.'

But for some teleworkers, there was also the pull towards withdrawing from social networks, given the effort involved in maintaining a place in outside communities. Although she was concerned about isolation and had become involved in organising a twins club, accountant Joyce Miller remained ambivalent about involvement outside the home.

Joyce Miller: 'I felt that whatever space time I had I sort of owed it to the family to spend it with them. It's very hard. It's hard enough juggling between work and family without trying to take on something else.'

In the same vein, computer mediator Peter Brennan was sensitive to the fact that socialising at weekends ate into potential working time.

Peter Brennan: 'I could become a very anti-social individual, actually. I mean, the danger for me is not so much that I don't see enough of other people, but that I might actually start shutting myself off from them.'

7.6. Conclusion

Telework and the teleworker can, neither of them, be divorced from what else is taking place in the world around them. Indeed for many if not all teleworkers, the support provided by those inside the household and outside it is crucial for its success. Partners may offer material support through the delivery of disks, feeding paper into printers, or helping set up equipment within the household.

The consistently expressed concerns about the consequences of teleworking are those to do with isolation. The withdrawal of work into private space is seen by commentators, managers and some teleworkers as, potentially and actually, an isolating experience, denying the normal, necessary and pleasurable sociability and contact that office work offers, and, some would argue, benefits from. Few of our teleworkers felt isolated in this sense. Most of them had access to formal or informal networks to link them both to their respective communities (through church, PTA or more informal neighbourhood groupings, to which they might contribute their specialist skills or access to their technology) as well as to other teleworkers (for example in the various self-help groups such as OwnBase which have recently developed). They are also, if they are employees, and most often at the beginning of their teleworking, involved more formally through company instituted and supported networks (often, but not always, these networks offered exclusively base-teleworker links). All of these provide a form of de-privatisation and resocialisation - albeit sometimes quite disruptive - which provide a compensation for the real or imagined isolation of the teleworker.

Whereas the problem outside the household is often seen to be that of isolation, the problem within the household is much more complex. Firstly the arrival of teleworking can involve other members of the household or an extended family in the work, and it can also lead to a kind of technological seepage in which children or partners learn new technical skills to support the increasingly significant activity which is now part of their domestic environment. Such extension is neither a simple nor an unconflictful aspect of teleworking for it involves shifts in the culture of the household and in its organisation. The management of a teleworking regime in households in which children grow and make new demands, or in which partners are more or less willing to accommodate to the teleworker's temporal, spatial and emotional demands, has to be set against the effect of the arrival of teleworking on the division of labour in the household or on its politics. Here, despite the innovation, not much is seen to change. Female teleworkers, as we have already noted, are still likely to be responsible for the household as well as for what is still seen as their domestic work. The female partners of teleworkers are still equally likely to be responsible despite their teleworking partner's continuous presence in the front room. Teleworkers and their partners can be isolated, as we have also noted, even in the bosom of the family.

This kind of double privatisation - the separation of the teleworker from those within the household as well as from those outside it - is one of the key anxieties associated with this new form of work. However there is actually something of a paradox in the literature, for the degree of isolation within the household - the relative isolation imposed by the time and space demands of telework - has not been considered. And in many respects it is this, rather than the external isolation normally identified as a consequence of teleworking, which seems to us to be much more of an issue. It is an issue precisely because it is usually invisible, but it is an issue too because it is often more difficult to resolve.

8. Information and Communication Technologies: General Issues

The introduction of teleworking into households does not only have consequences for the pattern of daily life and the relationships within and beyond the household. It affects the ways in which information and communication technologies are used and can influence the technological culture of the household as a whole.

In approaching this issue we start by asking two related questions:

- a. what are the general consequences of the introduction of teleworking in a household on the ways in which ICTs are bought and used?
- b. what aspects of a family's domestic life affect the ways in which teleworking technologies are used and in what ways?

The issue of how the arrival of teleworking in a household affects the ways in which different ICTs are used - i.e. the phone, computer and media technologies - is discussed in the next chapter.

8.1. Teleworking: General Effects on ICTS

We can distinguish between those consequences that follow directly from teleworking's entry and the effect which teleworking has upon ICTs already in place in the household. There is, of course, a dynamic inter-relationship between these two sets of consequences. In particular, patterns of use change over time as the teleworker, and the household as a whole, adjust to new sets of technological and social demands.

8.1.1. Direct Effects: Patterns of ICT Acquisition

First, we can categorise the key ways in which teleworking introduces new ICTs into the home.

- Acquisition of New ICTs. In many of our case studies, microcomputers entered the home for the first time specifically and solely because of work (e.g. among employees, programmer Sarah Moore, programmer manager Lyn Gloster; among the self-employed, typist Jill Perry, consultant Sam Reid, and Katherine Dennehy for her childcare agency). Amongst the self-employed, work partly justified the acquisition, but having a computer for the children was also a consideration (e.g. abstractor Clare Brown). All the participants in this research were already on the phone. Some acquired photocopiers for the first time when they started teleworking.

- Multiplication of Existing ICTs. Acquiring second or third telephone lines (usually for the fax machine) was common, although not inevitable, amongst employees (e.g. programmer Malcolm Knight, executive Jonathan Townsend). A number of teleworkers acquired new extensions and handsets (e.g. typist Sheila Clark). Some acquired additional computers (that were not upgrades of the ones they already possessed). For

example, the Lockwood household already had two microcomputers when systems analyst Angela was provided with a third machine by her employer.

- Dedication of ICTs. Dedication of telecoms equipment might involve the installation of new telephone lines specifically for work. Clearly, this process may complement the multiplication of ICTs. But it may equally be a means by which teleworkers cope without having to acquire new equipment. They may manage to change some of the rules concerning their existing ICTs: e.g. that certain handsets be used exclusively for work-related calls, or that the phone is used only or mainly for work during part of the day. In principle, the same processes could occur with the computer, wherever micros move from being family resources to being seen predominantly the tool of the teleworker. This might have contradictory implications for the household as a whole. While the appropriation of an existing machine might increase its role in one sense, as the teleworker finds more uses for the computer, but it may decrease the range of options for the rest of the household as they have less access to the machine.

- Upgrading of ICTs. Again, upgrading can complement multiplication, and is most common in relation to the micro, where more powerful machines are bought for work, while older machines can be passed on to other family members. For example, in King household had possessed home computers since the early 1980s. Designer Bob upgraded by buying a new machine for work use, gave his previous one to his wife (who had used it sometimes before) and sold off one of his older models to buy a separate micro for the children. But upgrading because of telework need not always lead to other household members inheriting ICTs. In the Lang household, publisher Bruce had already donated his old computer to his children some years earlier. When starting teleworking he simply exchanged his PC for an improved model. And in the Townsend household, the 'family' had already had a home computer for some years. The children carried on using this when both Emma and Jonathan acquired better machines once they started teleworking.

- Expansion of ICTs. Expansion involves adding new pieces of equipment to existing core ICTs in a way that significantly enhances or extends the range of services and facilities that can be used. The obvious examples here which were again common amongst our sample were adding the answerphone and fax in relation to the telephone or new software and modems in relation to the computer. In addition to hard- and software, new services such as E-Mail systems or telephone answering services (e.g. Kay Lawson) can also enhance the role or function of existing ICTs.

8.1.2. Direct Effects: Process of Entering the Home

New ICTs that are, at least in principle, to be dedicated teleworker machines come into households by a number of routes. The next issue to consider is what factors shape their entry into the home.

- Employees and Self-Employed. Employment status is one major factor, although the differences are not absolute, especially when some 'self-employed' (e.g. editor John Foster and Researcher Kay Lawson) work exclusively for one firm and enjoy situations similar to employees. On the whole, many of the ICTs used by employees were supplied by employers. Even so, some teleworkers, such as computer conference mediator Peter

Brennan, still made use of their own phone Lawson (and in his case, incurred work-related phone bills).

Some self-employed teleworkers were issued with equipment by clients - e.g. typesetter Diana Simons uses her client's computer and software. But generally, self-employed teleworkers have the options of either purchasing new ICTs, or else of commandeering existing technologies for teleworking use. Some small ICTs, such as telecoms handsets or even answerphones, had been acquired by other means in some of our case studies - e.g. found discarded in partner's new office, given as a gift, or 'bought' with the points saved on special offers (e.g. profile points).

- Finance and Values. For the self-employed, having the 'disposable' household income to buy extra equipment was clearly a significant consideration. However, the emphasis is on 'disposable' because what is important is not just the absolute amount of funds available in the home, but also the priorities that are negotiated. This includes the importance given to telework in the household.

For example, the Miller family was amongst those who felt that their money is tight, especially with the recession. But major one drain on their resources was paying for their children's private education. As a result, accountant Joyce felt that she could not afford to upgrade her micro, and in fact lost one client because competitors had more powerful machines to run the latest accounts packages. Meanwhile, the Brennan household had a considerable joint income, but Peter and Sian anticipated buying a house in London at some stage. Since they were not sure how much this would cost, they spent very little on ICTs - or, for that matter, on anything else.

The fact that the status of telework is negotiable has already been discussed when examining the heterogeneity of telework. It was noted how the role of male teleworkers as primary earners was more likely to lead to their greater demand on household resources for the purchase of ICTs. The case of the Reid household illustrates this, showing also some of the processes involved in negotiating purchases. Consultant and management trainer Sam had acquired a substantial amount of equipment, in effect, from the joint household income. At one stage this came mainly from his partner Anne. Discussing one particular purchase:

Anne Reid: 'He buys it and justifies it afterwards!'

Sam Reid: 'You could do your job without anything other than a phone.'

Anne Reid: 'I could, yeah.'

Sam Reid: 'I couldn't. I do need a PC.'

Anne Reid: 'Yeah, but you see this is the big word really this the word 'need'. 'Need' is a very subjective word. We don't need seven phones but we got another one the other day anyway and we did really really need this extra one I was told. In fact I didn't talk to him for an hour or two after that because he just said "Pull up here and I'm just going to pop into Argos". I said "What for?". And he said "Well you're not

going to believe this but it's another phone". And with that he leapt out of the car and ran across to Argos before I had a chance to say anything!

Several points are raised by this case. First, the purchase is contentious even if Sam was successful in achieving it - this household do not always share the same perceptions about the importance of ICTs. Second, the 'usefulness' of an ICT, and hence its value, is by no means always clear-cut. This also emerged in other interviews, where both teleworkers and their partners noted that when they bought a computer, or an upgrade, or a cordless phone etc., it was not totally clear how it would assist the work - even if they were willing to make the purchase. Hence, although to some extent teleworking households may have different ICTs because of the nature of the work (e.g. some acquiring modems because the work requires them to access computers at a distance), it is not possible to simply read of the level of 'appropriate' technology from the type of telework being undertaken.

A third point raised by this discussion is that work may be used to justify the acquisition of ICTs which are already desired, just as work can justify spending time experimenting with ICTs (see below, cross ref.). This appeared to be partly the case in the Reid family, but more so in some other cases. For example, Gordon Taylor could argue that he needed to spend the very limited household funds on equipment because he had to understand the state-of-the-art technology in order to run his computer helpline and consultancy business. But he had clearly always been interested in the latest ICTs, and had been an earlier adopter of many technologies prior to being a teleworker.

8.1.3. Direct Effects: Access and Use

We have seen how the introduction of ICTs into the home is in part dependent on the particular characteristics of the household's moral economy. Decisions to buy or to adopt, to postpone purchase or to adapt existing machines, are each dependent on the complex balancing of cultural and financial considerations. The subsequent 'career' of those technologies also involves a continuing process of changing uses and changing meanings as ICTs shift their cultural position within the teleworking household.

For example, the question of accessibility is one in which the teleworker will be involved in a more or less continuous, or more or less resolved, negotiation or even struggle over which members of the household can use the equipment and under what circumstances. This is a grey area which also involves individuals (friends, neighbours, relatives) outside the immediate household, who can make claims of one kind or another on the equipment. We have discussed some of the issues raised by this in the section on networks.

One factor which may affect access and use is the manner in which ICT's were initially acquired or appropriated for teleworking purposes. Where they are supplied by an employer or client there may be very clear rules as to how the equipment such as microcomputers should be used and by whom.

Amongst our particular sample, this was not the case. For example, in the Moore household both teleworker Sarah and Joseph worked with computers, albeit for different firms. When Joseph had been on call, he had sometimes used Sarah's computer and modem to access a distant mainframe when some problem arose. Several teleworkers issued with equipment had used their machines for word-processing, as had their partners,

and some would have done so if they had had a printer. And in both the Moore and Gloster households, the young children had been allowed to play on the machines, albeit with their mothers present.

Telecoms was a different matter, with teleworking employees respecting the fact that their firms paid the phone bills on work phones. But the Lockwoods had been willing to use the firm's fax machine - when transferred to their own home phone line so that Angela's employer incurred no extra cost.

Where new equipment was bought by the teleworker, it was most likely to be used exclusively for work where it duplicated existing equipment - i.e. a second phone line, a second, or third microcomputer. Where this is not the case, these technologies may often be the subject of competing claims from children or partner.

For example, Anne Reid used both Sam's word-processing software and his fax for her travel guide work and trade union responsibilities - although in this case 'his' machines were in effect purchased from joint income. The same was true when Kenneth Lawson used the paint package on 'Kay's' Apple Mac. These cases illustrate the ambivalence that can exist around ownership.

The case of children's access is slightly different because they rarely have any such claim to ownership. Nevertheless, many teleworkers participating in our research encouraged the use by children of 'work' micros for word-processing or 'keyboard literacy' and, more frequently, allowed it's use for games.

The Miller household provides an example of the complexity of controlling access. They had bought their computer principally for Joyce's accountancy telework but also to assist their children's computer literacy. The fact that the micro was defined first and foremost as her work machine meant that Anne could regulate how much games-playing took place. She could restrict children's use arguing that she needed the micro for work or else did not want her papers disturbed. But Joyce admitted that she could always make time for them to use it, by changing her work times slightly, if the children wanted to access the machine for more constructive school purposes. However, the dynamism around household technologies was made clear when the Millers bought a games console for the children. Since games were played on the living room TV, they both competed with broadcast TV and took place in a domestic space where the parents sometimes wanted some peace and quiet. Hence, games-playing was still regulated, but the issues of control had moved away from Joyce's microcomputer - demands on it from the children diminished once they had a better alternative.

Allowing children access to the micros used for work can create tensions. Even before designer Bob King started teleworking, he had been one of the earlier adopters of home micros. His BBC micro became a significant tool for his wife Valerie when she did a degree and later worked part-time at home herself. Since it contain all her files, she was always worried about it being damaged though her son playing games on the machine. Indeed, the Kings pointed out that he had managed to damage some of the keys.

Bob King: 'One of the keys didn't work because they were all hammering away together. You know, you'd have him and a friend and they would, because it all works on keys and no mouse, they'd be sort of banging joysticks on it.'

Valerie King: 'I used to feel really really tense about that, you know, somebody playing games on the computer, the word processor that was you know part of my work with a report with a deadline. That was awful.'

LH: 'So did you try and restrict them playing games at that stage?'

Valerie King: 'No I used to just shout "Don't lose my work".'

In fact, since Bob used the BBC as well, they found it impossible to cope with just a single multi-purpose family machine - despite the images portrayed by contemporary manufacturers. The tensions were only resolved by the introduction of a second machine and, with teleworking, a third micro. Bob, Valerie and the children now each have their own separate equipment.

8.1.4. Indirect Effects: Inheritance, Compensation, Displacement

The indirect effects of the introduction of telework-facilitating technologies into the household we call 'technological seepage'. The term refers to the ways in which new technologies affect the technological culture of the household as whole, providing opportunities for other members of the household to gain new skills, or altering the gendered relationships to technology. It also refers to the expansion in the uses and significance of existing technologies (not just the dedicated teleworking that we have just discussed).

These skills relate not only to the obvious ones of computing or word-processing, and not only to the optimistic encouragement of an initiation into computing through games playing. But they also relate to the telephone and the pressure on children to become competent answerers of phones and message takers, or in other ways to alter the use they make of the phone and phone-related equipment.

However, the secondary effects are more extensive and subtle even than this. The arrival of telework-facilitating technologies into the home has a kind of ripple effect elsewhere.

This is clearest in the case of inheritance. Even without telework, this is a standard process in households as partners, or more often children, inherit old TVs and hi-fi sets as new ones are purchased. In fact, in our research the Lockwood children inherited a TV because it had to move out of the room where systems analyst Angela wanted to work.

In addition, we have already noted how new computers replace old ones, and old ones are used by other members of the household (with varying degrees of reluctance and enthusiasm) in different, shared or private spaces, and most frequently for individual uses. Similar processes may well occur with telecoms. Although not occurring amongst our particular case studies, it is possible to envisage how the replacement of old telephone handsets may mean that they migrate to (children's) bedrooms. Or the fact that teleworker's use the 'work' phone for some social calls may leave the home phone freer

for other household members. In our case study of the Townsend household, executive Jeremy was waiting for the chance to get a form of voice mail which would, in effect, allow the children to have the equivalent of their own answering machine (since the existing one was cluttered with messages for all the family members).

A second indirect effect occurs where other information and communication technologies (particularly the television and the video) are used to compensate for the absence of the teleworker from full engagement with the rest of the household. This mainly affects the children, especially where television, or videos (pre-recorded, hired or bought) are consciously used as a child-minder. For example, in the Robinson household where both parents worked as a book distribution partnership, Tom noted this role:

Tom Robinson: 'Again it's a last ditch attempt if we've got some work that's got to be done, we've got to get on with it, it's easier to give in and let them have a video on.'

Typist Jill Perry was more positive about the video's role - especially since she specifically allowed them to watch the more 'education programmes - such as wildlife - which she had taped for them.

Jill Perry: 'With hindsight the video has been quite useful because if I want to get on with half an hour or an hour's work and there's nothing else they'll do, I can say well 'watch that' and at least I know that they're watching something which is good, you can choose it.'

But media can also compensate for the partners who will watch television while the teleworker is at work somewhere else in the house. As Dennis Simons commented: *'It's company if Diana's typing'*.

Finally, and as a reverse of compensation, we have the displacement factor. Here the spread of telework, and the commitments of those who are involved to it and to the technologies that support it, significantly limits the time spent with other ICTs. Some teleworkers watched considerably less television than their non-teleworking peers because of work pressures: for example, typist Sheila Clark had pointed out how TV-watching had reduced as she had to work in the evening.

8.1.5. ICTs' Saliency within the Moral Economy

The saliency of ICTs in general within a household can best be illustrated by contrasting two of our case studies. At one extreme we have the Townsend household where executive Jonathan and software writer Emma both teleworked. On the whole, telework fitted comfortably into their life, although the danger for Jonathan, especially, was the temptation to workholism was leading to his social isolation. Their home as a whole was increasingly, in their own account, becoming more like an workplace, an organisation. We saw earlier how Jonathan had tried to "action" Emma and the children, sometimes unconsciously treating them like employees. Meanwhile, the children had to earn their pocket money for jobs done at home.

Work-ICTs were also easily integrated into the moral economy of this household. In fact, at one point Emma asked if there are possible *technical fixes*' for overcoming some of

their problems of maintaining social contact, while Jonathan recognised his own dependence: *'I use technology to try and stay sane'*. That is not to say that technologies were welcomed uncritically: Jonathan had tried and rejected mobile phones and E-Mail. Nevertheless, there was a kind of technophilia within the household. The children had been brought up with an encouraged to use micros - indeed, the son was promised a UNIX work-station of his own if he got into Oxford. In this household, too, the children were encouraged to use the fax when possible (see below) and the phone for ringing their friends or shopping.

Jonathan Townsend: 'They don't use it enough, you see. I think they're English because the English won't use the bloody telephone.'

Emma Townsend: Yes, they'll go out and see if anyone's at home rather than phone up and find out if they're home before they go.'

Jonathan Townsend: 'Or if they want to buy something, instead of calling up all the stores and seeing if they have whatever they want to buy in their size, they go and walk around. Then they come back moaning about how awful it was walking around or not making contact with their friends and they're set in the middle of billions of pounds worth of infrastructure to allow them to call them up.'

LH: 'You've tried to persuade them to do this, have you?'

Jonathan Townsend: ' Oh I sort of nag them and sort of mock them when they come staggering back from Reading without having got what they wanted.'

Nor did non-work technology pose a problem: the Townsends were in general early adopters (e.g. of cordless phone technology) and Jonathan certainly monitored developments across a wide range of technologies.

In contrast the Miller's relationship to teleworking, albeit still at a professional level, is one of begrudging antipathy. For Joyce, it was the only means to continue working, but she wanted to return to the office as soon as possible. As for technologies, their material resources, but also their priorities, limited what they spent on ICTs, including work-related ones. Both Paul and Joyce had struggled to teach themselves to use the computer, and Joyce had sufficient technology to sustain her professional competence and identity (although she lost one major client because of her unwillingness to upgrade). They recognised that their technological expertise had now plateaued. While the computer had found some non-work uses - by the children and by Joyce to produce a local newsletter - the Millers still felt that it was under-used. Of their other ICTs, the VCR was broken and Joyce was re-evaluating whether they really needed it - or the TV at all. In this household, neither telework nor technology were embraced and at times they could be resented houseguests.

Lastly, whereas the Townsends telecoms equipment - phones, faxes and voice mail - integrated them into a work-based network this was not the case with Joyce Miller. The Townsends may be resigned to the social isolation from their immediate local community and recognise it as the inevitable consequence of their telework. But at least their ICTs kept them in touch with the outside world. In contrast, Joyce Miller often felt socially

isolated during her working day and did not have even the marginal compensation of an electronically facilitated network.

8.2. The Influence of the Household upon ICT Use.

The substance of the report thus far has provided the basic answer to this question. Differences of level of income, professional status, available space and disposable resources define the economic dimension of what we have called the household's moral economy. And gender differences (and more especially the domestic values that support those differences) are central in understanding the cultural environment in which practices associated with telework are defined and sustained.

The stage the family has reached in its life cycle, the age and the dependence of the children, the domestic division of labour, both in relation to household chores as well as childcare, the control of space, the management of time and the status of the teleworker relative to other working or non-working members of the household are all factors which both define and reflect the particularity of a household's moral economy. Beyond that they structure the particular way in which teleworking as a permanent or temporary phenomenon is integrated into the daily life of the household.

8.2.1. Regulation of Technologies

At the centre of domestic life lie issues of boundaries and control: control over the use of space and time; control over how the technologies associated with teleworking will be used. These boundaries surround the relations to technology as between teleworker and partner, as well as between teleworker and any children. The division of labour and the gendered politics of the household are central in defining these boundaries and control structures, and they in turn shape how ICTs will be used.

The degrees of control, regulation and boundary maintenance varies in different households and in relation to different aspects of the households life. For example, in the discussions of time and space, we saw how the Townsends , especially, maintained a rigid boundary protecting work from the interference of home life - although, not vice versa. But if we look at the regulation of their technologies, the Townsends offered an environment in which relatively little control was exercised over the use the ICTs. Both parents and children had access to and were encouraged to use all the technology available. As an economically successful professional family, cost was not a great issue and the Townsends were confident in their abilities to use technologies. The only exception to this pattern occurred in media viewing where the parents objected to their daughters interest in soap operas. But apart from that there was no censorship of what could or could not be watched.

In other households, technologies were more strongly regulated. In such environments access to ICTs was the subject of close attention, especially for the children. Where teleworkers who were less confident in their technological competence and technologies, children were not allowed to use the machine, or else were strictly monitored, or else children's usage created a tension. Sometimes it was computer games-playing which was regulated or TV-watching - as passive or less constructive forms of leisure. Or else it was the content of TV which was a problem. And one common worry already noted

concerned the expense of phone calls - often meaning the regulation of children's usage, but sometimes the usage of adults as well. While the motives for these different forms of control vary, households can be more strongly regulated as a whole.

Clearly the degree and form of regulation may also reflect the age of the children - in which case, regulation is also likely to change over time within the same household. More commonly, parental concern about media content relates to younger children and about phones to teenagers. But there is one particular process of deregulation which relates specifically to children's age: the process whereby they acquire areas of economic independence.

The Brown household was an example of a household moving to an allowance system. Previously, abstractor Clare had paid her children some pocket money, but paid for all clothes, toys etc., thus having some control over what the children could acquire. However, when she started encountering demands for £100 pairs of trainers she set up the arrangement whereby they paid for their own clothes from a more substantial allowance. They could also now earn money from doing odd jobs around the house. Clare reflected how her son's spending had changed now that he was in charge of his own money.

Clare Brown: 'Geoff will buy his computer games so no clothes ever get bought!'

Robin Brown: 'Then he walks around in rags.'

Clare Brown: 'He bought a bigger television from a friend of his whose father does up televisions so he could get the, you know, in his small room, this huge screen right next to it. And then he bought this more comfortable chair last week yes, and he also got his stacking system all within a short space of time so he's listening to this incredibly loud music and he's watching television quite a bit and playing his Megadrive. So it's all happened at once, you know.'

Clearly, deregulation of her children's finances made a considerable difference to her son's ability to acquire and use ICTs. In this particular household, the use and cost of the phone remained the main issue and subject of control. But in the Rahman household, Kathy and Rizwan had applied a similar deregulation to that ICT - the children were given their own separate phone line which they then had to finance themselves.

8.2.2. ICTs and the Wider Community: Deprivatisation.

Households are not isolated social units. They are to varying degrees integrated into a wider culture of family, neighbourhood or work-based relationships. The extent to which that is the case also has implications for the ways in which ICTs are used. Conversely, the presence or absence of such ICTs, particularly telecoms, will have consequences for the degree of household's isolation from, or integration into, the wider social world.

While teleworking often involves some withdrawal into domestic space (or more of a reinforcement for mothers at home), the degree to which a household is already part of a wider network will define how ICTs are used, both literally and symbolically. The pressures towards an increasingly privatised existence which accompany most kinds of

teleworking can be, and often are, compensated for by opportunities for various kinds of deprivatisation (or re-socialisation).

Two kinds of deprivitisation can be identified. The first occurs in neighbourhoods when the ownership of photocopiers, computers or faxes becomes seen, albeit in some cases only in a limited way, as a shareable resource: neighbours will come and ask to use the technological resources in the same way as they might ask to borrow a cup of sugar. For example, in the Brown household, friends had asked to use Clare's photocopier. Friends and neighbours had made use of the Robinson's fax machine. And several teleworkers reported how they had been asked to produce something for outsiders on their computers. In this facilitative deprivatisation the teleworker provides technological services to wider community (or extended family) and the technology itself becomes a shared resource.

The second, what we might call experiential deprivatisation, occurs in the symbolic status and expertise that is often perceived to be the property of those who own and can use a computer. Teleworkers become local experts, both a technical expert but also of course a teleworking expert. They can find themselves at the centre of an informal, but nevertheless significant, network of a common professional culture or an informal neighbourhood. Examples from our studies include Gordon Taylor and Malcolm Knight who were asked to help sort out friends and neighbour's computer systems, or the way Sheila Clark used to advise acquaintances from her experience of teleworking and her computer.

In both these cases, the teleworking technologies can be seen to be both the product and the producer of a distinct form of social activity with teleworking at its centre. The technologies are product in as much as the ways in which they are used are defined by an already existing pattern of social relations within and outside the home. But the technologies are producers in so far as the networks that emerge outside the home, or the social relations within it, are affected, sustained or even created by the opportunities released by the technologies or the skills, competences and claims that are based upon them.

9. Teleworking and information and communication technologies: Phone, Computer and Media.

Teleworking has consequences for the ways different ways in which the telephone, the computer and media technologies are used in the household. This pattern of use, and the often conflicting needs which it throws up, has both material and symbolic dimensions. ICTs have functional significance; they are bought and used for what they can do, or what they are believed to be able to do. But they are also bought for less functional reasons; for their status. The significance of these technologies changes through time. That significance is also often the source and site of conflict amongst members of the household. The meaning of ICTs in the home is not stable, and teleworking introduces a specific source of instability as technologies become displaced, or marginalised, replaced or rejected. Furthermore, this instability, and the response to it in a reorientation of the technological culture of the household, is not without its contradictions, conflicts and resistances.

Households are often conservative in their use of technology and in their response to new technologies, though this conservatism must be understood in at least two different senses. The first is the sense, to which we have already referred, in which existing technologies can create a level of dependence which provides a degree of technical security with the familiar. Once a certain level of competence, particularly in relation to the computer, has been reached some households will resist upgrading and changing the system even when they themselves recognise that they may be losing work as a consequence. The second is the sense in which existing patterns of use, especially gendered and aged patterns of use within a given household, will define how a newly acquired technology will be used (Rogge and Jensen...). Once again we are suggesting that the particular characteristics of a household's culture - its moral economy - defines how existing ICTs are used, how new ICTs are received, as well as offering the basis for any resistance to change that accompanies their introduction and the activities that are associated with that introduction.

In this context one key question is, therefore, to what extent the use of ICTs for work has effects on their use elsewhere.

9.1. The Telephone

9.1.1. Preliminary Observations

The telephone is, together with the computer, the core technology for the conduct of teleworking. The introduction of teleworking has perhaps the most significant consequences for the use and status of this ICT since the telephone has already established itself as a domestic technology with a clearly defined status and function within the household. The issue is both technological and social. As a technology the telephone can expand, with teleworking, through multiplication or extension. As a social object the telephone is the focus of, and quite literally constructed by, its patterns of use, particularly across gender and age, and through any reorientations of the conflicts surrounding that use.

A few preliminary observations about the phone need to be made before discussing the specific implications of telework. The first is that the telephone is, in most households, a technology that does have a particular status. It is often invisible in use, a point reflected in the fact that some interviewees did not register it as a technology. It is often taken for granted. It is highly gendered. Women use it in distinctly social ways to manage family and friendship networks (cf. Moyal...). In our research, for example, Bridget Foster described her daily local phone calls to her network of female friends:

Bridget Foster: '(To) find out who's having a nervous breakdown today.'

Men can be reluctant to answer it and equally reluctant to chat or gossip, seeing the phone in the home as part of the domestic sphere and therefore their partner's responsibility (FN previous Brunel work). In the current research, this was exemplified by Dennis Simons, Robert Gloster and Malcolm Knight.

Malcolm Knight: 'I've never been very good at talking on the phone. I just think small talk on the phone is a strange way to spend you time.'

Hence, one question to ask about the effect of teleworking concerns how the transformation of the domestic telephone into a work technology (as it was earlier this century - De Sola Pool, 1977) may involve its re-gendering if the teleworker is a man.

The second point concerns the individualisation of phones. To date, the phone has been individualised at two levels. The first concerns the cordless phone, where this handset becomes a personal possession of one (or more) household member (which has parallels with the fate of some remote controls of TV sets). For example, in the Brown household, Clare was the only one who used their cordless - Roger was not particularly interested in making calls. In the Foster household, editor John laid claim to this technology because of his work, while Bridget observed that she rarely had chance to get her '*sticky fingers*' on it.

The other form of individualisation occurs where extra lines have become the sole possession of one or more people in the household. In the case of teleworking, this usually means the business line. But we noted earlier how the Rahman household had solved some of the conflicts over the phone by hiring an extra line for the children. However, until personal telephones appear, there are limits to the extent which this ICT can be personalised: even when there are numerous extensions in a household, multiple handsets do not offer multiple access to multiple lines.

Tensions between adult partners over the financial costs incurred through phone use were present in several of our case studies, but were often muted in interviews. For example, the Lockwoods 'joked' about Angela's long social calls to her sister in Sweden - but clearly the expense was something of an issue. And in the Knight household, after Malcolm noted how Ruth could spend hours on the phone he added that itemised bills were the '*best thing that ever happened to the telephone*'. Ruth commented that she had '*been good*' in terms of resisting telephoning her family for a while, but also said.

Ruth Knight: 'I'm naughty really. Only if I'm ringing family do I try to ring after six. If I'm doing local calls, I don't really care when I use the phone, I must admit. I probably would be if I was paying the phone bill.'

The question of phone bills was even more explicit in households with teenagers. Before they solved the problem by buying their children their own phone line, the Rahmans described some of the tensions raised by the teenage children's use of the phone.

Rizwan Rahman: 'My telephone bill went up from seventy pounds a quarter to about two hundred and fifty a quarter and this would be before we started our business.'

LH: 'Did you ask them to make less phone calls?'

Kay Rahman: 'Oh yes we did, didn't we?'

Rizwan Rahman: 'Screamed and shouted (laughter) Tried moral persuasion. Threats, you know.'

Kay Rahman: 'Do you remember you went to a day school on Saturday once and somebody actually complained in front of anybody else to say that they couldn't get through to their tutor because he was always on the telephone? It was so embarrassing because it was the children who were on the phone.'

LH: 'Who were they phoning?'

Kay Rahman: 'Their friends. All local calls. That's why it was such an amazing....to get a bill over two hundred and twenty pounds on local calls was just amazing.'

Possible tensions were also well illustrated in the case of the King household. These were exacerbated when Bob was made redundant and became even concerned about domestic finances at about the same time as he started teleworking. He described his dramatic intervention to curb his daughter's use of the phone.

Bob King: 'I took (her phone) apart and took all the buttons out so she can receive calls but she can't phone from it. If she wants to make a call, she's got to use one of our phones.'

LH: 'Why was that, why did you do that?'

Bob King: 'To stop her using the phone because it was just getting ridiculous because we have an itemised phone bill which even in the cheap times...I mean her phone conversations were lasting two hours. It wasn't too bad actually. It was about 50p. I was surprised. But I just had to say sorry... well it was partly tied up with me losing my job, wasn't it? We said we've got to cut back and just said sorry that's enough. We were even talking about getting rid of some of the phones or hiding them. But you know that's impractical really because I don't want to rush around all over the place looking for the telephones. I mean, if it rings you want to answer the thing.'

LH: 'Right. But, that's quite a strong measure to actually take the buttons out of the phone to alter it. Couldn't you arrange it another way by sort of persuading her?'

Bob King: 'Well it sounds very drastic....'

Valerie King: 'Oh it was quite amicable really. It was quite amicable.'

Bob King: 'It was a ten quid phone that had already gone. ...when you dialled you didn't get the right number. So it was the duff phone that she had there. And I don't know what made me do it. I just, I mean literally a couple of screws and the whole panel came out and I gave it back to her and I said "Well sorry. It's part of the economy drive". It was done as part of the time when I was made redundant so it might have had something to do with the way I was feeling at the time. That, yes, we had talked about cutting down the phone bill but it didn't seem to make much odds so I suppose it was a slightly draconian measure to say "Well if you don't stop making the calls..." I said 'I'm not going to take the phone. I understand you want to have private phone conversations but you've got to understand that you can't sit there on the phone all the time'.'

However, that attempt at control was contested. Both parents recognised regulating usage by forcing their daughter to use phone in spaces where she could be monitored had only been partially successful - their daughter has found ways around it.

Valerie King: 'Sometimes she gets them to phone her.'

Bob King: '(And) She phones them up and puts it on hold and then goes and takes it on her phone, because I mean you can press the hold button and then go and put the phone down and go and pick it up somewhere else. So she can use it on her (phone).'

Meanwhile, Clare explained why the Browns had decided not to relocate the phone in the hallway when they moved in.

Clare Brown: 'It's to stop children getting comfortable. Wasn't that the theory behind it?'

Robin Brown: 'Yes.'

Clare Brown: 'But it's amazing how they get themselves comfortable down there. Have you seen the latest advertisement for BT where the girl gets a cushion and a pile of sandwiches and... I think it's a dreadful advert. It really encourages teenagers to make themselves comfortable and sit for hours on end. You'll have to watch out for that one.'

What for the parents is an issue of cost, can for the children be an issue of privacy. The King case was exceptional in that usually only the adults had the privacy of a telephone extension in a bedroom. Of course, cordless phones enabled that privacy to be redefined, as exemplified in the Townsend household, where Emma and Jonathan were wealthy enough not to be concerned about phone bills and believed in making the full use of their technologies.

Jonathan Townsend: 'If it's a call for one of the kids, you just take in the phone and give them the phone, you know, wherever they are, usually in their room. "Here's a call for you"'.

Emma Townsend: 'Or if it's one of their friends, I just put it outside their door and shout at them.'

Nor was the option of privacy merely a gift from the parents: their teenage children were quite ready to use the technology to create their own personal space.

Jonathan Townsend: 'They take one of the cordless phones and then creep off to their room or onto the stairs or somewhere like that.'

Emma Townsend: 'And then if you come into the room, they go out of the room.'

In contrast, Clare Brown was so concerned about control of the phone costs, that her children were denied access to the cordless handset because that would have enabled them to circumvent her monitoring their calls,

Clare Brown: 'Well I've tended to hide it these days. Well you wouldn't know who's making a phone call or where they are, and you might be in there watching a television programme only to come out and find that they've been on the phone for the last hour. I mean you're not aware of what everybody's doing, because the children are up in their rooms or they're having a shower, and you might settle to do something. But if they're there [in the hall], you know what's going on. It sounds terrible I know but it's just general family life.'

Finally, the cost issue can also be mixed with question of whom household members can legitimately call. For instance, when itemised billing was introduced, Peter and Katherine Dennehy discovered that chat lines had been used on the afternoons when they went out shopping. On checking out the number on the bill, they found that their elder son had been phoning sex lines,

Peter Dennehy: 'We didn't mention it to him but we made it pretty obvious that we knew. He was saying it must have been one of the guests in the house, but we were pretty certain. We noticed the calls all stopped then, when he realised that we could check. So I suppose he's just a teenager who likes to sort of experiment with these things.'

A second set of issues around the phone concern the intrusion into the private domestic world which unexpected or unwelcome calls generate (Silverstone and Morley, 1990). For instance:

Sian Brennan: ' Sometimes I'll get an evening when half the night seems to go because I get a couple of phone calls and he gets a couple of phone calls. I'm quite glad when he goes on the machine (micro) because he turns the phone off. I just never seem to get on playing with Freya so I don't like the phone on all the time. I find it intrusive and I quite often just plug it out.'

LH: *'Well, how do other people respond to this?'*

Sian Brennan: *'They get irritated. My sister does, yes. But I think they know now if it's engaged. Also we have a clear pattern so they know when they can ring. So we've trained other people into our pattern of work, I think people allow phones to run their lives too much and I don't intend to let it do so if I can avoid it. I spend a lot of time on the phone at work and that's fine, that's work. But I don't socially choose to have the phone going at all times.'*

Sian was equally unenthusiastic about answerphones: *'It just means you've got to ring people back all the time.'* In other words, she did not simply want to time-shift communication to a more suitable time. Sian did not want to encourage too much communication at all in her social time.

In the Gloster household, Robert explained how he actually unplugged the phone at times to stop its intrusion.

Robert Gloster: *'Because I'm not bothered about speaking to anybody, to be honest. Because people always phone up when we're having tea or something like that or we've managed to get Bruce to sleep. Having a quiet sit down with our feet up or something and people phone up. So I went through a phase of unplugging the thing.'*

The Simons household also showed some ambivalence towards the intrusiveness of the phone. Diana reflected on their initial resistance to the idea of getting a phone at all. That explanation itself indicated some of the general values shared in this household.

Diana Simons: *'We quite enjoyed not being on the phone. Because every time I start doing something here, the phone rings and it drives me potty. It was more inconvenient for other people that we were not on. They said "I wish you'd go on the phone because we tried to get in touch with you and we can't". We didn't have a problem other than that other people had the problem not being able to contact us, but we quite enjoyed not being on the phone. We do have quite a few friends, but we very much enjoy our own company so we don't need to.... Some people need to go on holiday with someone else and they need to go to a restaurant or to a pub with someone else, and we don't particularly need to do that, although it is nice to do it occasionally. Some people can't go out without going with someone else, but we can do that. So it didn't bother us that people couldn't contact us. We thought "We'll contact the outside world when we want to do". So we didn't bother. And, of course, when we came here the phone was already in place. And now I don't know how I did without it because I'm always on the phone.'*

In fact, whereas many people would see having to use public phones as a hassle, Robin Brown stressed that when he used to use them at least he had control over the communication.

Robin Brown: *'It's very disturbing, isn't it, when you get in a bath and then the phone rings or you're trying to do something. The phone always seems to ring at*

inconvenient times, sitting down for meals and, what else? In the middle of a television programme. ...Before we had the phone I mean obviously if you haven't got a phone you have to make calls and, of course, you do them at your convenience. Whereas when you've got your own phone you get calls at other people's convenience which doesn't always suit you, does it?'

Although the acquisition of answerphones for telework are discussed below, they were in fact bought prior to teleworking by the Lawson household precisely to prevent the intrusion of social calls.

Kenneth Lawson: 'Because, when the children go to sleep we sit down and relax and I don't want to have to... I mean, I don't make many phone calls. I don't actually make many phone calls from work. I'm not a great phone person and the last thing I could stand is like sitting down with my meal and bottle of wine or watching something, and having to...'

Kay Lawson: 'People always seem to phone up in the evening and we just don't answer the phone.'

Kenneth Lawson: 'I don't want to speak to them. I just want that time to be private.'

Kay Lawson: 'Just leave it on the answerphone. Yes, so I think basically, once we'd discovered answerphones, we realised they were a means of filtering calls from the outside world. It meant that we could select who we wanted to speak to and who we wanted to call back. If there's anything urgent, you can always call back.'

Nor was that the only technological solution to intrusion. Bob King explains his original motivation for hiring a call-barring service and then how he had used this to deal with the disruption from incoming calls.

Bob King: 'We've got call barring on this phone because we wanted to stop people making international calls without permission. We had had a lodger and we've had students and obviously they're in the house when you're not in the house. We had a bad experience years ago with an au pair. I think she was on the phone to Barcelona most of the time and we had this horrendous phone bill when she left... (Anyway) we had a student staying and (the incoming calls for her) got to a point where it drove me up the wall. I had programmed a couple of buttons so I can tell it to stop taking any calls, which I did one night. But I've had bad consequences ...the lady up the road wanted my daughter to baby-sit and couldn't bloody get through. I was trying to cook and every time I picked up the pan or a knife, the bloody phone went and it was for this Jennifer, the student, "Hello, is Jennifer there? ". So I'm afraid, because I was fed up with all, fielding calls about every two seconds, I just pressed the button that says incoming calls are barred. I thought "Well that'll give me peace and quiet for half an hour" and then forgot to turn it off.'

9.1.2. The Telephone and Telework: New Pressures

The introduction of telework and the new demands on the phone which it generates can significantly affect that ways in which the telephone is used in households. First,

teleworking increases the pressure on the domestic phone system: conflicts over its use intensify.

For example, in the case of the Kings cited above, telework had a bearing on Bob's reaction to his daughter's use in that her calls were a 'nuisance' for his business: people had told him that they could not get through to him once his daughter got home from school. In addition, incoming calls for her became more intrusive since he now felt even more obliged to answer them.

Bob King: We seem to be a part telephone answering service upstairs as well...from about half past three it's usually for Susie. All her friends or friends of Peter. So it's a bit of a pain. But you can't not answer it because it could be a client.'

In fact, one of the main reasons for eventually introducing the business line was partly to avoid such problems and further conflict with his daughter.

Bob King: 'It was cheaper than the arguments'.

Amongst teleworkers who were employees, their firms often installed and financed separate business lines. Amongst the self-employed, this was more likely to happen at the professional end of the spectrum. In the Lockwood household, systems analyst Angela and Mark had a home line purely for social calls, her two business lines for work (one for the fax), and a fourth separate line for the extra business they were running on the side: an agency for matching teachers to vacancies. They discussed the advantage of having separate lines for impression management - by pointing to the problems they would have if they just used their home line for the agency.

Mark Lockwood: 'I wouldn't know how to answer it. If someone was phoning up wanting to speak about the business, you don't want to answer it and say "Hi, this is Angela" or Martin going "What?" as he usually does. He's got a wonderful telephone manner; "What do you want?"'

Angela Lockwood: "'Why do you want to speak to her!'"

Mark Lockwood: "'You can't'"

Apart from such technological solutions to the telecoms issues raised by teleworking, we noted earlier how there were also social ones: new rules about telephone use were sometimes negotiated. For example, in the Dennehy household, the demands on the phone came not just from household members and Katherine's telework running a childcare agency. The Dennehys also ran a bed and breakfast business, where potential guests would often want to reserve a place by phone. Hence, there was a pressure for both visitors and children to keep calls short so as not to block the line on which both her agency work and the bed and breakfast work depended.

Often new rules concern impression management - which also requires new skills. For instance, in several of our teleworking households people besides the teleworker had to learn how to take messages and what type of response to give. Sometimes there were rules about not answering various lines. For example, in the Rahman household, the

children had not been allowed to answer the phone because of the impression they might create

Kay Rahman: 'You'd get Paul answering the phone "Yeah".'

Rizwan Rahman: 'Sounding like Dell boy from "Only Fools and Horses"!''

And in the Foster household the children were not allowed to answer it during business hours, nor make calls without permission.

John Foster: 'In case someone's on the phone already and if you've got kids picking it up and starting shouting, you know, "I'm just ringing Russell", it doesn't quite create the right impression when you're talking to the American Film Marketing Association.'

When she had been a child, Anne Reid and all her family had from an earlier age been expected to answer the phone properly and take messages for her father, the local vicar. Sarah: *'We were always assumed to be helpers.'* She carried on that process in relation to Sam's consultancy telework:

Anne Reid: 'When he's out he tends to leave his answerphone on up there but if I'm up there I'll answer it because I think it sounds better to have someone answer it rather than an answerphone. I mean, I don't do anything different. All I do is usually take a message or can tell them how long it will be 'til he gets back to them. But I just think it's a better image. Especially if people don't know the set-up, they might actually think he had a sort of posh sounding secretary on the other end of the line. I put on my best telephone voice.'

Teleworkers also used other strategies to cope with some of the problems thrown up by the phone. When working at home. Valerie King had at times found the constant phone calls very disruptive to her work. She recalled solution, which was far from Bob's preference for technological fixes.

Valerie King: 'I just used to want to think and not be interrupted at all. So I used to, just to take the phone was off the hook...it makes an uncomfortable noise for about ten minutes.'

Bob King: 'First of all it tells you to "please replace the handset." If you leave it off the hook for a bit longer, it'll actually scream at you.'

Valerie King: 'But I won't let it defeat me. I actually bury it under the cushions until they give up and they do eventually.'

9.1.3. The Telephone and Telework: Control and Impression Management.

The answerphone was usually the most significant enhancement to the telephone, especially from the point of view of managing the public world. While it had the practical benefit of enabling teleworkers to make sure that no calls were lost, its other significant role was to control communication.

In our households, several teleworkers used the answerphone to filter calls: listening to the message as it came in and deciding whether to answer it there and then. The answerphone enabled them to time-shift messages - social or work ones - so that they would not disturb their current activity, be that writing a report or dealing with children. And especially in the latter case, the answerphone enabled teleworkers to control their image: it disguised their location and gave them the opportunity to distance themselves from the domestic setting which threatened to intrude both as a result of the phone being answered by another member of the family or through extraneous noise or disturbance. Lastly, Sheila Clark reflected on how it enabled her at times to also control of her workload.

Sheila Clark: 'Sometimes I feel like not answering the phone and I've done that. I've sometimes put the answering machine on if I know people are going to phone from work...Just before Christmas when there was a lot of work, then I needed to get things done myself...going out shopping or something, and if they phone and get me, then I don't like to say "no". So I would just stick the machine on and go out...they've got other girls in the pool (who the work would be passed onto).'

Therefore, the answerphone functioned as a device both for impression management and boundary maintenance. The answerphone also obviated, to some degree, the need for the rest of the household to learn additional answering skills which are required once the phone shifted its position from the domestic to the teleworking setting.

However, it is also worth noting two points that were never actually articulated by those taking part in our research. First, the arrival of the answerphone meant that all calls were now recorded, including those which were meant for other members of the household. Second, it implied that the public face of the household which the answerphone message created was that defined by the teleworker redefining the home, for all those who call, as a place of work.

The answerphone was not the only means by which teleworkers could achieve some of the forms of control listed above. For example, research Kay Lawson used answering agencies as a more focused way for impression management, using a personal intermediary to protect them from the intrusion of home as well as to offer the illusion of an office (secretary) based working environment. And programmer Sarah Moore used a VOX system whereby the functionality of the answerphone was located at work: she phoned in to check for any messages.

As an example of another technical facility permitting some control, the Fosters pointed to the usefulness of the mute option on their handset.

John Foster: 'You can just press that and the person at the other end can't hear what's going on. So, if you want to go and find someone, you can just press that and start shouting and they don't hear you shouting. It's a bit more business-like I suppose for business calls.'

Bridget Foster: 'And also if you're up in the bedroom and have to come down to the kitchen down here, you can hear boom, boom, boom down the stairs and it just sounds a little bit better.'

9.1.4. The Telephone and Telework: Modems and Faxes

In general, modems and faxes provide the basis for a communication network, consistent or intermittent, which for certain kinds of telework might seem to be essential. But most telework is not dependent on a network for its viability. In practice, very few of our teleworkers used modems. They were most often to be found in the homes of teleworking employees where data or word-process documents were sent to or accessed from a central office - e.g. in the case of programmer Malcolm Knight, and systems analyst Angela Lockwood.

Research Kay Lawson, self-employed but working for one company, used her modem to access US databases when necessary; editor John Foster used his to send copy to co-workers; Emma Townsend used hers to test out the communications software which she was developing; and Peter Brennan used his modem to carry out his work mediating computer conferences. But modems found very little application outside of work - none of our sample had any interest in sending non-work E-Mail or accessing non-work bulletin boards. Within work, Angela Lockwood sometimes sent social E-Mail messages and programmer manager Lyn Gloster tracked a few of the work bulletin boards. Only Gordon Taylor, running a computer helpline, thought joining Compuserve might be interesting, but found the cost prohibitive.

The self-employed were more likely to use faxes, although some employees, such as systems analysts Angela Lockwood and executive Jonathan Townsend, also had them. In our particular sample, half of those with faxes had a dedicated line, half did not. As Sam and Anne Reid pointed out, faxes were not just a functional means of transmitting certain types of message: such messages had a better chance of getting through than a verbal ones.

Sam Reid: 'If you send a fax there then you know people say "Oh a fax, it must be important. We'll put that on the desk" or whatever. Log it in saying: "Fax received at.... from...."'

Anne Reid: 'Well you actually have to make a point of throwing a fax away don't you, whereas a phone message can easily just get forgotten and it disappears into thin air.'

Although bought originally for Sam's work, the Reid's fax had become more of a joint resource which Anne used for both her union work and in her job as a tourist guide.

Sam Reid: 'She likes the fax machine, she tells everybody that she's got a fax machine now so the confirmation of jobs and everything comes whizzing down the line now. I couldn't take that away now, even if I wanted to. she's wedded to it.'

And in her interview, Anne pointed out, once again, that it was not just the functionality of the fax which was important - but also the image it facilitated:

Anne Reid: 'I think the whole thing (including having the fax)- it looks more professional. A couple of firms said to me "Oh we do like guides with faxes", because not many of us have got them. It does tend to be people like me who've got somebody else in the house that needs one. It would be an extravagance to have one just for you as a guide. It wouldn't be worth it. But they do like people who have got faxes.'

A few of the teleworkers in the study had started to use their faxes for non-work purposes. For example, publisher Bruce Lang received faxed articles for the vintage car magazine which he edited. But it was executive Jonathan Townsend, who was the most sophisticated user, reflecting his work in the telecommunications industry. Of all his technologies he '*couldn't live without a fax*'. The fax was so vital in large part because Jonathan could control communication. As with answerphone messages, he could read his faxes at time of his choice.

Jonathan had also developed his own procedures for efficiently using the fax. For example, when arranging times for work meetings, he would often write down three possible times and ask the person being contacted to simply tick one. This saved time trying to get through to the person on the phone and then checking diaries while both were tied up on the phone line.

Jonathan was also quite willing to use fax for non-work purposes. For example, 3 years ago when he had been based in the US for a while, he had arranged for his son to fax some homework over to him so that he could help out. Nowadays the children used the fax mainly as a photocopier - a pattern which also occurred in some other households.

The fax was also used for various forms of domestic contact with the outside world.

Jonathan Townsend: 'One of our banks irritated me recently and sent me a letter and I just wrote a rude comment on it and faxed it back to them. That shut them up. So, you know, if you just want to get something done and out of the way and, if the organisation which has written to you has a fax number, then I'll fax it back because otherwise you have to keep writing letters and putting it in an envelope and put a stamp on it and post it and so on.'

And Jonathan had also tried to encourage his children to use it more, with limited success so far:

Jonathan Townsend: 'Once or twice I've suggested to Giles that he faxes something. You know, when he was talking with Trinity, I said 'Well, just fax it. They'll have a fax there'. But he didn't want to do that because he said, you know, if a potential student sends them a fax, they might think it's a bit of a posing kind of thing.'

Although most of our households did not use the fax for social purposes, the Perry children occasionally used typist Jill's machine to send messages to their grandparents abroad, and both the Robinsons and Fosters thought that they might use their fax for social purposes if and when more friends and relatives acquired them.

9.1.5. The Telephone and Telework: The Cordless Phone

Turning to cordless phone technology, abstractor Clare Brown had bought her cordless so that she could have a phone with her at a time when she worked in the caravan at the bottom of the garden. When she subsequently moved in-doors, she pointed out how the technology facilitated impression management for work, but also gave her privacy in making personal calls.

Clare Brown: 'It means that you can get out of the way if you want to have a conversation because the phone's in the hallway and if people are coming backwards and forwards they don't want to be intimidated if you've got a business call. So you can take the cordless phone in here and sit down at the desk with the relevant papers and have a semi-private call. (Or) for example, when I'm phoning one of the family over a problem that I don't particularly want the children to hear.'

Typist Sheila Clark was another teleworker who bought a cordless for work purposes, but then discovered its other benefits: especially for monitoring her children:

Sheila Clark: Because with the kids around usually you're on the phone and that's when they decide to do all the things they are not meant to. But with (the cordless) you can walk out after them and still be on the phone, you know, so it's handy.

A similar sentiment was expressed by programmer Sarah Moore. Although she had not been supplied with the cordless phone by her firm, teleworking had an indirect bearing upon the Moores' decision to buy a cordless handset - she then no longer had to run down to home phone line when working upstairs. Commenting again on the children:

Sarah Moore: 'In fact, I've found that phone incredibly useful with the kids because normally they misbehave because you're sort of stationary (on the phone in the hall)... I've not necessarily been taken away from them. (Whereas)if I'm just sat.... they're playing and I'm just sat here, it's just my presence. It's not the fact that I'm going to join in sort of thing. (But) If I go out (to the phone), they follow me out and start whinging in the hall. (With the cordless) I've just found they don't notice you're on the phone so much if you're sort of just....'

Joseph Moore; 'Wandering around after them.'

It also had other benefits, although Joseph joked that this might push the phone bill up.

Sarah Moore: 'Oh I'm sure it will because you sit here in an evening and you can like keep an eye on the telly, you know, if you're trying to follow something like the tennis or something, you can just sit here and chat can't you.'

9.1.6. The Telephone and Telework: Mobile Phones

Lastly, a few, but only a few, teleworkers had acquired mobile phones for their telework - and these were used mainly for work. While far more showed an interest in mobile technology, sometimes for reasons such as being able to phone home when stuck in traffic, usually the expense was still too high to justify a purchase (NB interviews took

place prior to the launch of cheaper mobile phone connections aimed at a domestic market). But at least one interviewee observed that such phones still had an status image which went beyond their function. Publisher Bruce Lang had plans to buy one.

Bruce Lang: 'Mostly it's for the time that I now spend in the car. When you're in a car and the traffic conditions are hard to ascertain and you've got a meeting in London or whatever. And I'm fed up with people saying "Or you can get me on my mobile". And being someone who loves to keep up with the Jones...'

LH: 'Oh you feel you've been left behind on this.'

Bruce Lang: 'I feel I've been left behind, yes.'

Susan Lang: 'Bruce's not joking actually. He was up there leading the Jones' on technology, aren't you? It's been a passion. I'm surprised the home gym upstairs isn't computerised.'

9.2. The Computer

9.2.1. Preliminary Observations

Whereas the telephone has long been established as a domestic technology, and therefore subject to redefinition and extension once teleworking was introduced into a household, the computer is much less established. Its more recent history as a technology for the home is one of only partial domestication. In Britain the home computer appeared, and was embraced by many households, at a time of a major political and commercial campaign designed to transform British society into an information society (Skinner, 1992). For many, however, the computer appeared to be functionless, a 'self-referential' machine (Haddon, 1988) that was good for very little except learning about computing. It was subject to competing definitions and competing claims among those who bought and used it, both institutionally and within families and households: the key to social mobility through the acquisition of new high-tech skills on the one hand, and an increasingly addictive games playing machine on the other.

Yet as schools and workplaces have provided the basis for a more functional and plausible computer culture, the computer and the games console have found a place in an increasing number of households. A number of the teleworking households in this study had some kind of computer in the home before teleworking began. Almost all had had experience of the computer either at home or at work before beginning their teleworking. Yet, once again, the introduction of the computer in the home as a dedicated work machine was not without consequence for the ways in which it was defined and used in the household as whole. Once again we can trace these consequences at two levels: both technologically and symbolically.

9.2.2. The Computer and Telework: Acquisition

Teleworking provided the computer with an identity in the household. It can also be said that the computer provided those who used it as teleworkers with an identity.

In relation to the first, teleworking placed the computer at the centre of a more or less clearly defined work culture. Equally, where the computer was placed, the rules of access, and the degree of skill and range of function that it commanded, were all material in the construction of telework as a legitimate and vital activity in the household.

Economic considerations especially could limit the extent to which computer technologies were upgraded or extended. For example, graphic designer Bob King was something of an early and enthusiastic adopter of technology. Although a certain amount of his work was still done by hand, he had acquired an Elonex, a laser printer and a small hand scanner. However, in his line of work, an Apple Mac would have been far more useful, but he was not earning enough to afford this.

Priorities were a related factor inhibiting upgrading. We saw earlier how accountant Joyce Miller lost one of her main clients through the inadequacy of her hardware - but had been unwilling to upgrade because of using family resources on her children's private education. And the Clarks were only grudgingly content with the relatively low of performance offered by their Amstrad machine. Typist Sheila thought that she would like to upgrade, both to a faster machine and one which was IBM compatible since her clients were now asking for electronic as well as hard copy. So she too could envisage losing business. Yet, the Clarks were unlikely to take this path, as a result of their preference for spending their limited resources on television and entertainment based technologies (to be discussed later).

On the other hand, some of those at the professional end of teleworking could sometimes invest up-front in a range of technology that enabled them more or less to reproduce the level of technological support they were used to in office-based employment. Sometimes this was because funding was no problem - as with the fairly wealthy Townsend household. Sometimes it represented greater risk taking: as with consultant Sam Reid and publisher Bruce Lang. Both these cases illustrated a point made regarding the status of telework: how such risk-taking was more likely to be associated with males, and could involve risking the family income. While Sam was setting up and buying his systems, Anne was the sole earner. And after Bruce initially lost his managing director's post, the Lang's were in huge debt because of their high mortgage. Bruce managed to stay temporarily solvent by selling some of his vintage cars, but for some months the main regular funds that supported all the household on a day-to-day basis came entirely from Susan's work. Such was his desire to find a form of telework that restored his previous income, which he soon did, that Bruce was willing to risk spending several thousand pounds on equipment.

9.2.3. The Computer and Telework: Teleworkers' Non-Work Usage

By no means all computers were used by teleworkers for applications besides work. The fact that typesetter Diana Simons had no printer with the micro supplied by her client was an immediate barrier. But it was not the ultimate one. She had considered buying her own printer on the grounds mainly that it would be useful to word-process some correspondence: for example, when complaining to the local council. However, she was worried about *'messing up*, the typesetting program installed by her client. She also recognised that accounts software would be useful for her role as local Women's Guild

treasurer. But she admitted that she would not know how to go about finding the right software. And again, she feared that she might inadvertently upset the existing software.

Lacking the confidence, or computer knowledges and skills were not the only barriers to using the computer for non-work purposes. The Moores, both programmers, would not have bought a micro for themselves if Sheila had not been issued one for work. And Sheila had no interest in using the machine outside of work. Nor did programmer manager Lyn Gloster.

Lyn Gloster: 'I don't use it for anything serious, no. Like Robert was saying before, I tend to think that when I've been on that terminal for most of the day I don't want to be involved.'

However, a majority of our sample did manage to use the micro for some routine household administration - mainly, as in the case of researcher Kay Lawson, for word-processing official correspondence. Sometimes this included applications on behalf of those outside the home, as with editor John Foster writing school reports in his capacity as a school governor or accountant Joyce Miller producing a newsletter for the local mothers and toddlers group. Book distributor Sally Robinson had used her microcomputer to type newsletters for the local Imperial Cancer Research group which she attended and for the local toddlers group. And Doris Taylor commented on how computer helpline operator Dave had used his scanner:

Doris Taylor: You scanned in a couple of things, didn't you. You did that verse of the calendar for Mavis..and a couple of other pictures so that we can take them to people.'

Consultant Sam Reid commented on his use:

Sam Reid: 'I did some tickets for a hockey club. I've organised the last two or three karaoke/disco-ey-type things, and I just knock the tickets up upstairs and print them off. When Kate was born, I scanned a picture of her face in and blew it up and that was the, you know, "she's arrived". (And) at church on Sunday, I suggested or offered to do the weekly newsheets which has gone by the board because the guy who used to do it is no longer doing it. It doesn't look like a big job. They tend to be sort of hymns and songs which I could put into the computer quite easily. And then just, I want number 1, number 47, number 36, just pop them all together and shove them on the page and print them off.'

Few attempted any more advanced computerisation of household management beyond letter writing, most not thinking it was worthwhile to handle such things as household accounts on the micro. However, there were exceptions. For example, helpline operator Gordon Taylor had written a program to calculate mortgage payments - partly for his own use, partly for experimentation.

Before teleworking, when the Jonathan and Emma Townsend first bought one of the Amstrad CPC series of micros, software designer Emma had written a program to choose random recipes and hence provide some variation in their meals. In fact, this proved to be impractical since she never used to fancy the ones chosen. Another program predicted all

the quantities of food she would need to buy based on the meals chosen for the week. In both cases, it had proved easier to achieve these goals without the micro. But coming from a background programming mainframe computers, Emma wanted to gain some familiarity with micros and so although she was seeing whether their applications were really 'useful' these tasks also gave her some purpose for experimenting with the machine.

Even before teleworking, designer Bob King had tried to design a spreadsheet for his household accounts. He had become very concerned about the need to monitor his business accounts since his last business went bankrupt several years earlier. Until his redundancy and teleworking, which coincided with his wife's move to full-time employment, Bob had always been the main earner and was still responsible for organising family finances. The family's economic situation had for a long time been very 'tight' in the sense that income just covered the bills leaving little disposable income to spend. So monitoring the family finances was by no means a hobby. It had a serious side. Indeed, when he had been made redundant, he had spent some time working out scenarios with pen and paper to make sure the family could cope.

In practice, it was proving difficult to set up a home accounting system which could fit on a spreadsheet.

Bob King: 'You get so frustrated that you think "Oh I don't know, is it worth it?" The amount of effort you've got to put in to get the computer to do something. It's like that old Goons joke about this machine does the work of two men and it takes three men to do it. I mean it sounds stupid, but it's true. It often takes you three times longer than doing it... so there are times when you think "Oh well, it's just not worth bothering".'

In this case, Bob's experience of household accounts had some parallels with the way he researched new purchases - especially technology ones. He always spent some considerable time reading about equipment, comparing prices and features etc. But as with the accounts, he sometimes despaired whether all the effort was really worthwhile when it turned out that there was sometimes no great advantage from all this research. The general point to draw out, though, is to show that although computerising the household accounts may seem like the frivolous interest of stereotypical computer hobbyist, his interest was based in a very serious concern and his decision to experiment with his the computer reflected a much broader orientation whereby Bob was willing to invest effort if there was a chance that it might pay off in the longer run.

9.2.4. The Computer and Telework: Exploring the Micro

A number of teleworkers in our sample - like Bob King or consultant and management trainer Sam Reid - were willing to spend time exploring their hard- and software to see what effects they could achieve. Nor, despite some stereotypes, was this behaviour unique to males. Programmer Emma Townsend, as we have seen, had this approach. And several women who word-processed, such as researcher Kay Lawson, took an interest and pleasure in experimenting with their facilities.

Kay Lawson: 'Every time I use it to do a document, I mean, to me, I'm a bit of a perfectionist in that I'll write my document and I'll want to set it out how I want it.'

I always spend extra time, and I know it's needless time, trying to find out how to set it out in the best possible way.'

Kenneth Lawson: 'But that's work.'

Kay Lawson: 'I know, but what I'm saying is that it's, to me that's the bit of work which is the icing on the cake.'

Kenneth Lawson: 'But all that is is that's deriving pleasure from work.'

Kay Lawson: 'Yeah, it is. I like that part of it.'

Admittedly, 'playing with computer', as males were more likely to put it, could distract them from more pressing work. However, none of these were hobbyists in the sense that they looked at every aspect of computing. This exploration was much more contained, relating to how knowledge of the technology might have positive spin-off for their work. They might do the exceptional 'fun' thing, as in the case of editor John Foster who designed a wanted poster for the cat who kept pinching items from the family washing line. But much of the exploration, while being enjoyable, had to be justified to themselves in relation to their work.

Nevertheless, such justifications were contested and did, in the case of male teleworkers, sometimes create a tension with their partners. Anne Reid complained about husband Simon:

Anne Reid: 'He's quite happy to go up and fiddle about and play around with new design potential and, you know, all these wonderful things. I mean, he drives me mad sometimes because he can spend hours on there just creating some tiny little thing, you know, and trying it out and trying all the different buttons and seeing what he hasn't yet discovered about this new piece of software or something.'

Some of these tensions came out most clearly during the joint interview between the Valerie and Bob King. Although Valerie was somewhat sympathetic to Bob's attempt to computerise the household accounts, she remained to be convinced. This led them into a revealing argument about his 'playing' with computers.

Valerie King: 'It's interesting though because I think the thing is he does spend a lot of time fiddling round and it is an exploration which I say I haven't got the time and it's because I don't allow myself to have the time and he, I think you do allow yourself, it's part of your life to explore the software. But I just want to use the bloody thing. I just want to use it.'

Bob King: 'We discussed this years ago and you went off...'

Valerie King: 'But I have gardens and...'

Bob King: 'Which is a relaxation.'

Valerie King: 'Yes it is, it is a relaxation, yes.'

Bob King 'But with you, you went and you did MAs and did Open University.'

Valerie King: 'Yeah, and actually an MA is a relaxation, yes.'

Bob King: 'You did all these theory things and I never did. I left college, did my career... I'm talking before. If you like, it's a kind of learning hobby.'

Valerie King: 'That's true, that's true, yeah. No that's true, that's right.'

Bob King: 'I don't go to evening classes to learn about computers because I learn more by just sitting there doing it. I actually enjoy learning things and learning new skills and but OK they're centred on this one machine, but there's so much to learn.'

Here Valerie started by offering a mixed evaluation of Bob's orientation to technology: it was 'exploration' and clearly it was a very important part of his approach to technology. But it was also 'fiddling', a term which devalued the activity. She implied that he could make time for this 'leisure' which she would not have been able to justify - a familiar argument from feminists about the personal space which males can make for themselves while women are locked into more obligations and have less 'free time'. At this point, Bob reacted by saying that she could also make 'leisure' for herself, characterised as 'relaxation', through gardening.

Bob then turned her argument around by pointing out that her study itself had elements of leisure: the freedom to make personal space to follow up her own interests. Indeed, in the earlier interview, Valerie had talked of the enjoyment and satisfaction she obtained from her study. Bob felt that he had missed that opportunity: he had had to work. In fact, he had previously talked about the pressure on him to bring in the family income, how he used to worry about employment, and the sense of relief he now felt since Valerie had shouldered some of that particular burden.

In the discussion above, Bob then went on to revalue his hobby in comparison to formal education, pointing out that what he was doing was just as constructive, but merely another form of learning which suited him. The last point worth making is that clearly this discussion has been rehearsed before: not only was Valerie quick to agree to his arguments but sometimes helped him to finish them off. Yet, she was still presenting her perspective on his 'hobbyism', which suggests that she was not as entirely convinced by his arguments as it might seem from this interchange. Clearly, this discussion of technology reveals and reflects a good deal about this couple's sense of their individual personal space and time and as well as their perceptions of the situation of their partner.

9.2.5. The Computer and Telework: Expertise

Although the Kings had computers prior to telework, this household also provided an example of another process which may also occur when computers (or for that matter other equipment such as telecoms hardware) enter the home because of teleworking. The role of 'expert' may be constructed. For example, from time to time Bob clearly played the role of 'expert' on computing within the family. He had initially taught Valerie how to word-process and commented a few times that she did not use all the facilities she should

- for example, noting that she should make use of software which organised files, At one stage, he commented she '*uses it like a typewriter*' and *didn't use the technology properly*' - for example, that she did not back up files or use spelling checkers. While this did not actually lead to an overt argument, Valerie was quick to point out that she did all these things now. In sum, Bob used his skills as a form of power, here questioning the technical competence of his wife. But, while taking some of his advice, she also resisted some of his characterisations. She has learnt to do things of which he was not aware.

9.2.6. The Computer and Telework: Other Users in the Household

The process of children or partners inheriting computers as teleworkers upgrade has already been mentioned, though teleworking was not the only cause of this process. For example, the Lockwood children acquired Mark's old machine when he upgraded his micro prior to Angela's telework. The Foster household illustrated a different process. Editor John had acquired machines to assist his home-based work since microcomputer technology first became available. His children had always used John's machine, but only under strict supervision. In any case, access was limited because the micro was in constant use for work. To resolve the dilemma of demand, rather than upgrading or passing on his machine, John was about to re-acquire an old PC used by a colleague which both Bridget and children would probably share.

Certain gender differences were immediately obvious as regards. For a variety of reasons, male partners used their female partners equipment less than the female partners of male teleworkers. A few female teleworkers involved in clerical tasks, like typist Sheila Clark, typesetting Diana Simons and also abstractor Clare Brown had partners who were involved in manual occupations. These males either had little interest in the micro or lacked the skills to make use of it - although Roger Clark could help his wife out by printing off her work while she attended to other tasks. This was also true of some professional male partners: estate agent Richard Perry had neither the interest in or competence to use typist Jill's equipment. In addition, there were also sometimes anxieties around multiple use of the work machine: the above males as well as solicitor Paul Miller were wary of using the machine themselves fearing that they might upset the programs which were vital to their partner's telework. One exception was Tom Robinson who used the business's micro normally operated by Sally to keep lists of the antiquarian books he collected as a hobby.

The female partners of male teleworkers were far more likely to use of micro on an occasional basis when it was not being used for work. Usually, this meant word-processing essays, reports and letters. In effect, the computer represented for them an upgrade to a typewriter. In contrast to the husbands of the teleworkers described above, most of these wives were already competent at word-processing from their previous occupation.

There were also a few examples of use beyond word-processing and games-playing. For instance, Doris Taylor used Gordon's chess programs, typing tutor software and his software for finding the shortest routes to a given destination. And Valerie King could foresee herself using applications software relating to her interest in gardening.

Valerie King: 'I tell you what I will do one day when I'm retired. I'll get a garden design one and plot everything in the garden so that you can have the spring, summer, autumn, winter and know exactly where everything is in the garden. When you do garden design, you're meant to get a good grid and you're meant to, grid paper and sort of go and measure it and then sort of plot it out on it. But I'll do that on the screen. I would.'

As regards children's use, most of the younger children, as in the Brennan and Gloster household, were allowed access to and showed some interest in the machine - sometimes simply because it was used by the parents. These children were the first generation to grow up in a household where the computer was always present in the home. Most were allowed access to the micro, albeit often under some supervision, and either hit the keys for effect if very young, typed in letters or played with graphics software. Although we saw how typesetter Diana Simons lacked the confidence to use the machine for her own non-work purposes at the moment, she allowed her young son access.

Diana Simons: 'He shows an interest in it now...I mean a proper interest in it. Not just messing. He'll sit on me knee and he'll say "You type" and when he goes to press the buttons, he doesn't press them like a normal ordinary child would press with one finger. He goes with all the fingers together because he's seen Mummy doing it, you see.'

Diana expected to buy him a computer when he was older - in which event, he might then use for her own purposes. In the Moore household, although programmers Sarah and Joseph showed no interest in using the computer for themselves, they too were proud of their children's interest and talked about getting a computer for them when they grew older. And in the Gloster household, programmer manager Lyn and Robert had bought an Amiga for their young son after he had shown an interest in playing with his mother's work machine.

Where older teenage children were present, such as in the Lockwood, Foster and Miller households, both boys and girls were already showing an interest in word-processing some of their schoolwork. In the Dennehy household, the son was now doing all his A-level projects on the machine as well as writing letters. And in the Rahman household, Kay described her daughter's use:

Kay Rahman: 'A friend of her erstwhile boyfriend fancied himself as a writer and she would DTP his articles for him so that he could be taken more seriously by publications and he paid her to do that.'

The Kings best articulated a common sentiment concerning the value of computers for older children. They had been happy to comply with their son's request for an Amiga, considering it important for the children to have some type of micro in order to develop familiarity with computers, especially with word-processing. The Kings provided an educational justification for this, observing that in school essays were sometimes marked down if the handwriting was difficult to read - and also noting that their son had the particular problem of being slightly dyslexic. But the main point was that keyboard skills - more than computer literacy in general - would be vital for work. In fact, they were actually a little concerned that their daughter was not using the Amiga for this purpose.

Bob King: 'Because it's just a basic skill. It's like driving a car. I think Frances has made comments about how she's forgotten to use the keyboard and...it worries me that she might lose those skills. I suppose she'd pick them up quickly enough. But they're essential in any office and the people that don't understand the keyboard, can't use WordPerfect or something simple, basic stuff..you look a complete idiot these days. But it still stands you in good stead and they kind of expect people to know all these things.'

Bob valued word-processing so much that he thought that they should now be setting the children up with monitors instead of a TV set and buy them their own printer. Valerie concurred with most of these sentiments, adding that they should think about organising typing lessons for their son now that he was 14. She had already indicated to her daughter that she should now be starting to word-process all her school essays.

The Townsends best exemplify a household with a high level of competence with the technology which provided a supportive and even insistent computer-oriented culture. Their first microcomputer had actually entered the home before teleworking commenced.

Jonathan Townsend: 'We felt that Geoffrey was of an age (11) where he should start writing some decent programs and learn how to write Basic and stuff like that and Emma could play with it and Susan [who was younger] could play with it.'

Geoffrey became the main, but not sole, user, developing into the school expert. He was alone amongst the teenagers in this study who had ventured to use other applications software besides word-processing/DTP and games.

Jonathan Townsend: 'He wrote some quite elaborate basic programs. He wrote an interpreter for a language called Forth on it so it basically converted him into a computer nerd type...(Later) he did computer science and he knew far more about computing than his unfortunate computer science teacher. (Now) he wants to do a computer science degree. He is as computer competent now as most of the people who work for me who I pay huge amounts of money to. He's very, very, competent.'

LH: 'Were there signs that he had this interest when you bought the Amstrad?'

Emma Townsend: 'Oh , he was very keen, wasn't he?'

Jonathan Townsend: 'Yeah, because since the age of 7, there had been computers in the household and a common topic of conversation is computers and, you know, he knows that I was running a computer business.'

Emma Townsend: 'That's put Rebecca off totally mind you.'

Jonathan Townsend: 'Yeah. So he is, you know, the archetypal indoctrinated computer guy.'

In the Rahman household, all the children eventually learned considerable computer skills, mainly word-processing and DTP, as they became enrolled in their father's

business. Their older cousins, working in the computer industry, had supplied much of the early expertise since consultant Rizwan did not use a micro himself and researcher Kathy used her machine mainly for data analysis. The children had become involved with Rizwan's work while still at school, helping to produce the reports he wrote. However, Kathy described how one of their daughters had not participated in this way - although after finishing school she subsequently returned to work for the family business.

Kay Rahman: 'Fiona actually resisted learning anything about computers. She didn't want to be relegated to secretary. I think perhaps women have to be very careful about that sort of thing....Since she started working for us she's now using D Base. She's about to learn DTP. She's learned Wordstar very fully within a month and she doesn't now see it in the same way.'

The Brown family provided an example of a household where the children had failed to show much interest in computer technology. Abstractor Clare Brown bought the BBC in 1984, using their black and white TV as a monitor. Her rationale had been a combination of buying a machine for the children and seeing if it could help in her own work:

Clare: '(The BBC) was used in all the education establishments and the children were just coming up to an age where they were beginning to learn about computers, and I thought it would be a good combination to have one at home so they could become familiar with it in their own time, knowing that computer time at school would be limited, so I decided to get a BBC. I (also) wanted a business aspect to (the computer) and I wanted the educational side to it as well. I didn't want it just for games and they did games as well, so it seemed like a compromise.'

However, while it had proved useful for work, her children had not benefited as much from having the micro in the home as she might have hoped. One extra consideration was that her machine, though sophisticated when first bought, was now perceived as being out of date.

Clare Brown: 'They didn't take great advantage of it being there, other than playing the games but perhaps, yes, it did give them a slight edge in that they knew the various function keys and things like that. But the time that they had on computers at school was very very limited. James did copy the software to bring home and play with but it seemed to have very limited appeal. Perhaps it's just that these two are not particularly computer interested. At least it was there if they'd wanted it. My daughter's doing word processing at school and they have much more sophisticated computers and typewriters and things there. She finds the BBC antiquated and she doesn't really want to get to know to use it, so really that's passed her by because she is involved in that type of work at school - Business Studies - but prefers to use their machine.'

Once again we can point to the significance of the moral economy of the household as a key determinant of the ways in which the working culture around the computer does, or does not, extend beyond the confines of the teleworkers own involvement with it. In the Knight household, Malcolm, an ex-lorry driver, was currently a programmer, while Ruth who had had a variety of jobs in factories, was now working in a nursery. Malcolm had been interested in micros since they first came out in the early 1980s. He had followed an

OU course which had subsequently led him into computer work and teleworking. However, the PC issued by the firm was identified with and used totally for work. Recently, he had bought a second machine, an Amiga, 'for the family'. Malcolm had anticipated that he might be able to experiment on it while the others could play games - although, if the children (aged 7 and 4) took some interest in programs or just manipulating the screen from the keyboard he thought that that would be '*useful*'. In practice, he had not '*got around*' to using it much, although he also noted that there was also little chance because Ruth and the children played on it so often. He had managed to look at one paint package, but his children got bored with that '*since it's not nearly so exciting as games*'. (Malcolm)

The point is that in contrast to many other families there was little educational agenda regarding the computer. While Malcolm would be happy for the Amiga to be used for applications other than games he did not actively promote this. In the Knight household, the teleworker's interests did not pass on to other family members nor were his technological skills a convertible resource which could benefit his children. Meanwhile, since Ruth's main use was also games she had the same type of interest as the children and did not in any way push the children to develop their involvement with the computer in any other direction.

Lastly, a point should be made about games. Whatever else they might do with computers, most children used them to different degrees and at different stages to play games. But only in some cases was this a new option opened up by teleworking. In a number of households, computers were already present before the introduction of telework. Perhaps more significantly, games consoles such as those from Nintendo, Sega or Atari had become very popular at the time of this research and were present in many of the households. When these consoles arrived in some households, such as the Miller one, this led to a decline in competition for Joyce's computer since the children preferred the consoles. Or else consoles were already established when telework started, in which case, there was limited demand to use the teleworker's machine for games. This picture might have been different a few years earlier when computers were still the main vehicle for interactive games in Britain (Haddon, 1988).

9.2.7. The Computer and Telework: Empowerment

The final observation about the computer is that it can become a significant element in the teleworker's own sense of self. It can help in defining or redefining an identity which distances the teleworker from more conventional stereotypes of, especially, the woman at home. For both men and women, as we have pointed out, that identity is often problematic and double-edged. The status claimed with the gaining of a set of technical skills and the often visibly displayed mastery of the computer can be in conflict with the status of being at home. This basic conflict is particular to neither sex, although we noted earlier that it is experienced differently since the home is perceived as being women's 'natural' domain (cross-ref...). Teleworking, especially for women, can often involve a reskilling and an enhancement of status not just in the neighbourhood but in the household itself. And in this case both ownership and control of the computer becomes a central focus of the struggle for personal independence and recognition.

This was most dramatically the case in the Lawson household, As background, Kenneth and Kay had very different perspectives on many issues including their economic position: Kay thought they were spend-thrifts, Kenneth thought that he especially was not paid enough for his work in the media. Although they shared some similar values, there were many conflicts - which came out clearly during the joint interview. Their arguments had been sufficiently serious in the past that they had even split up for a period before the research. This raised for Kay the alarming possibility that she might be left with their two children and without sufficient income from her work as a researcher.

Kay was teleworking on a contract basis for an American television monitoring company. Her boss was putting pressure on her to invest in her own Apple Mac so that she could provide a more efficient service and, as he put it '*invest in the future*'. She and Kenneth were technologically sophisticated and already had an Amstrad PCW word-processor, bought soon after that particular machine was first launched. They were looking into an alternative computers with the children (aged 6 and 3) in mind, when Kay spotted a special offer. Without consulting Kenneth, she went out and bought an expensive Mac. This was not by no means a conflict-free decision and it was still contentious at the time of the interview. But for Kay it was clearly an extremely significant act, both for her relationship to her work, and perhaps more significantly for her relationship to her husband:

Kay Lawson: 'I wanted to own one because if I used it for my own work, I would feel quite entitled to do so or if I ended my relationship with him (her boss) I wouldn't feel then that I was going to be deprived of the Apple Mac as well.'

Since they pooled their income, Kenneth felt that they should have had a joint say over not only the purchase but the subsequent use.

Kenneth Lawson: 'To put it in perspective, the thing about buying the computer was not that I ever felt that you shouldn't have bought it. It was more that, you having bought it with our money, I wanted a say in how the computer was used and how we'd try to use it and get back money for it.'

Kay managed to establish that even though it was bought with their joint money, it was mainly her computer. It must be remembered here that she was beginning to be more aware that some more independence might be desirable in case she ever spilt up with Kenneth. Defining the micro as her possession was an important part of this process - she was not only more independent of her employers.

But it was not only ownership that was important: the very act of purchasing as an individual was an important psychological gesture for Kay.

Kay Lawson: 'I suppose that is bound up with the work though ... because I felt that within Ken's work sphere, he has a certain amount of autonomy as to how budgets are allocated and he has to make financial decisions. And I felt it was right that I also had some degree of autonomy within my own work sphere, even though I don't work in the same sort of way at all. Of course, the money that I'm allocating is our money, not somebody else's money. But I still feel that for my own personal

satisfaction I need to have an area of control on the way that you (Kenneth) have an area of control at work.

Kenneth disputed her analysis and its relevance to their own lives. Even though he subsequently used the machine, the one thing that particularly hurt Kenneth was that although they brought in a considerable income, their outgoings meant there was little to spend on buying new items- including ICTs. He enjoyed making purchases, and had been excluded from the biggest one they had made in years.:

Kenneth Lawson: 'All the things I wanted to buy, we haven't bought!'

Clearly, the Apple Mac had more than simply functional significance. The manner of its acquisition was itself deeply meaningful, in very different ways, for both partners. This, plus Kay's subsequent ownership claims on it provided for Kay a statement of independence and power.

9.3. Media Technologies

9.3.1. Preliminary Observations

Both the telephone and the computer are directly involved in teleworking. It is through their use that the particular character of the telework within a given household takes shape. But also vice versa. It is also through the particular character of the household and the way in which telework is conducted that these two technologies gain their meaning and establish a place for themselves.

Media technologies, on the other hand, are much less central. Teleworkers have no privileged control over their use relative to their partners or children. And if that use is affected by the arrival of teleworking in a household, it will not be affected in any simple or straightforward or even unequivocal way. On the other hand the presence of an often powerful television-based component to the culture of an individual household can have an effect on the way in which teleworking is conducted. Once again there is no simple analysis to be offered of what can be seen to be a changing, contradictory and dynamic technological culture. In discussing teleworking's consequences for television and video (and vice versa) we need to be aware of a complex set of interactions, whose specificity cannot be understood without a consideration of the individual household's own moral economy.

Recent research has shown in what ways television and video use is rule governed and gendered. The rules associated with watching are deeply inscribed into the culture of the household: conscious and visible in the management of children's access and the regulation of what is to be seen; unconscious and invisible in the daily patterns of interaction in front of, or around, the set. They have been intensively, if not necessarily extensively, studied. And those same studies have revealed how gender difference, and the gendered politics of the family, have made a significant impression on the ways in which television and the video are watched and incorporated into domestic life. One might expect the introduction of teleworking to have little consequence for such deeply ingrained habits and patterns. Our research suggests that this first impression is mostly accurate. But in a number of interesting ways teleworking and the technologies that

support it do relate, both causally and consequentially, to the ways in which television and video are used.

9.3.2. Media: Demands on Space and Resources

By making new demands on space in the home, the arrival of telework can affect the location of ICTs, including media equipment. In a number of our households, for example, radios had migrated to the area now colonised by the teleworker. However, this study and our previous work (Haddon 1991) indicate that telework rarely takes place in the main living room and hence normally does not cause a relocation of the TV. However, in at one case, the Lockwoods, the TV had not been in the living room but in the multi-purpose front room where Angela used to iron and Mark did his teaching preparation and administration. When systems analyst Angela started teleworking the TV had to move out because the children made too much noise when watching it. At first the parents thought that this was an opportunity to give up TV-watching, and so the television went to the children's bedroom. But they eventually decided that TV played too important a role for them and so they relented and bought a second set for the living room.

Angela Lockwood: 'I guess it must have just been that we needed something to just sort of sit and unwind while we had dinner.'

Mark Lockwood: 'We've got to do something like watch television otherwise you can't stop.'

It should be added that although it may not be in the same room, telework can interfere with TV watching and vice versa if they are in such close proximity - as demonstrated earlier in the Foster household where editor John was distracted by sound of the children watching TV next door (cross ref....) .

In the early days of home computing, TVs offered a cheap alternative to buying dedicated monitors. In fact, since abstractor Clare Brown was working at home during this period in the early 1980s she exemplified this process by using her old black and white set as a monitor. But this old TV had now been superseded by a dedicated monitor, and relegated to the loft. All our other teleworkers had used dedicated monitors since starting teleworking, and so their work had not actually introduced new TV equipment into the home. This was not the case with second microcomputers belonging to the children: in several of our households again illustrated by the Browns, the children had acquired TVs to use as computer screens. But that usually meant that they could also then use them as personal TV's in their own rooms.

The Clark household demonstrated a number of issues relating to TV, but of chief concern here, it showed how telework competed with other demands on disposable income. Both Sheila and Roger Clark were avid consumers of all that is most recent in media technology. They were very early adopters of satellite and Roger, a postman, wanted a mobile satellite dish in the garden. They operated an ad hoc informal video recording service for friends and neighbours who wanted to watch movies or sporting events on satellite. They liked the sense of immediacy that satellite, especially satellite news, provided, as well the sense of being at the cutting edge of technology from

ownership of the latest equipment. Satellite was very much Roger's technology. Video was Sheila's since it allowed her to time-shift her favourite soap operas when she could not watch live broadcasts because of teleworking in the evening. The dynamic of technologies was also shown in this household by fact that the arrival of satellite had changed their watching patterns as much as Sheila's typing telework: the transmission of late evening movies had encouraged them to stay up and watch them together.

The Clarks were preoccupied with state-of-the-art television and hi-fi, though they could not afford to upgrade continuously. The current television system was, Roger acknowledged, perfectly adequate, but *'I just want a new one'*. This dominating and extensive television culture had consequences for telework - Sheila did not have to miss her soaps because Roger rescheduled them for her and Roger himself was offered a continuous distraction while Sheila worked.

We noted the Clark household in the discussion of computers (cross-ref). The Amstrad PCW9512 which was bought in 1989 for Sheila's work, which she adored and valued as *'the best thing we ever bought'*, had made her initially more competitive in the local typing market. It was nevertheless deficient. It did not have a sheet feed into the printer and the time taken to feed the paper into the machine by hand was often as long as the preparation of the original document. Sheila would have like to upgrade, but she could not 'justify' the expense. The question arises as to how that is to be interpreted. Here a household's priorities, priorities that were in turn of a piece with their moral economy, defined what counted as legitimate expenditure. The palpable saving of time and increase in efficiency that a sheet feeder would have provided was not valued relative to the value accorded to television technology. Here is an example of the way in which teleworking itself was clearly bounded within a household, and perhaps too, one in which gender was an important factor (though it should be pointed out that there was no apparent dispute between husband and wife over priorities, nor any dramatic differences save for differences in taste, when it comes to their enthusiasm for television).

9.3.3. Consumption of Media and Media Technology

To what extent does a willingness to experiment with telework reflect an orientation which is receptive to non-work ICTs? Are teleworking households more likely than equivalent households without teleworking to be high consumers of information and communication technologies and services? Obviously this whole issue is made more complex by the fact that sometimes it seems appropriate to focus on individuals. To some extent, the option to and desire to telework falls upon the teleworker and they initiate the purchase of ICTs for work . And in terms of consumption, it was specifically males who tended to exhibit a greater interest in acquiring especially media ICTs. On the other hand, we have attempted to show throughout this study how teleworking can crucially involve other household members - who can also participate in the decision to introduce teleworking. Moreover, the purchase of both work- and non-work ICTs from joint family resources often involves some degree of negotiation - albeit one where one partners may wield more power than the other.

Although not a quantitative study, our small sample did show how quite a number of teleworking households, and especially but not solely the males in them, were willing to

be early adopters of a range of other ICTs, and showed an enthusiasm for enhanced video and TV technology.

For example, publisher Bruce Lang had for some years been a believer in the imminent arrival of home entertainment systems interconnecting all audio and visual media. Because of this he had initiated the purchase of an 'organic' TV system (separate monitor and tuner). His household had been an early adopter of videodisc players, camcorders and he expected to acquire wide-screen and HDTV once they became available. On the audio front, he had bought one of the first CD-players when they appeared. Meanwhile abstractor Clare Brown had been an early adopter of answerphones, cordless phones, computers and photocopiers for her telework. But the Browns, partly through her interest, had also been one of the first households to acquire VCR and teletext. She was now looking forward to taking up teleshopping at some point.

Apart from actual acquisition, a number of the households, but males especially, showed an interest in and awareness of technological innovations. Jonathan Townsend was looking forward to video on demand, HDTV and distributed video, while Emma was waiting for a good teleshopping system. Meanwhile, Kenneth Lawson wanted CD-I and HDTV while Kay's priority was distributed audio. However, while these and other households might be actual or potential early adopters of a wide range of ICTs, they were not indiscriminate adopters: several, such as the Browns, resisted satellite and cable because it might encourage too much TV-watching or because of the poor quality of programmes they felt to be available.

However, cross fertilisation from work to leisure based ICT activities was by no means automatic. This was shown most dramatically with the Brennans, where the technological culture of this household was very uneven. Sian used computers and various telephone features every day in her librarian role, while computer conference mediator Brennan was a sophisticated user of computer comms software. Yet, their phone was a very old fashioned handset with a dial and was on a long cord that trailed around the house. There was no CD or VCR technology and they rarely watched their poor quality black and white TV set.

The second issue in this section concerns actual media consumption. Amongst our teleworkers there were none who could ever have been called 'heavy' TV-watchers, although programmer Malcolm Knight had watched a fair amount during the day when he had been unemployed in the past, and Gordon Taylor watched some day-time TV since the failure of his helpline business left him underemployed. A minority, had always been 'light' watchers. For example, television did not feature much in the lives of typesetter Diana Simons, computer or Katherine Dennehy, who ran a childcare agency. TV was marginal: they might occasionally watch it if it was tuned on by others, and Diana would sometimes watch children's programmes - but mainly as a shared activity with her young son. For such teleworkers, television was an irrelevance. Their relative lack of interest in the medium had not been affected by teleworking, nor did teleworking appear to incline them to seek in television some kind of compensation for the demands of telework in their domestic space.

For those who did show a little more interest in the medium, the pattern of teleworkers' television watching depended on the degree to which the work itself was bounded, either

by the demands of an employer's schedule or the ability to self-impose a structure on the day. Men and women teleworkers, as we have noted, had different capacities in this regard. For those whose work could be contained during weekdays, the introduction of telework had little overall effect on the amount and timing of TV consumption. Most TV would be watched in the evening. Usually the actual TV came on when nursery- or school-aged children came home. For such teleworkers, only occasionally did extra telework eat into TV time - e.g. when systems analyst Angela Lockwood or researcher Kay Lawson had to produce a report to a deadline.

For those self-employed women with young children at home, teleworking would be concentrated in the evenings or in odd grabbed periods in the day. It was amongst this group, as well as some managers like Jonathan Townsend, that the pattern of television watching was most affected. For example, typist Sheila Clarks only slot for watching TV was late in the evening, after she had finished her work. Researcher Kay Rahman also noted how her TV watching had been squeezed out because of the increasingly heavy workload from a combination of her own research and helping out her husband's teleworking business.

Amongst fully employed male teleworkers (as opposed to underemployed Gordon Taylor) the only examples where the pattern of TV watching shifted noticeably was in the Knight and Reid households. Since programmer Malcolm Knight tended to work intensely at the start of the week and complete most of his set tasks in the first few days, by Friday he was winding down. When not fitting in a game of golf, he tended to watch more daytime TV as his work finished. Meanwhile in the Reid household both consultant Sam and travel guide had somewhat flexible schedules but also hectic lives which affected when they could watch TV together.

Anne Reid: 'If there's a programme on the telly, we'll tend to tape it because evenings aren't very good for watching telly and then we just watch it when we both have time. That's where our lives go a bit topsy turvy. So if we have two hours' time between four and six, we'll sit down and watch a video.'

LH: 'Why are evenings bad for watching TV?'

Anne Reid: 'We either have meetings or one of us is out. Certainly if we want anything together, if it's like a video, we would tend to wait until we had time together or people come round. The other good thing about the evenings as well is that Kate tends to go to sleep so you can actually get on. Like last night I was doing my paperwork and I didn't even think of turning the telly on. Because she's out of the way and there are some things, even if she's in a good mood, you just can't get on with if she's awake.'

The Reids and the Clarks were examples of those teleworking households which were willing to use VCRs to adjust TV consumption to fit in with their telework schedules. They had particular programmes which they wished to see and, in both cases, a desire for it to be a shared activity. However, for others television viewing was not such a focused television experience so much as being a time filler - especially late in the evening. They watched the 'best' of what happened to be on and there was often little broadcast that was so significant, both for male and female teleworkers, that they would go to the effort of

actually time-shifting it to the evening slot. Although a few had tried this, they had never 'got around' to playing what they had recorded. Hence, changes in time structures imposed by telework can but do not necessarily lead teleworkers to time-shift media.

The Clark and Reid examples showed how household and not just individual patterns of media consumption can be affected by telework. Yet, on the whole, teleworking did not affect non-teleworking household members. Children's patterns of consumption were usually unchanged, as were those of many partners of teleworkers.

Lastly, it is worth adding that teleworker's consumption of audio media - radio and patterns of listening to music on CD and hi-fi - were affected more than TV. A few teleworkers, usually male, listened to music while they worked, whereas this had not been possible when they had been office-based. For example, publisher Bruce Lang often listened to classical music, consultant Sam Reid listened to Jazz and designer Bob King usually tuned into Radio 1.

9.3.4. The Role of Media

Understanding the use, or not, of video technology entailed asking what role television was playing in the households.

Its role as compensation for partners and child-minder have already been noted earlier. But it could also be a general time-filler for all family members where consumption did not entail a desire for very active engagement with broadcast material.

Malcolm Knight: 'The TV's on and we gaze at it.'

And:

Robert Gloster: 'I mean, it's just there. If we flop down on the settee and want something to, you know, look at with your mind in neutral, then the TV's quite useful for that.'

Kenneth Lawson also reflected a range of people who commented on TV's role in helping them to wind down last thing at night.

Kenneth Lawson: 'Sometimes we put it on if neither of us is really involved in a good book or something. We'll put it on just to sort of unwind a bit. Or perhaps also when you don't want to go to sleep yet because you feel you know the children have only gone to bed at sort of eight and you think, "God". You know "I don't want to go to sleep before 11". But by 10 you're too tired to do much else, so you think, "OK well I'll just soak up a bit of television". It's because I can't do anything else. I don't really need it to relax me. I'm already relaxed but I don't want to go to sleep.'

Yet, these comments only capture what TV means for these people as individuals. There is a further social dimension, in that joint television watching can also be used by both partners as the catalyst for a meeting at the end of a working evening. The point is that it can provide a shared time before retiring to bed.

Lastly, television, with its predictable, familiar but uncontrollable schedules, provided both a temporal marker and 'family time' earlier in the day. For example, a number of teleworkers took their lunch breaks to coincide with the mid-day news, the external broadcast schedule helping them to structure their day. The other significant marker was children's TV. For male and female teleworkers it could provide the chance for a brief spate of work between the children's return from school or nursery and the evening meal. But it could equally well be one of the main times which these parents shared with their children.

9.4. Conclusion

It should be clear by now that the information and communication technologies that support teleworking - the telephone and the computer above all - are not simply machines. They are not simply working machines, nor are they simply material objects. They are a crucial part of the complex culture - the moral economy - of the teleworking household, and as such are the focus of a range of activities and meanings that go far beyond their functional significance. Above all they are involved in the dynamics of the household as a unit, mediating and sustaining the activities of daily life, both inside the home and outside it.

We have seen how both the computer and the telephone, as symbolic objects, are implicated in the households' management of time and how their use is affected by the dominant forms of temporality of the household: how the days and weeks are managed, but also how a family or household orients itself to past, present and future (cf. Silverstone, 1993). We have also seen how these technologies are involved in the political life of the household. They are involved in the individual's assertion of identity and status. They are involved in the household's demarcation of public and private spaces. They are gendered in use. Rules of access to teleworking technologies, control over that use and conflicts around it, reveal a great deal about the dynamics of family life. But they also constrain the ways in which teleworking itself is undertaken.

There is what we have called 'technological seepage' around teleworking technologies. It is perhaps unsurprising, but it is significant. It affects the range of skills that the other non-teleworking members of the household have to new technologies. It affects the ways in which new technologies are found to manage the implications of telework within the home, protecting it from unwanted intrusions, managing its public face, compensating for the inaccessibility of the teleworker and his or her relative withdrawal from family life. Televisions and video recorders as well as answerphones and answering services are then implicated in teleworking, and are symptomatic of the increasing technologisation of the household which telework stimulates.

However, as we have noted often enough, this technologisation is uneven. Many households, by virtue of limited economic or cultural resources, are still relatively unaffected by the arrival of a teleworker and his or her machine in their midst. The prior definition and limits on use of, especially the computer, by virtue of its ownership by employing organisation, also limits its impact on the culture of the household as whole. On the other hand, the use of the telephone for work as well as for social purposes requires the creation of new rules of, and conflicts over, access.

And within all households the personalisation of technologies, but also the boundaries that are consciously or unconsciously thrown up around them, reproduce and reinforce the gender politics of the household. Each household has its own version of this politics, of course. And this politics is not stable. While we have seen how little is affected in the core division of domestic labour by the arrival of teleworking, the relative status of a female teleworker is often affected through her command of complex technologies and of course the resources which that command generates.

The meaning of information and communication and their impact on the household are therefore both governed by the rules and rituals that define and sustain the daily lives of families and households. The intensification of the technological culture of the household which results from teleworking is not immune from this. Far from it. New machines, and new practices, as well as old machines and old practices, are all governed by the ways in which households manage their daily lives. These change through time, as much or even more as a result of the changing position of the family or household in its life cycle, as by the arrival of telework. The way in which these the teleworking technologies are used, by whom and for what, as well as the character of the teleworking itself, are all equally affected by these dominating changes.

Teleworking, by definition, involves the use of information and communication technologies to work at home. These technologies - the machines and the services and connections that they provide - may not be new to the household. We have seen how existing machines are mobilised to new functions. But whether they are new or not, they become redefined as work machines, and in that redefinition the overall culture of the household, its management of domestic time and space is itself redefined. We have seen how that happens, and how complex and subtle a process it often is. We have also seen how the technological culture of the household changes as a whole with the arrival of teleworking technologies. And we have drawn attention to the ways in which teleworking does provide a route, an accelerated route, for the household as a whole to become involved with new technologies, to develop new skills and to become increasingly sensitive to new developments and innovations in technologies that might improve the quality of their work. This is more likely to be true for the telephone and the computer than for the television and the video. But these media technologies, and the patterns of their use, are affected by the arrival of teleworking into the home in as much as their use is increasingly affected by the presence, and sometimes dominance, of the routines of the teleworker.

10. Conclusion

In this final section we attempt to summarise some of the main conclusions and recurrent themes that have emerged in the report as a whole. It aims, in particular, to identify how and why teleworking comes to affect, and is also affected by, the dynamics of life in the family and household. We see no reason to change our originating perspective which insisted on seeing teleworking fundamentally as a social activity, and one which could not be understood without close attention to the processes of its incorporation into the household and the home. We have seen how varied the experiences of teleworking can be, and how those variations are the expression not just of the fundamental structural differences in our sample: differences between the employed and the self-employed, or between professional or clerical levels of work. But they are the result also of a range of equally insistent, but perhaps less visible forces: those that have to do with the particular dynamics of gender, household politics, the management of time and space, and the integration or lack of integration of the household in wider networks.

These observations are significant, we believe, for all those with a professional interest in teleworking, for it is precisely in its status as a social activity that we can begin to understand both its potential and its problems as a new form of work. The introduction and management of teleworking, seen quite properly by managers themselves as essentially a problem of control, is manifestly much more than that. Similarly the future of teleworking is neither unequivocal nor guaranteed once one takes into account the manifest variations of experience and trajectory - as well as the different degrees of success and failure - that quite clearly mark its present character.

The recognition that it is the issue of control which lies at the heart of the successful management of teleworking is a correct one. But it is also inadequately framed if by control is meant only the capacity of the central organisation or management to 'manage' its dispersed work-force. Control is the central problem for households and families. The politics of the household, rarely substantially affected by the arrival of teleworking, nevertheless defines the context in which teleworking is more or less successfully adopted. This household politics is a gendered politics. It relates above all to the differential - but remarkably intransigent - responsibilities that men and women have for their household. These differences are exaggerated, perhaps, in families with children. They depend too on the relative status of the work of teleworker and partner and of their material contribution to the household budget. But having said as much, it is quite clear that the experience of telework, its meaning and the capacity to manage it within the home, are all fundamentally determined by the gender of the teleworker, and the particular gendered politics of the household.

The second major conclusion we would like to stress relates to what we have called the technological culture of the household as a whole. Teleworking households, despite enormous variations in sophistication, all share a commitment to the functional use of information and communication technologies. Computers can still be used for games-playing, but they must be used for work. Telephones can still be used for conversation and gossip, but they must also become a central link between a professional and his or her clients, a clerical worker and his or her customers, or an

employee and his or her manager. It is in this functional commitment that teleworking households are distinctive, and even if we have argued, as we have, that the definition of technologies is never exclusively nor unambiguously expressed in functional terms, the claims of work are paramount. How far they extend into the household, and how far the presence of 'money-earning' machines influences the non-teleworkers in a teleworking household to become more involved in the use of the technologies, varies substantially across households. It depends on, as we have seen, the household's moral economy, the particular balance of values, experiences, skills and material resources, that define the household's integrity. It varies, but it is never absent. No household in our sample has succeeded in isolating teleworking from the rest of what goes on at home. Some encourage its integration (by letting children use the computer, or using the computer for domestic tasks or leisure); some have a hard time keeping it apart (especially in the management of the telephone); others find teleworking constraining their own capacity to participate in other dimensions of electronically mediated culture (in the relative low involvement with television or video, for example).

Teleworking households are therefore, even at their most basic, leaders in the domestication of information and communication technologies (Silverstone, 1993). To some extent, though we have only a little evidence of this, they also become (or can become) informal apostles, opinion leaders, for the form of work which becomes quite quickly visible to extended family and friends. The networks that emerge around teleworking, as well as those that pre-exist the adoption of teleworking, together provide to a greater or lesser extent a satisfactory integrative framework for the teleworker, and once again, to a greater or lesser extent, compensate him or her for the inevitable isolation that follows the withdrawal of work from public to private spaces. These supporting networks are, for many, sufficient to compensate for the absence of office conviviality and work support. This is especially the case for those, principally women, who may have less intensive experience of office work. But how much of a compensation depends on a multiplicity of factors, not least the age of the children and the disruption they may cause to the ordered management of teleworking. It also depends on the desire for more in the way of support and company than working at home can provide (even with E-mail links, which we have seen to be relatively insignificant). Our work culture dies hard. The attractions of office based work are still sometimes identified as a major reason for wanting to give up teleworking, and the attractions of the office are often, but perhaps paradoxically, those of sociability. Opinions differ on the issue of efficiency.

The issue of isolation is therefore an important one, but once again, not one that can be simply resolved. We have drawn attention to different kinds of isolation as well as different degrees of isolation: isolation inside the home as well as outside it. But in all cases the experience of teleworking varies, so for example for those women who have been confined to home by the responsibilities of a young family, teleworking offers opportunities for a manageable re-integration into a wider world of relationships and meetings. In this sense teleworking is not of itself necessarily isolating. The withdrawal of work into the home is to some degree mediated by the electronic communication that teleworking both depends on and supports, but the extent to which teleworkers feel isolated as a result of their home dependence, varies both with respect to the realities of the work that they do (many will have both opportunities and

expectations to leave home and meet colleagues or clients) as well as the particular character of their own sense of their place in the world. The lack of enforced sociability may be seen as an advantage. Isolation then is a phenomenological as well as a social experience: the lack of human contact that teleworking might, but need not, create can be perceived and experienced in different ways. It can be desired or resented. It can be embraced or resisted. And it is not so much teleworking as the degree of commitment to the work at home, and its intrusiveness relative to other forms of sociability which is the crucial factor. As ever the technologies can be used either to separate or connect. They can also be used to do both at once.

The other great claim of the telework apostles is that it extends flexibility and gives teleworkers greater control over their working environment, and over their work as whole. The flexibility is de facto a spatial one. We can, supposedly, choose whether to work at home or not. It is also a temporal one. We can choose when to work. Both of these flexibilities are however far from absolute and in many cases are chimerical. The decision to work from home is not always a voluntary one nor is it, even in the absence of institutional constraints, always an unequivocal one. Likewise, the capacity to define when work will be done is constrained, often determined, as much by the still intrusive demands of public time, and the connections that still need to be made with others who are working 9 to 5, as by the more insidious demands of the domestic day and week. Once again the technology offers a potential, at best, which the realities of everyday life can either realise or deny.

Flexibility in any case - the choices that are trumpeted so loudly as being at the heart of the attractiveness of teleworking - are often double edged. They are certainly likely to produce an entirely uneven response. As we have just suggested, teleworking offers, for some, genuine choice. For many more that choice is a compromised one. For yet others it is one that can only be made provisionally. And for still yet others it is no choice at all.

The industrialisation of work has proceeded, more or less, in a single direction, forcing workers of all shapes and sizes into factories and offices, towns and cities. Teleworking offers a choice, but does not insist that we make it. It is inevitable therefore that the future of work is going to be a much more complex and varied future and that teleworking will develop unevenly. It is inevitable too, and we hope that this report illustrates the how and why of it, that the future of telework can only be anticipated and planned for if we make an effort to understand those factors that affect the ways that those choices are made and, just as importantly, to make an effort to understand their consequences.

Footnotes

Introduction

1) The findings from this research have appeared in a number of places (esp. Morley and Silverstone, (1990) ; Silverstone, R. (1991); Silverstone, Hirsch, and Morley, (1992)

Heterogeneity.

2) Two points need to be made here. First, the difference between clerical and professional telework is less of an absolute division and more of a continuum. Second, this division itself relates to gender, in that virtually all clerical telework is done by women.

3) Current PhD research by Anne Fothergill at the University of Westminster is also drawing attention to the number of teleworkers who have taken up this work option because of redundancy in the recession.

4) For example, we already see examples in the homeworking literature where work at home can be defined mere 'pin money', sometimes to be kept out of sight of the breadwinning husband.

Trajectories

5) If telework is viewed as potentially transitional, then over a period of time, the numbers who telework will be greater than any snapshot headcount of telework in that period would indicate.

Time

6) Industrial time also has a bearing on patterns of tariffs for such services as the telephone and electricity. This was relevant in one case where lower phone charges gave Peter Brennan another reason for checking his computer conferences in the evening rather than daytime.

Space

7) Lack of space can also be a reason for not buying more ICTs, or else for preferring smaller ICTs - as in the case of David Barry who wanted to move to notebook computers. This experience was also discussed in Haddon 1992:66-67.

8) Clearly if other household members have to learn to take messages, or not to answer some phones, or not to answer at certain times in the day, then they are constantly reminded that home is a workplace.

9) In addition to those cited in the case studies, we talked more briefly to a range of other teleworkers during the course of this research. In one case, a husband objected to

the noise made by his teleworking wife's printer because it disturbed his TV watching. This provides an example of the noise from an ICTs impinging on the rest of the home.

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