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ESRC Seminar Series

Mapping the public policy landscape

The impact of teleworking and teleconferencing on transport policy

Foreword

An increasing number of people, known as teleworkers, work at home or on the move, using a laptop and a mobile phone to communicate with colleagues or clients. This seminar, organised by the Economic and Social Research Council (ESRC) and the Department for Transport, (DfT) explored the likely impacts of future trends in teleworking and assessed the case for Government intervention to encourage this new pattern of working.

Developments in information and communication technologies have had a dramatic effect on where and when people work. It is estimated that by 2006 over four million people were working at home for at least one day a week, and 52 per cent of them relied on the telephone and computer to do so. The numbers have nearly doubled since 1997, but they still represent only a small proportion of the working population. However, employers who have offered workers the opportunity to work from home claim to have achieved increased productivity as well as a higher rate of job satisfaction among their staff.

These new working practices are not only visibly transforming the lives of individuals, they are also changing travel patterns in ways that could have a significant impact on transport congestion and carbon emissions as well as on improved work/life balance.

Social science research is interested in the impact of changing patterns of work on employment as well as its potential contribution to sustainable transport policy. This seminar brought together leading researchers in the field and experts from the policy community to share their experience and explore opportunities for future collaboration.

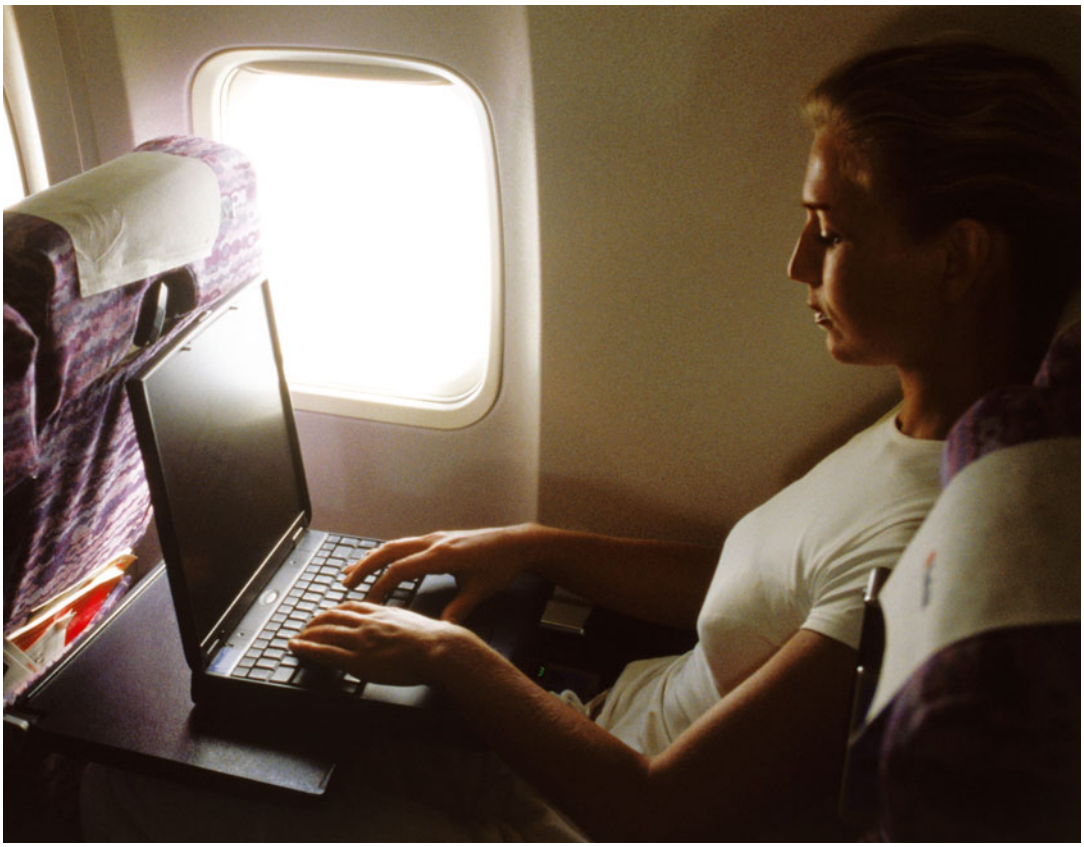
Professor Ian Diamond AcSS
Chief Executive
Economic and Social Research Council

The impact of teleworking and teleconferencing on transport policy

The Researchers

PROFESSOR GLENN LYONS is founder and Director, Centre for Transport & Society, University of the West of England, Bristol. His aim, and that of CTS, is to improve and promote understanding of the inherent links between lifestyles and personal travel in the context of continuing social and technological change. He is recognised for his work in a number of areas including: travel choices and information (and has for several years been an advisor to the Department for Transport's Transport Direct Programme); social participation and the Internet; travel time use in the information age; and the changing nature of homeworking and travel implications.

PROFESSOR ALAN FELSTEAD holds a Research Chair at the Cardiff School of Social Sciences, Cardiff University. He has a distinguished track record of carrying out research in the field of employment with relevance to the academic, policymaking and practitioner communities. Professor Felstead's research focuses on: training, skills and learning; non-standard forms of employment; and the spaces and places of work. He has given expert advice on these matters to policymakers in UK Government Departments and agencies, to European-wide organisations, to other national governments, and to practitioners in the public and private sectors.



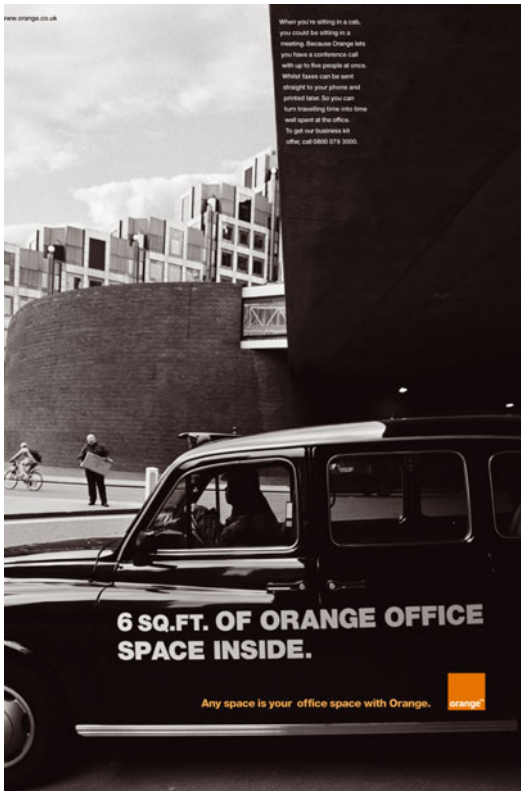
Executive Summary

Introduction

The widespread availability of wireless broadband and mobile telephones means that people are now able to communicate with one another and lead their working lives from diverse locations and on the move. This has prompted growing numbers of employers to make changes in the traditional workplace, for example, by offering 'hot desks' or 'touchdown' desks for collective rather than individual use. These changes not only have profound effects on the lives of individual workers, but also have a wider potential to influence transport management and to contribute to a better work/life balance. So far, transport policy has not explicitly reacted to the trend towards more flexible working patterns, which potentially offer a win-win for both travel demand management and business performance.

However, working from home rather than the office has so far not lived up to the advertising and media hype. It is estimated that by 2006 over four million (14.9 per cent) of people were working at home for at least one day a week, and 52 per cent of them relied on the telephone and computer to do so. The numbers have nearly doubled since 1997, but they still represent only a small proportion of the working population and the growth is nowhere near as explosive as suggested by the advertisers of mobile technology and travel.

In contrast to the new generation of so-called 'teleworkers' who operate from home or on the move with the help of modern technology, there are many people who work mainly at home doing low-paid manual jobs such as knitting, assembly work or packing.



The problem for social scientists is that data on these various groups and subsets are based on a number of different definitions, which leads to confusion. In his presentation, Alan Felstead argues that real and dramatic shifts are taking place in the physical places where people work, but the process is gradual and only a minority of the workforce is affected. The data are patchy, but there is evidence that office workers, managerial staff and professionals using telephones, faxes and computers are benefiting most from the changes. However, many of the people who work at home are still in traditional low-paid manual occupations. He explains the persistence of both images of homeworking and takes a fresh look at the stereotypes surrounding them.

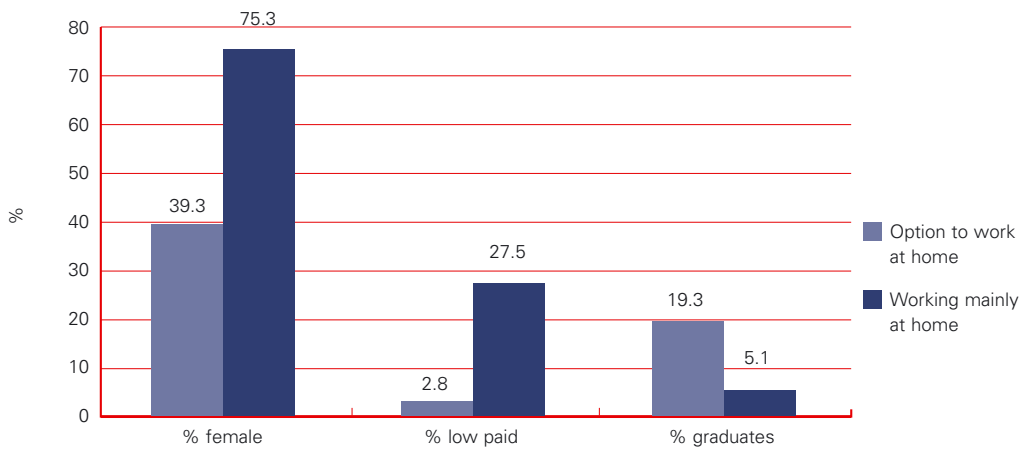
Measuring the impact of teleworking on transport is also complicated by the lack of data. Glenn Lyons further argues that the available datasets do not take sufficient account of people who occasionally work at home for part of a working day as well as travelling to and working at their conventional workplace and/or other work-related locations (eg attending site meetings or conferences) on the same day. Such part-day homeworking may have implications for travel demand and if this flexible homeworking behaviour is not acknowledged then overall levels of teleworking may be underestimated.

In his presentation, Glenn Lyons says that with appropriate sticks and carrots in place teleworking could influence if, when and how we travel in relation to work. But in order to exploit such potential influence policymakers need to become more reactive, rather than inactive in their response to the trends brought about by market forces.

Teleworking and social inclusion

Some researchers believe that telework can support social exclusion. The *Is Teleworking Sustainable?* (SUSTEL) report produced by researchers at the UK Centre for Economic and Environmental Development for the European Commission found that telework can provide employment or promotion for people who might have difficulty in travelling to and/or working in a local office, or who live in more remote areas with limited local work opportunities. Eleven of the 30 case studies in the SUSTEL study provided evidence that teleworking was contributing to social inclusion whilst none found the opposite. The two main examples of this were teleworking helping disabled people and females on maternity leave to remain in employment.

Figure 1: Working at home: Option-holders and practitioners



Source: WERS98, spring & autumn 1997 & 1998 QLFS

At the present time, the growth in teleworking is mainly attributable to the white collar, better-educated section of the workforce. Yet the bulk of homeworking is still made up of mainly female, lower paid, self-employed manual workers.

Key insights and implications

- While the number of people in employment in the UK has been increasing, the average number of commute journeys made per worker per year fell by eight per cent from 1995-2005. This could be partly attributable to flexible working patterns such as compressed working weeks and teleworking. However, over the same period the journey to work has grown longer in both distance and time. Around 70 per cent of all commuting journeys are undertaken by car, van, or minibus. In all commuting journeys between six and 45 minutes in length, car users make a greater proportion of trips than average.
- Business journeys have also increased in length, with the average trip now being 19.4 miles.
- *The Costs of Transport on the Environment – The Role of Teleworking in Reducing Carbon Emissions* report from researchers at the University of Oxford says that there is a need for more coherent policies to take advantage of the environmental savings that could be made from more sustainable working policies.

- The 2007 CBI/Pertemps annual employment trends survey of 500 firms found that all types of flexible working have increased since 2004. The most dramatic increase was in teleworking, which is now offered by almost half of employers, four times as many as in 2004.
- Employers, such as BT, have embraced the idea that their employees can work productively from home, and have developed effective management techniques to support this. A BT employee interviewed for the *Smarter Choices – Changing the Way we Travel* study for the Department for Transport suggested that up to 65 per cent of the BT workforce might ultimately take part in some form of telework. BT says that its 13,700 home workers are on average 20 per cent more productive and their increased productivity adds another £6m-£7m to BT's bottom line.
- The frequency of homeworking amongst full-time employees is rising, but 83 per cent still say that it is not possible to work at home. However, 65 per cent of those in work in the UK are 'very' or 'somewhat' interested in at least one type of telework.
- Nine out of ten companies in Germany and Sweden practise flexitime. This is compared with just 48 per cent in the UK. In Germany, Sweden and Denmark, 40 per cent of employers had some staff involved in teleworking – compared with just 20 per cent in the UK. Work Wise UK argues such practices could improve productivity and reduce traffic congestion, overcrowding and pollution. But the Equal Opportunities Commission recently warned the UK was significantly lagging behind its European competitors on allowing such practices.

Place for teleworking in transport policy?

Glenn Lyons discusses the results of his research with colleague Hebba Haddad into part-day homeworking

Transport planners are interested in the potential of teleworking to reduce travel, particularly at peak hours. However, although it has been recognised as a phenomenon, teleworking has not been high on the transport policy agenda. Nevertheless, the report *Smarter Choices – Changing the Way We Travel* published by the Department for Transport in 2004, does endorse the possible role of teleworking in addressing traffic levels, concluding that 'teleworking has the potential to deliver substantial reductions in car travel at peak hours'.

Part-time homeworking could ease peak-time congestion

The Labour Force Survey (LFS) has been gathering data annually on teleworking since 1997. The survey considers people who use homes as their base and therefore don't commute to work. It does also cover people who occasionally work at home – these are said to have numbered around one million workers in 2005 and reflect individuals who, on non-homeworking days will be undertaking commute journeys.

What is teleworking?

Teleworking is an umbrella term which brings together work and communications use in relation to where and when people undertake work activities in a number of different ways. It can mean anything from checking emails from home, working in a telecentre, teleconferencing, working on email from the office, to working while travelling. The following terms are used by the Office for National Statistics:

- People who work mainly from home (either in their own home, or in different places using home as a base) are classified as homeworkers.
- Teleworkers are people who work mainly in their own home or mainly in different places using home as a base, who use both a telephone and a computer to carry out their work at home.
- TC Teleworkers are a subgroup of teleworkers who could not work at home (or use home as a base) without using both a telephone and a computer.
- Teleworkers as a whole, and the TC teleworker subgroup, can be divided further into those who work mainly in their own home, and those who work mainly in different places using home as a base.
- Some analysts have identified a further category, which they refer to as occasional teleworkers who work at least one full day a week at home who used both a telephone and a computer to carry out their work.

Transport researchers have taken a particular interest in people who have a conventional workplace which requires a commute from home but who work from home occasionally – for one or more days per week. This form of teleworking tangibly impacts upon travel and to an extent dictated by how many people practice such teleworking and how frequently. Recent research at the Centre for Transport & Society (UWE, Bristol) has highlighted that in addition to part-week homeworking, employees are also practicing part-day homeworking. This may be impacting upon the timing of commute trips.

"Perceived attitudes of work colleagues may be impinging upon the way individuals organise where and when they work. When interviewed, some people were anxious about being seen to go home early even though they would be continuing to work at home. Individuals said they would respond to worsening traffic congestion or the introduction of congestion charging by turning, to a greater extent, to both part-day and full-day homeworking – or by making changes in where they lived or worked."

Centre for Transport & Society research results arising from depth interviews

UWE researchers conducted a national survey of c1,000 workers who are Internet users to find out more about patterns of working at home. For the purposes of the research they defined part-day homeworking as involving at least 30 minutes of continuous work at home as well as in the usual workplace in any given day. This was called varied spatiotemporal (VST) working.

VST working can take a number of forms, for example working at home before going to work or leaving early to work at home or even a combination of both. In such cases the commute is not replaced by a day at home, but instead may take place at a different time of day (ie it is displaced). Although this may be less desirable than the removal of commute trips, the effect could still be positive and important for easing the burden of traffic at peak times.

"The appeal of teleworking is that it can potentially offer a win-win situation with less traffic, less time spent in traffic, more flexibility and more productivity."

Glenn Lyons

Key findings from the CTS survey

- The proportion of full-time employees who VST work is more than double that for full-day homeworking (14 per cent compared to six per cent)
- The number of days of VST working is also more than twice that for full-day homeworking
- Blue-collar workers practice more VST working than full-day homeworking
- Women are more likely to VST work compared to men while the reverse is true for full-day homeworking
- The means of transport for commuting does not appear to determine VST working, though most VST working is associated with car use
- ICTs are an important feature of most VST working days though less so than for full-day homeworking days
- A working pattern of leaving the 'workplace' to go home early seems by far the most common form of VST, with Monday being the most popular day of the week for VST working
- There is evidence of some displacement of the commute when VST working takes place.

A substantial number of respondents described another distinct pattern of homeworking which has led to the researchers introducing a further definition. Where a working day includes at least 30 minutes of continuous work at home as well as work at locations which do not necessarily include the usual 'workplace' (this could include offsite visits, external meetings etc) this is termed business varied spatio-temporal (BVST) working.

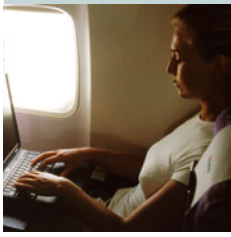
Looking more closely at teleworking

In order to find out more details about the rationale for homeworking, as well as people's attitudes to working at home and the way in which they organise their working day, UWE researchers have conducted a series of depth interviews with employees who (B)VST work in a large UK local authority.

The interviewees were men and women working in white-collar managerial or professional occupations, most of whom were educated to degree or post-graduate level. The mean age was 43 years. Interview topics covered commuting, workplace ICT use, types of work on workplace days and the potential for working at home. Other questions were asked about attitudes to working at home, perceived advantages to VST and full-time homeworking and the potential influence of congestion charges on future working patterns.

Findings

In general terms, VST and BVST working are different practices in nature, tasks completed, motivations and needs met:



- VST working is mainly ad hoc, while BVST working is planned
- Three key themes emerged as drivers for VST working, namely work, domestic and travel factors; whereas BVST working is predominantly driven by travel (and indirectly work) reasons
- VST working usually occurs when people need to focus on a particular work task and need a quieter environment. Sometimes people also need a change of scene in order to restore lost focus. A number of interviewees reported deliberately delaying or advancing their commute to avoid congestion
- BVST working is principally motivated by travel reasons and in particular a wish to avoid excess driving when attending meetings or making off-site visits which are nearer to home than the workplace
- Most interviewees who said they frequently BVST worked, reported that tasks done at home tended to be directly associated with a forthcoming meeting
- Most interviewees said that VST working was different from overworking, although they did admit to checking emails on both VST and BVST working days, somewhat blurring the distinction between VST working and overworking
- Interviewees said that the perceived attitudes of their colleagues affected the way they organised where and when they worked. Some people were anxious about being seen to go home early to VST work. On the other hand, they thought that their colleagues would readily recognise the common sense of working from home to avoid excess driving on a BVST day
- A significant number said they would respond to worsening traffic congestion or the introduction of congestion charging by turning to both part-day and full-day homeworking – or by making changes in where they lived or worked.

Conclusions

Based upon their research to date, researchers at UWE stress a number of points including the following:

- (B)VST working is a practice which is being undertaken, in comparison to occasional full-day homeworking, to a substantial degree and can no longer be ignored in studies concerning the transportation demand impacts of teleworking
- Displaced commuting could have implications for public transportation as well as car use. In parts of the UK, passenger rail demand is leading to overcrowding during peak commute periods and off peak services are often underutilised or with spare capacity. The same could apply to bus services
- There is a need to make VST working feel more acceptable within the working culture. This could also be coupled with attempts to encourage people to walk or cycle to work because of the beneficial effects on mental alertness
- Ongoing teleworking initiatives in organisations do not always appreciate the multiple forms of homeworking and their differing motivations. However the fact that this is a dynamic field which is not fully understood, should not be a reason for transport policy to refrain from being reactive if not proactive in terms of taking advantage of this potentially substantial transportation demand management measure.

What do people do when they're on the move?

A study by the Centre for Transport & Society at the University of West of England, Bristol, and the Centre for Mobilities Research (CeMoRe) at the University of Lancaster has examined the use of people's time when they are on the move – including, in effect, mobile working (see www.traveltimeuse.org).

Travel Time Use in the Information Age has been a three-year research project funded by the Engineering and Physical Sciences Research Council (EPSRC). The principal aim of the research was to explore the different ways in which travel time can be used, especially with new mobile technologies like mobile phones and wireless computers, and how this poses challenges to the established convention, implied in economic appraisal of transport, that travel time is 'wasted time'. Considering the 'positive utility' of travel time may provide a way of challenging the need to increase the speed of travel, where slower travel may mean more sustainable travel.

Findings from the study (part of which involved gathering survey data on travel time use from 26,221 rail passengers in Great Britain) include that:

- The ideal commute is 20 minutes (with thus a rejection of the prospect of 'teleportation')
- Nearly a quarter of all rail passengers find their journey time very worthwhile and over half make some use of their time
- Only about a fifth of travellers consider their train journey time to be wasted time
- Thirteen per cent of rail commuters spend most of their time working or studying (forty-two per cent read for leisure)
- Thirty-one per cent of rail business travellers spend most of their time working/studying (twenty-five per cent mostly read for leisure).

Implications for policy – sticks and carrots

Work-related travel remains a significant contributor to overall travel, and over 70 per cent of this is by car. *Smarter Choices* said that teleworking has the potential to deliver substantial reductions in car travel at peak times. The report also says that road pricing, fuel duties, workplace parking levies and congestion charges are all likely to encourage more sustainable commuter travel.

So far, transport policy has not explicitly reacted to the trend towards more flexible working patterns, which potentially offer a win-win for both travel demand management and business performance. With appropriate sticks and carrots in place, teleworking could influence if, when and how we travel.

Measures could be introduced to discourage commuting or travelling at the most congested times – these would have the potential to be in tune with the needs of employers and employees, for productivity and staff retention or reduced stress and better work-life balance. Parking restrictions and congestion charges at peak times already serve as sticks for some employees in relation to full and part-day homeworking.

However, a degree of misunderstanding of the practice of homeworking continues to inhibit levels of uptake. There is a need for awareness raising and training initiatives which are geared towards changing the norms of working practice, thereby removing prejudice and encouraging flexibility of the time/space mix in people's working lives.

Legislation on employment practice could also provide more employees with greater entitlements not only to flexible hours but also to flexible locations for work. However, too much legislation might deter people from teleworking. Many people work at home informally, side-stepping issues such as health and safety and tax rebates. If such issues were formalised they could become an administrative burden.

The travel plans of employers' organisations are already geared towards developing packages of carrots and sticks for influencing travel to and from work. The appeal of teleworking is that it can offer a win-win situation with less traffic, less time spent in traffic, more flexibility and more productivity. The challenge is to bring about further changes in attitudes and understanding and to have mechanisms available to help more people make the behavioural changes that will enable them to work from home if they wish.

The Exploding Office – beyond the hype

In his presentation, Alan Felstead discusses the implications of employment 'working at home, on the move and in collective offices'

Media hype and advertising by ICT companies often suggests that the future of work is at home and that the daily commute to the place of work will soon be a thing of the past. Hot-desking, telecottages, touchdown desks, wi-fi and PAD are part of the new vocabulary of employment. It is clear that the technical wizardry exists, but to what extent have new communications technologies changed where, when and how people work?

Teleworking – the media view

The problem for social scientists looking at the changing spaces and times of work is that there is no single data source on the extent of the shift towards working from home, and there are many definitions of teleworking. The term is popularly used to describe people who work outside the boundaries of a conventional office, factory or shop, but this definition leads to confusion because it encompasses traditional homeworkers and teleworkers who work mainly *at home* as well as people who work on the move or partly *from home*.

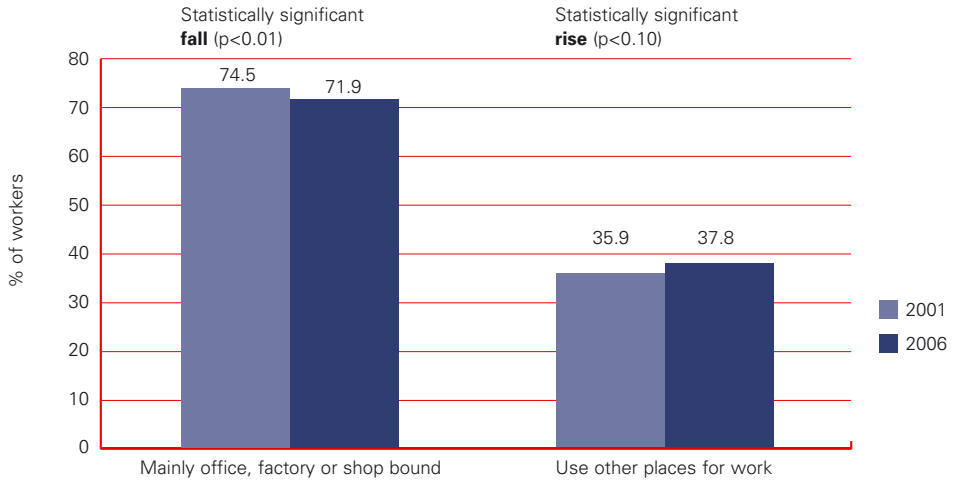
Researchers are forced to draw on a variety of data sets, some of which overlap and some of which are more reliable than others. Most data relate to the use of the home as a place of work, and very little information is collected about other places where people work, such as trains, taxis, hotels and internet cafes.

> "The big picture comprises a shift from few to many workplaces and workstations, from singular to plural workscapes."
>
> *Changing Places of Work. Alan Felstead, Nick Jewson and Sally Walters*

This presentation draws on original research findings generated by two studies of professional and managerial workers, funded by the ESRC as part of the *Future of Work Programme*. The first focused on working at home; the second on the implications of working on the move and in collective offices. The findings are based on analyses of secondary and primary quantitative surveys as well as qualitative data from case studies of 23 organisations, interviews with around 250 workers, photographic records of the places of work and periods of work shadowing.

Shifting locations of work – both outside and inside the office

Figure 2: Changing places of work, 2001-2006



Source: ESRC supported Skills Surveys

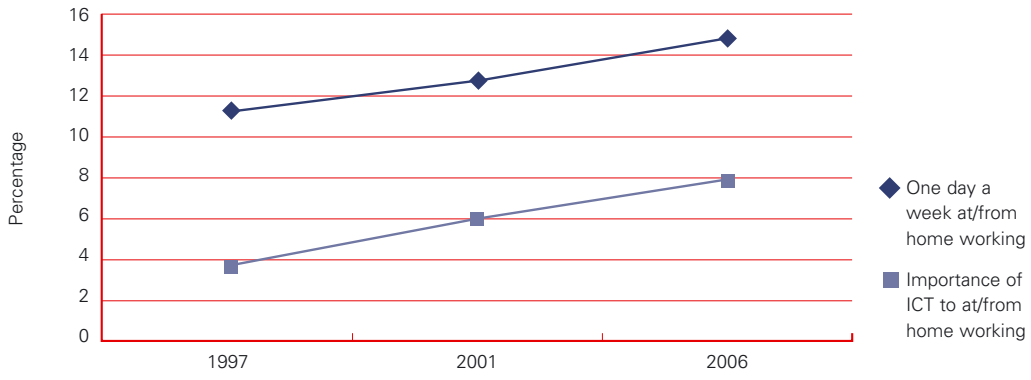
Only a minority of workers are affected by the move away from the conventional factory, office or shop.

The aim of the two studies was to build a picture of the changing patterns of people carrying out work away from the conventional physical boundaries of the office or factory, and identify which types of people and jobs have been most affected. It also looked at the ways in which offices themselves have changed.

Key findings

- Real and dramatic shifts are taking place in the physical places where people work, but only a minority of the workforce is affected. Office workers, managerial staff and professionals using telephones, faxes and computers are benefiting most. Sizeable proportions of people using their home as a workplace are from groups with a long history of working in this way.

Figure 3: Partial use of home as location of work and importance of ICT, 1997-2006



Source: QLFS spring release for 1997, 2001 and 2006

- Managerial and professional work is being carried out in a variety of different places – in the home, in an assortment of workstations within the office, and in 'third places' such as transport facilities and in-between spaces, such as motorway service stations.

> "Since professional and managerial work has become embedded in the electronic envelope, it is now possible to be engaged in productive employment in more and more locations across the globe at any time of day or night. The office stretches to become anywhere a laptop and mobile phone can function."
>
> *Changing Places of Work. Alan Felstead, Nick Jewson and Sally Walters*

- For those involved, the experience of everyday working life is radically changed. But there has been no 'big bang'. The change has been in the detail of daily routines and daily timetables.
- There has been no simple transition from working in the office to working at home. Homes are an important aspect of this change, but represent only one site among many. The direction of change is towards greater complexity in the spaces and times of work.

	Working mainly 'in own home'	Working mainly 'in different places using home as base'
1981	346,000	642,000
1992	661,000	1,201,000
1996	629,000	1,566,000
2002	673,000	2,130,000
2006	749,000	2,410,000

Source: QLFS spring release for 1981, 1992, 1996, 2002 & 2006

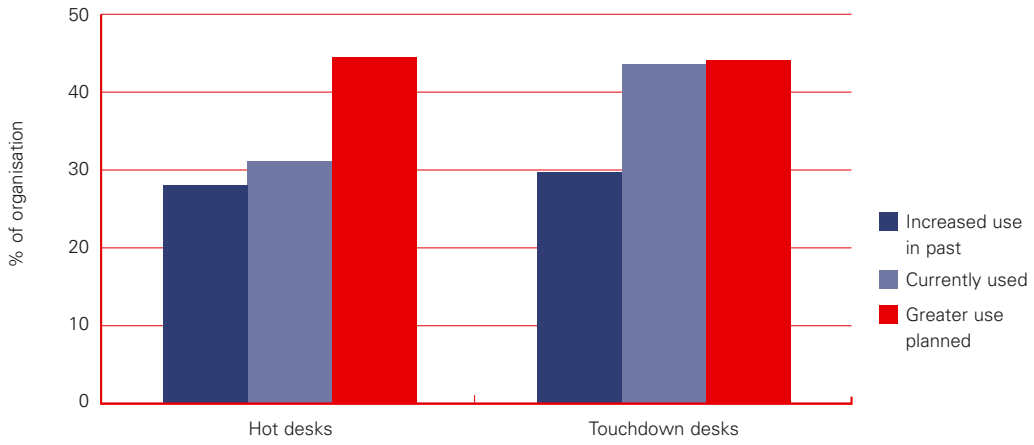
Home is only one of the places where people work away from the office.

- The process is being facilitated by portable electronic communications, mainly mobile phones, which enable instant connection to computer screens and the internet
- The implications for travel patterns are unclear: work may involve periods at home, in places of transit and in collectivised offices.

The office is changing too

Employer surveys suggest that the internal layout of workplaces is also changing. People are able to work in a range of places within the same building rather than being tied to a fixed location or cube of personal space.

Figure 4: Changes inside the office: Past, current and future trends



Source: ESRC FOW supported survey of HR managers of 128 of the largest UK organisations

Over a quarter of organisations surveyed reported an increased use of 'hot desking' over the last five years and approaching half planned to make greater use in the near future. A similar picture emerged with regard to the use of 'touchdown desks,' or desks that are set aside for drop in use by anyone in the organisation.

> "The office as we have known it for a century or more, is being reconfigured in ways that reduce, or even in some cases eliminate, personal space. This has fundamental implications for the ways in which people work and the relationships they make with co-workers."
>
> *Changing Places of Work. Alan Felstead, Nick Jewson and Sally Walters*

- Overall, the evidence suggests office work is becoming increasingly detached from individual and personalised spaces marked by a walled cell, or by an allocated desk in an open plan building
- Collective offices, for example, are typically open spaces with uninterrupted lines of sight in which staff do not have permanent workstations for their sole use. Instead, workstations are occupied on a temporary basis by whoever needs them. Internal walls are torn down or replaced by glass partitions. Buildings have large open areas, such as atriums, cafes and streets and stairs and lifts are open and exposed
- Although the absence of individually allocated desks and rooms can cause distractions the research suggests it can also result in a more informal social interaction, enhanced visibility and closer ties with work colleagues.

Confronting the stereotypes

There are two conflicting images of people who work at home. One is a woman – often from an ethnic minority tied down by the needs of her family and exploited by her employer, with few or no skills and working for low wages doing tedious work. The other image is often portrayed as the future of work – where people choose to work by phone, fax, email and computer while at home and enjoy a good work/life balance.

Research for the ESRC's *Future of Work Programme* confronts these stereotypes using empirical evidence from the Labour Force Survey (LFS).

Working at home is rapidly increasing

- The numbers working 'mainly' at home have risen from 1.5 per cent in 1981 to 2.7 per cent or 749,000 in 2006
- Those working at least one day per week at or from home has risen from 11.3 per cent in 1997 to 14.9 per cent or 4,201,000 in 2006.

Those working at home rely heavily on ICT to carry out their jobs

- Reliance on ICT has risen sharply with the availability of new technologies. In 2006, 52 per cent of people who work at home at least one day a week relied on phones and computers for their work, compared to 33.1 per cent in 1997
- Non-manual workers are most dependent on these technologies.

Homeworkers are more likely to be poorly paid than their peers

- About three-quarters of manual workers who work mainly at home are low paid compared to a fifth of counterparts who work in conventional locations
- A fifth of non-manual employees who work mainly at home are poorly paid
- On average, those working mainly at home receive lower rates than those doing comparable jobs in the workplace
- The picture also varies by gender. Women who work on non-manual jobs at home are better paid than their office-bound counterparts, while men tend to receive the same rate for non-manual work whatever the location
- Both male and female manual workers who work mainly at home receive substantially lower rates of pay than their labour market experience would predict.

Women are more likely than men to work at home compared with the rest of the population

- Women are statistically more likely to work mainly in the home whatever their job.

Ethnic minorities are over-represented among those working at home

- Ethnic minorities working mainly at home in manual occupations are over-represented, but not particularly prone to work at home taking other factors into account. However, they are among the worst paid.

Women with dependent children are more likely to work at home compared with the rest of the population

- Women who work mainly at home are more likely to have dependent children than their peers who work elsewhere.

Working at home or on the move – a perk for the privileged few?

For many people, new places of work can lead to increased levels of job satisfaction and perceived empowerment. However, the downside of working at home or on the move can be isolation, the erosion of small group solidarity, work intensification, longer hours, tensions with family and friends, and ambiguous relations with management.

> "The times and spaces of work are seeping into and wrapping themselves around those that were once the preserve of non-work activities, such as leisure, family and 'down' times… Drawing a line between work and non-work becomes ever more difficult."
>
> *Changing Places of Work. Alan Felstead, Nick Jewson and Sally Walters*

Having the opportunity to work at home is often put forward as one way in which the competing demands of work and family can be reconciled. But working at home can only contribute to work-life balance when it is offered as a choice. The majority of people who work at home do so because it is their only option.

Analysis of data from the 1998 Workplace Employee Relations Survey suggests workplaces that offer work at home are likely to be:

- Large establishments in the public sector
- More reliant on management techniques of self-monitoring so that individuals are responsible for the quality of their own output
- Less unionised but not feminised

People who are given the choice to work at home tend to be:

- Highly educated – over half have degrees or post-graduate qualifications
- At the top of the jobs hierarchy; managers and professionals account for 62.5 per cent of the total. Only one in ten of those entitled to choose where to work come from lower occupational groups
- Those who have more say in the way their work is organised, are more satisfied with their job and are more committed to the organisation.

In other words, choosing where to work is another perk given to those who already enjoy a relatively privileged labour market position.

Teleconferencing

Teleconferencing can be described as the use of telecommunications to facilitate contacts that might otherwise have involved business travel – such as meetings, briefings, training sessions or providing information. It usually involves two or more people in a telephone conversation, video or web link. There is little information about the degree to which teleconferencing is used and evidence of its impact on travel is sparse.

The *Smarter Choices* report (2004) quotes from a British Telecom survey of an unspecified number of staff who had booked audio-conference calls on a specific day in March 2000. The results showed that:

- 75 per cent of respondents said their call had replaced a face-to-face meeting
- If the sample was representative of BT, audioconferencing was estimated to be saving 135,000 face to face meetings a year, of which 120,000 involved a car journey
- Overall travel savings were estimated to be around 150million miles, of which 59million miles was car travel
- 46 per cent of the avoided trips would have taken place during peak congestion periods.

Among its policy recommendations, *Smarter Choices* suggests:

- Information and advice about teleconferencing could be included as part of any initiative aiming to influence business travel, for example, 'fleet management programs'
- Legislation which increases the employer's (health and safety) responsibilities for employees when they are undertaking travel in the course of work could encourage a greater rationalisation of business travel
- The social benefits of teleconferencing (greater participation of those with disabilities; better work life balance) could be more widely disseminated.

People meet more but travel less

Other researchers working on the broader impact of ICT

ROBIN MANSELL is Professor of New Media and the Internet, London School of Economics and Political Science and Honorary Professor at SPRU (Science and Technology Policy Research), University of Sussex. She is internationally known for her work on the social, economic, and technical issues arising from new technologies, especially in the computer and telecommunication industries. She was Director of a joint EPSRC, ESRC, AHRC research programme on *Countering Terrorism in Public Places*. http://www.epsrc.ac.uk/ResearchFunding/Programmes/CrossEPSRCActivities/CrimeSecurityAndTerrorism/CounteringTerrorism.html *The Oxford Handbook of Information and Communication Technologies* Edited by Robin Mansell, Chrisanthi Avgerou, Danny Quah, and Roger Silverstone, 2007 offers a broad inter-disciplinary perspective on the implications of ICTs for individuals, organisations, democracy, and the economy.

DAVID BANISTER is Professor of Transport Studies at the University of Oxford Centre for the Environment. He was Professor of Transport Planning at University College London and was Coordinator of the ESRC Transport Research Initiative (1987-1991). One of his research interests is reducing the need to travel – this includes analysis of pricing and planning interventions to achieve reductions in trip distances, car use and emissions. The key concern here is to provide local opportunities and to improve accessibility so that the quality of life in cities can be improved. Research has been carried out for the EU (DANTE, TRANSLAND, TRANSPLUS, PLUME), and the EPSRC (Cities and Sustainability Programme).

Professor Banister has recently published the findings of a project supported by BT that explores the potential for substantially increased levels of teleworking on companies, individuals and homes, through the development of a total energy analysis framework. In addition issues relative to the social implications of teleworking are discussed, including isolation, promotion, security and family constraints.

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Further information

RoSPA, The Royal Society for the Prevention of Accidents, http://www.rospa.com a registered charity established over 80 years ago with the aim of reducing accidents in all areas of life, says that every week up to 270 people are either killed or seriously injured in incidents which occur whilst 'travelling in the course of business'. This compares to less than seven fatal injuries in work related accidents in the workplace. RoSPA is campaigning businesses to implement alternatives such as videoconferencing.

Work Wise UK http://www.workwiseuk.org/what_is_wwuk/index.html is a not-for-profit initiative, which aims to make the UK one of the most progressive economies in the world by encouraging the widespread adoption of smarter working practices.

The National Business Travel Network. The Department for Transport's National Business Travel Network works with businesses to promote workplace travel plans. The National Business Travel Network is funded by the Department for Transport and operated by the environmental charity, Transport 2000 Trust. The British Chambers of Commerce are key partners in the National Business Travel Network. http://www.theclimatechangecharter.co.uk/national_business_travel_network.asp

The Meeting Without Moving Foundation (MWMF) http://www.meetingwithoutmoving.com/ is a not-for-profit organisation which works with businesses to adopt improved working practices, based around the use of collaborative technologies, in order to facilitate a new work and travel culture aimed at:

– reducing carbon emissions from unnecessary road and air business travel, and therefore protecting the environment;

– reducing unnecessary business travel, and therefore reducing work-related road traffic accidents.

– improving productivity, by reducing wasted time spent travelling; and

– enabling a more flexible and sustainable work environment, therefore enhancing work/life balance.

MWMF advocates the use of collaborative technologies such as video conferencing in the work place as an effective and environmentally friendly alternative to unnecessary business travel, therefore significantly decreasing the amount of CO2 emitted by business.

The **Department for Transport**'s aim is transport that works for everyone. This means a transport system which balances the needs of the economy, the environment and society.

The Department for Transport provides leadership across the transport sector to achieve its objectives, working with regional, local and private sector partners to deliver many of the services.

www.dft.gov.uk

The Economic and Social Research Council is the UK's leading research and training agency addressing economic and social concerns. It aims to provide high-quality research on issues of importance to business, the public sector and Government. The issues considered include economic competitiveness, the effectiveness of public services and policy, and our quality of life.

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