

Time to Go Home? A Temporal Examination of The Benefits of Homebased Telework

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Introduction

Time is an important variable and it is linked with every aspect of human behaviour and yet despite its importance, most studies with regard to work time within an organisation fail to distinguish between different individual perceptions of time or 'time personalities' and different organisation perspectives or 'temporal cultures'. This paper examines temporal cultures of organisations and time personalities with regard to a particular form of work organisation known as telework. It looks at the dominance of 'clock time' in Western culture and argues that the use of new information and communication technologies (ICTs) necessitates a change in this time perspective. It also examines different time personalities of individuals and a distinction is drawn between those individuals with polychronic conception of time who prefer to engage in two or more tasks or events simultaneously and those with a monochronic conception that prefer to concentrate on one activity at a time. This study examines a particular form of work, known as telework, which literally means working "at a distance". As time-space distanciation is incorporated into policies and practices a number of alternative work forms such as satellite centres, neighbourhood work centres, mobile work as well as home-based work become possible (Jackson and van der Weilen, 1998, Kurland and Bailyn, 1999)). However, for the purposes of discussion, the UK's Labour Force Survey (LFS) definition of teleworkers as "people who do some paid or unpaid work in their own home and who use both a telephone and computer" will be used in this paper. Moreover, this paper will specifically refer to those professional teleworkers (knowledge workers) who spend a substantial part of their regular working week based at home instead of an office.

Today, paid work activity can be conducted, "anywhere", "anytime" as the traditional spaces of paid work and rigid work time associated with these have become disjointed. This relocation of work from office to home removes some rigid temporal boundaries and demands some re-negotiation of the teleworkers' commitments to work and/or the domestic sphere. As individuals can bring work to home, family, shopping and social events, the dividing lines between work, home, marketplace and social activities have become more blurred. The division between work time and non-work time has become almost indistinguishable, particularly so for those individuals that spend a substantial part of their regular working week based at home instead of an office. This paper argues that a teleworkers temporal perception will affect the way in which they define the boundaries between work and non-work and their approach to working at home. Likewise, the dominant time orientation will determine the approach to telework within the organisation. It is argued that a failure to recognise these different perspectives may explain some of the problems in implementing telework schemes.

The paper also provides a preliminary analysis of some exploratory research into the use of telework as an alternative to relocation following the closure of a local office. The findings provide a temporal examination of the benefits of telework, derived from observations and in-depth interviews of teleworkers within the organisation. The research was conducted in the North West of England in a public sector organisation with teleworkers who were based at home as part of a pilot project.

Individual Time Personalities

Many researchers have examined what individuals do with their time resources, however these studies examine the use of time under the dominant time perspective in Western Culture. This orientation is referred to as 'clock time' where time is seen as a resource that can be used and therefore its use must be optimised. This assumption of the construct of time has limitations when examining what individuals do with their time resources as it does not allow for the consideration of polychronic time use. (Kaufman et al., 1991) Activities are presumed to be undertaken one at a time (monochronically), while many activities are actually undertaken simultaneously (polychronically) (Davies, 1990). Jacques (1982) highlights that we may live at the same time but not in the same time as we each have our own time perspective. As a consequence of this, many other perceptions will be effected by an individual's perception of time (Graham, 1981). Jacques (1982) argues that there are several

concepts of time used by different individuals. He notes the difference between Chronos, a time interval and Kairos the opportunity. The former being clock time and the latter time as related to personal action. This distinction is also drawn by Marsh (1952) and Robinson (1950) who discriminate between 'chronological time' and 'realistic time' and 'objective time' and psychological time'. This difference in temporal perception is based on whether time is symbolized as monochronic or polychronic being the two different ways in which individuals organise time and process tasks, particularly at work. (Kaufman et al., 1991). The distinction between monochronicity and polychronicity was first examined by (Hall, 1983) who used these concepts to describe the "temporal personality" of individuals, and even of entire nations. Hall (1983) argued that polychronic individuals view time as an infinite resource and interpersonal relations are at least as important for them as the task to be performed. They undertake to do several things at a time and are strongly oriented toward the present. They are less bound to a timetable or a procedure. In contrast monochronic individuals view time as a commodity that can be wasted and must be spent wisely. Their extreme concentration or dedication to one particular task reduces in importance the need for interpersonal communication. This "temporal personality" has been widely discussed by a number of authors but these later studies have shown that monochronicity and polychronicity are not two distinct concepts, but the opposite poles of a single concept (Bluedorn et al., 1992; Usunier, 1991). Kaufman and Lindquist (1999) state that monochrons seem to require a deliberate, planned control over their time and hence to identify time periods when certain activities will be undertaken. Hence they are would be better placed in a workplaces based on structured time with a well-planned schedule. Whereas polychrons would flourish in an environment of uncertainty and pressure (Kaufman and Lindquist, 1999)

Organisational Temporal Culture

The successful development of industrial capitalism required a standardised sequential order for industrial activity. The production process necessitated the operationalisation of clock time and the "clock" became the key machine of the industrial age (Mumford, 1934). Furthermore it has been argued by Hassard (1989:18) that 'the clock was the instrument of co-ordination and control' and that the task was replaced by the time period as the central unit of production. Hence, the understanding of industrial time is based on time-keeping, time-thrift and time-discipline (Thompson, 1967). This led to

the concept that time is a resource that must be saved and managed efficiently because "men's mind became saturated with the metaphoric equation time is money" (Thompson, 1967: 95). The study of time and motion in Taylor's scientific management is an extreme use of this belief. The protestant work ethic also strengthened the belief that time is money. Within this ethic, the utilitarian perception was that time cannot be reclaimed and therefore needs to be treated as a scarce resource, and optimised in its use. Adam (1990) regards this operationalisation of clock-time as primarily responsible for the historical development towards commodified time. The principle of time is money therefore became the underlying principle that informs, identifies and communicates the practices and (work) patterns of social and organisational life. The division between labour and free time supported the standardisation of the working hours and coordinated shopfloor activities. The result of this interrelation between regularity, standardisation and co-ordination brought about the introduction of the eight-hour day. Hence, clock time dominated the production process and work was measured in time units. Brown and Eisenhardt (1997) highlight that time has also been seen as a significant, and sometimes vital variable in the planning process, quality of the decision making, motivation and performance of individuals or groups, and in the success of exchanges or negotiations. This monetary attitude to time led to the belief that time was something that needs to be controlled and spent and therefore must not be needlessly wasted, used frivolously or given away freely. Lakoff and Johnson (1980: 8) argue that time is almost regarded as a quantifiable commodity and that it structures everyday activities in that it can be "spent, wasted, budgeted, invested wisely or poorly, saved or squandered".

As has been outlined, time has been key in the development of industrial work organisation but Western Culture chose to adopt to one dominant time perspective, that of "clock time", "chronological time" or "linear time" (Bluedorn and Denhardt, 1988). This Western perspective of time is deeply instilled with the Newtonian concept of the universe, where time is seen as chronological, linear, universal, segmentable, objective, unidirectional, constant, irreversible, measurable, separate from distance or space, having a beginning and an end (Gherardi and Strati, 1988; Usunier, 1991). Hence, our organisational design and consequent job designs are often based on demarcated departments, rigidity of deadlines driven by economies of time and motion. These short-term strategies support instant profit, restrictive control measures and uniform standards and procedures. This parochial attitude to time fails to recognise individual perspectives

of time, pays little regard to cultural differences in time perception between various departments, individuals or the host countries of transnational organisations (Benabou, 1999). Hence, the universality of the view that time is money has led us to ignore other notions of time. This is despite the fact that time is money is a relatively new concept, historically speaking, as it was preceded by a task-based conceptualisation of time, which is variable and context-dependent (Lakoff and Johnson, 1980). Adam (1990) points to the concept of the German Tagwerk (day's work) as such an example, where work (not money) is the measure of time. This conception of time where the task drives the completion of the work not the measurement of the clock has been associated with pre-industrial modes of production and with the household.

Impact of ICT on Temporal Culture.

In general management practices, it is implied that clock time and its associated monochronic procedures are superior to polychronic ones. (Lee, 1999: 17). It is without doubt that the use of clock time or linear time has produced excellent results. Furthermore this monochronic time is deemed to be easier to control and co-ordinate Schein (1992). However as Benabou (1999) identifies these successes occurred in stable socio-economic and political environments and technology had not caused the chaotic climate that now exists. Therefore, when information and communication technologies are involved in work processes, the superiority of the monochronic over the polychronic may be reversed. Holder (1992) argues that modern organisations are adopting polychronic conception of time (P-time) rather than monochronic time (M-time). P-time is abstract, intangible, events occur simultaneously and unpredictably and everything is in flux and nothing is truly stable. These organisations are regulated more by events and tacit communication than by clock time. However, he also highlights that the development of a P-time orientation in an organisation may not be adopted by all its actors (Holder, 1992). Temporal microcultures exist and therefore the individual's conception of time also need to be considered in relation to an organisation's temporal culture.

In discussing the societal change from modernity to postmodernity a number of authors have highlighted changes in our common understanding of time. Harvey (1999) suggested the term 'time-space compression' to encapsulate how the speed of global communications has substantially altered our temporal and spatial horizons. Giddens (1992) refers to 'time-space distantiation', when he highlights that increasingly social

relations between individuals no longer require a shared physical presence. Individuals become disembodied and although they act as if they are connected they remain at a distance, “continually creating and re-creating themselves through changing networks of interconnection based on ‘real time’ communication” (Morgan, 1993: 5). Consequently, information and communication technologies are altering our way of working particularly with respect to temporality Lee (1999). It is now technically possible for a wide range of different tasks involving the processing of information to be carried out anywhere and at the same time provided suitable infrastructure is available. Mobile computing technologies, for example, enable individuals to engage in several tasks located at different places at the same time. Hence ICT provides increased opportunities for disrupting the temporal ordering of work. Rather than making tasks or work more efficient Jauréguiberry (2000) argues that this ‘simultaneity’ is intrinsically radical and one activity is not substituted for another but occur at the same time.

Telework Time

Glennie and Thrift (1996) highlight that the industrialised world is currently undergoing a process of desynchronisation, where time is fragmented and discontinuous rather than linear, continuous, regular and unidirectional. Teleworking is representative these of post-industrial production processes where individuals are required to be able to master fluctuating and flexible temporal systems. It is a virtual work environment where individuals in different physical and temporal locations interact through information and communication technologies. Telework in its use of information and communication technologies disrupts the temporal order by altering the ways in which individuals structure their work patterns. It highlights a move towards more ‘task-oriented’ working where work is focused on the task, not the time taken to carry it out. Rather than fixed working hours based on clock time, the working day lengthens or shortens according to the tasks undertaken. This presents a challenge to the Western perspective of time as increasingly time is seen as a social construction of the actors in the organisational universe. (Benabou,1999). Individuals working monochronically seek to structure activities and plan for events by allocating specific slots of time to each event’s occurrence whereas individuals working polychronically place less value on temporal order, accept events as they arise and engage in multiple activities simultaneously, (Barley, 1988). Hence the temporal personalities of teleworkers may range from an extremely uni-tasked, monochronic individual to another who is able to deal with

multiple work and domestic tasks. Therefore this difference in time personalities may help to explain why some individuals find working from home difficult and others are completely at ease. Some teleworkers will focus on a single task over a defined period of time (e.g., they work monochronically) while others find it relatively easy to multi-task and work on several tasks concurrently (e.g., polychronic work). An organisation of work where individuals worked at specific time periods were required to be punctual, where time was seen as a resource, routine was the norm tasks were restricted to one or two at a time would be very difficult for a polychron. However a teleworking situation where an individual has the freedom to set their own work schedule, undertake non-work activities at the same time such as household tasks or eating would be more conducive to that individuals concept of time. Attitudes to use of time by teleworkers may also help to explain the differences between what teleworkers count as work and non-work time. For example Tietze and Musson (2003) found some teleworkers following more polychronic task-based approaches tended to be more flexible in the way they handled access, or in how they defined the end of the working day. Lee and Liebenau (1999) also suggest that individuals differ in their perceptions of time with regard to social time and clock time. For some teleworkers, time spent communicating with people is not wasted and for them socialising is an important feature of work and building relationships. However other teleworkers see time as a valuable commodity that should not to be wasted and therefore believe they should always be concentrating on the task in hand and completing it within specified time. Hence a teleworkers temporal perception will affect the way in which they define the boundaries between work and non-work and their approach to working at home.

The paid work of industry and the unpaid work of domesticity are often examined, both conceptually and empirically as separate entities. (Morf, 1989; Nippert-Eng, 1996) However, this construction of "work" as discrete from "home" or "non-work" is not clear (Hochschild, 1997; Perin, 1998). Telework removes any separation and brings "work" and "home" back together. This has brought about a blurring of the boundary between 'work and leisure' and necessitates a change in temporal perspectives. For some telework provides an opportunity to improve the work-life balance (Silver, 1993) but others point to the difficulties of relocating "work" into "home" (Brocklehurst, 2001; Steward 2000; Sullivan and Lewis, 2001). Others warn of the dangers of this blurring of boundaries such as the Taylorisation of family life and the extension of the "time is money" metaphor into home and leisure time. (Hochschild, 1997). Hence the private

arena becomes ever more dominated by the symbols of industrial production (Adam, 1990). The management of time between paid work and home or non-work has focused on scheduling time patterns. Zerubavel, (1981:60) refers to this as encouraging temporal harmonizing between “temporally asymmetric worlds”. However, although subject to the “commodified temporalities of its wider institutional context” the household is defined by more fluid, cyclic temporal boundaries (Karsten and Leopold, 2003). Furthermore, household time is structured by sequences of tasks rather than quantities of hours. It is grounded in different, more flexible temporalities (Davies,1990; Morgan,1993), which establish recurring patterns and rhythms of activities. Harvey (1999) argues that using clock time to measure activities between different temporal settings may cause an individual to wrongly associate an hour spent in one temporal organisation with an hour spent in another. Therefore it is questionable whether time in one domain, such as paid work can be substituted with time in another such as non-work.

Home-based teleworkers need to rely on their self-discipline to devise a temporal structure for their days spent at home. In teleworking situations the household challenges the boundaries between work and home. However, the removal of existing time-space barriers and the incorporation of work and leisure into the domestic setting can cause negative effects such as longer working hours. This may be because some teleworkers are unclear as to the boundary between work and leisure and others introduce stricter boundaries to separate work and leisure times than office-based workers. Hence it is difficult to count work and non-work-time resulting in the exclusion of breaks and interruptions (Steward, 2000). Telework brings the concept of clock time and its rigid temporal boundaries into the home but this temporal order does not always fit smoothly into the household pattern. Tietze and Musson (2003) highlight the use of symbolic behaviour, dress codes, signs on office doors and other avoidance strategies used to prevent the family intruding on work. However, they also argue that the household may impose its own temporal orders onto work when conflict leads to the emergence of more task-based approaches. Furthermore, by their nature polychronics are far less likely to compartmentalise home and work than monochronics, they often see the opportunity to combine tasks from work and home and thereby complete more in less time, thus suiting a flexible organic environment. Hence, the different ways of coping with telework may be attributed to the individual’s temporal nature. This was noted by Leeds and Leeds (2000) who found that some teleworkers found telework

provided them with the opportunity to combine household tasks whereas others created coping mechanisms to separate home and working spheres. Similarly, Harris (2003) reported difficulties in combining work and domestic tasks amongst some teleworkers.

Benefits

Home-based telework is associated with a range of specific as well as shared advantages or challenges. Advantages for the organisation can be access to a wider labour market, increases in productivity, reduction in overtime, cost savings on office space and an overall reduction in absenteeism. For the individual it is claimed that telework can break down segmented gender roles, increase employee control over working conditions, flexibility of working hours, assistance with childcare arrangements and provide benefits of increased autonomy in balancing work and life (Baruch 2000). (For a more detailed discussion of the realities of home-based work see Jackson and van der Wielen (1998) and Felstead and Jewson (1996, 1999, 2000). This optimistic view presents telework as technologically feasible, family-friendly, flexible and autonomous, desirable and perhaps even inevitable. For the organisation telework can be seen as a vital tool to achieve flexibility for companies' striving for reduced costs and rationalization (Webster, 1996). In the UK there is a current policy view that the opportunity to work at home can help achieve a better work life balance as well as providing opportunities for employers (DTI, 2001: DTI, 2003) This optimistic view has been strengthened by positive 'stories' appearing in mainstream, widely-read publications (Winner, 1996) and a lack of discussion of an alternative view in these publications. In addition telework is often portrayed by the media as an escape from the office environment and as part of social progress enabled by technology. Personal flexibility and the opportunity to balance paid work and family commitments is stressed repeatedly in headlines such as:

There's No Workplace Like Home Guardian Thursday May 20, 2004

Kiss Goodbye to the Office Forever. The Guardian Saturday October 9, 1999

Go To Work in Your Pyjamas Tuesday June 11, 2002

Flight of the globetrotting 'telecommuters' The Independent 17 April 2004

The ideological view of telework presents a desirable, socially progressive type of work where its technological opportunities are seen as providing hope to those disadvantaged in the work place (Winner, 1996). New technology is seen as providing an improvement of working conditions and therefore the teleworker benefits from increased autonomy,

responsibility and skill development. The optimistic view is symbolised by the notion that telework is an area where both gender and class will converge and have an equal footing. There are claims that telework will engender equal opportunities as women can remain at home and undertake paid work but still undertake their family and caring responsibilities. Furthermore, it will provide an environment where women are liberated from the male control and the power of conventional workplaces (Huws, et. al., 1996). In addition, teleworking men would also be motivated to contribute to childcare and domestic activities due to the removal of the barrier between the home and organisational realms.

However, some studies report mixed results in terms of the impact of telework on daily life (Gurstein, 2001; Sullivan & Lewis 2001), and in contrast to the idealised view, a number of authors have adopted a critical approach to telework, highlighting the exploitation experienced by those engaged in this flexible form of work.. The critical studies continue to draw attention to the lack of training and development opportunities, low levels of income, social isolation, increased levels of control and exclusion from the internal labour markets (Phizacklea & Wolkowitz, 1995; Allen & Wolkowitz, 1986). When the idealised benefits are examined more closely it can be argued that rather than creating “ post-modern, empowered teleworkers" (Stanworth, 1997: 58) telework creates many difficulties for the individual and employers use it as means of reducing costs and weakening terms and conditions. The following sections will explore in more detail the benefits claimed for telework from the individual’s perspective and will provide a critical view of these benefits.

Cost Savings

Some studies claim telework assists the family budget as the teleworker does not pay for parking, car fuel, meals, and business wear. Also, some teleworkers can claim tax deductions for their home office space (Pitt-Catsoupes and Morchetta, 1991; Goodrich ,1990). However, in contrast to this view Stanworth (1997) has highlighted that teleworkers all share an increased vulnerability to cost cutting by employers. Even though many authors highlight the cost savings for employers in implementing a telework policy few examine the impact it has on the employee and the family home. The advantages of teleworking rarely mention of the possibility of the employer compensating the employee for home-based work by paying a portion of rent, mortgage, or utility costs. McQuarrie (1994) argues that changing office-based workers

into home based teleworkers may be an example of a transfer, rather than a reduction, of costs. That is, the employee bears the costs previously covered by the employer. Thus the 'energy and space "saved" at the office is instead relocated to the employee's home' (McQuarrie, 1994). Furthermore, those employees who combine work at office and home are having their rights to ownership of physical space eroded (Stanworth, 1997). Moreover the cost of work undertaken but not paid for, such as additional administration is not discussed.

Child and Eldercare

Although the media may imply telework provides the opportunity of the concurrent achievement of remunerated work and child care, the difficulty of undertaking paid work and providing child care at the same time has been highlighted by a number of theorists, (Christensen, 1987; Kugelmass, 1995). Nevertheless, a number of authors observe that by working at home teleworkers can rely less upon paid child care providers (Oldfield, 1987; Zeleny 1993). For example, Robertson (cited in Mirchandani, 2000) estimates that childcare can be reduced by up to three hours when a parent works at home. Similarly, the study by Gurstein et al. (1995) highlighted that female teleworkers were able to alter their paid work patterns around their childcare work. Furthermore, many academics observe that because teleworkers are working at home they can be available to supply occasional care for older children or elderly relatives. It is not seen as a substitute for child or elder care but it can provide a bridge that prevents (Schepp, 1990; Kugelmass, 1995). However, the claim that home based telework gives workers the flexibility to better integrate their work and family responsibilities (Nippert-Eng 1996) ignores the difference between professional and non-professional teleworkers. It is claimed that working at home allows the integration of paid work and child care, however there is no empirical evidence to support this. Galt quoted in Mirchandani (1999) found that home-based workers often worked late into the night after caring for children all day. Risman and Tomaskovic-Devey (1989), suggested that teleworkers arrange for child care for children at home which negates the cost-saving "benefit" of being able to care for one's children while working. Furthermore McQuarrie (1994) argues that telework provides a means for the organisation to escape responsibilities and commitments to its workers. In addition it can be argued that encouraging workers with children to telework may remove the pressure on an organisation to provide day-care services for working parents" (Risman

and Tomaskovic-Devey, 1989). Furthermore, as most women still retain the primary responsibility for the children. (Armstrong and Armstrong, 1994) telework does not provide the ability to 'balance' it can be argued that telework presents a situation where women are expected to continue to be the carer and undertake paid work simultaneously. Mirchandani (2000) argues that the benefits of working from home can only be fulfilled by strengthening the gendered organizational norms that assume family responsibilities are separate from job demands. This position is also supported by other research (Christensen, 1988; Haddon and Silverstone, 1993; and Phizacklea and Wolkowitz, 1995).

Work-Life Balance

It is argued that telework allows the teleworkers to manage family and other domestic or personal responsibilities (Pitt-Catsouphes and Morchetta 1991; Christensen 1990). Winker (cited in Vendramin et al, 2003) highlights that telework may be able to increase workers' autonomy, and support the balancing of domestic and professional life, arguing that parents recognise flexible time schedules allow teleworkers to determine their own working hours. Reducing commuting time is also seen as a benefit and Pitt-Catsouphes and Morchetta (1991) argue that telework allows individuals to save on their travelling between their place of work and their home. However, Sullivan and Lewis (2001) highlight that commuting time has its advantages as it allows individuals to switch off and move into their other life. Without this space and time the transition is harder and increased stress may occur. In addition it has been argued that by working at home, teleworkers can convert their saved commuting time into personal and family time (Pitt-Catsouphes and Morchetta, 1991). Despite this, many authors have highlighted the many difficulties associated with relocating "work" into "home, rather than providing an opportunity to improve the work-life balance (Silver, 1993),. When teleworking at home, the space and time where paid work occurs is the same space and time where non-work or home activities take place. Duxbury et al., (1993), argue that this has the potential to reduce stress as telework removes the problem of both role overload (as dual responsibilities are fulfilled simultaneously) and role interference (as both roles are co-located) However, many authors dispute this and argue that the co-location of work and home may increase the overlap of an individual's family and occupational roles and thus increase stress (Brocklehurst, 2001; Steward 2000; Sullivan and Lewis, 2001).

Reduced Absenteeism and Reduced Stress

Reduced absenteeism is claimed as an organisational benefit of telework, conversely it may be viewed as detrimental to the individual teleworkers. Nevertheless, Steward (1997) has drawn attention to the fact that the ability to commute has defined fitness-to-work but that teleworking has redrawn the boundaries between the sick and the healthy worker. This is highlighted by Leeds and Leeds (2000) who note the claims by a senior HR manager that 'often what stops you coming into work is the journey, but if you can stay at home and maybe start a little later then often you can carry on'. Pollert (1988) also maintains that that in this form of work it is possible from the employer's perspective to expect workers to continue to work during illness. Some studies highlight long working hours and stress. In particular, women have the dual responsibilities of family and domestic tasks. Many studies report that women with caring responsibilities organise their work around caring demands (Phizacklea & Wolkowitz, 1995; Felstead & Jewson, 2000; Bryant, 2000). Stress also increases as a result of the blurring of boundaries between work and home, as teleworkers also need to undertake emotion and cognitive work in order to balance the two previously separate realms (Ellison, 1999; Mirchandani, 1997; Nippert-Eng; 1996, Sullivan, 2000). Winker (cited in Vendramin et al, 2003) draws attention to the danger of self-exploitation as permanent time pressure of work related activities negate the opportunity to increase leisure time. Consequently, the advantages of improved compatibility of job and family are removed. Felstead & Jewson (2000) also highlight the intrusion of work into homelife and discuss the strategies teleworkers employ to prevent this interference.

Control and Autonomy

Greater schedule flexibility is based on the belief that telework provides greater work autonomy. Some authors have supported this claiming that teleworkers working at home are in control of their time (Zeleny, 1993). However, rather than provide increased worker autonomy and control it can be argued that the new technologies will result in the erosion of individual freedom for workers. The claim for increased autonomy and control is based on the supposition that professionals have the autonomy to manage their own work and tasks. Specifically it is assumed that professionals are in charge of their time. Zerubavel (1981) argues that this autonomy is relative as professionals are autonomous only when compared with the relative lack of control experienced by other workers. Moreover systems of socialisation and education are

internalised time disciplines amongst professionals and this coupled with social expectations regarding the character and status of professional work, results in low temporal boundaries hence professional managers are “always on the job” (Zerubavel, 1981:148). This is reflected in findings by Leeds and Leeds (2000) that professional teleworkers did not feel more in control of their work, and many felt that their working pattern was more rigid than that of some office based staff. Huws et al. (1990) maintain that when control is indirect and measurement by results the process of giving instructions is more of a negotiation this may lead the employee to believe that he/she is being treated more like an equal than a subordinate. They also claim that there is no real loss of control over the workforce as it is still the employer who controls the work and the payment and therefore the balance of power remains unaltered. Huws et al (1990) maintain, that the greater freedom from central control experienced by some professional teleworkers may be an illusion resulting from an alteration in the mechanism of control. Allen & Wolkowitz(1986) also highlight autonomy is a myth as power remains with the employer or contracting organisation. McQuarrie (1994) argues that it is clear that in most teleworking relationships power and control over work and work conditions still lie mainly in the hands of the employer--even though the work is being performed in the employee's home. She further highlights that the limited choices available to the teleworker support Braverman's (1974) argument that advances in technology serve to de-skill workers and put greater power in the hands of owners and managers.

The UK Labour Force Survey indicate that twice as many managers as administrative staff are teleworking and increasingly that there are a number of professional people that work at home for some of their working week Felstead et al, (2001). It is often assumed that these skilled professional teleworkers have greater autonomy over their work situation. However, this is based on the supposition that professionals have the autonomy to manage their own work and tasks. Specifically it is assumed that professionals are in charge of their time. However Zerubavel (1981). argues that this autonomy is relative as professionals are autonomous only when compared with the relative lack of control experienced by other workers. Moreover systems of socialisation and education are internalised time disciplines amongst professionals and this coupled with social expectations regarding the character and status of professional work, results in low temporal boundaries hence professional managers are “always on the job” (Zerubavel, 1981:148). This is reflected in findings by Leeds and Leeds (2000) that

professional teleworkers did not feel more in control of their work, and many felt that their working pattern was more rigid than that of some office based staff. Highlighting that the greater freedom from central control experienced by some professional teleworkers may be an illusion resulting from an alteration in the mechanism of control (Huws et al., 1990)

Schedule Flexibility

One of the strongest arguments for the benefits of telework stems from the perceived benefits that working from home offers in providing schedule flexibility. Schepp (1990) argues that teleworkers have an increased selection of working hours and therefore are able to undertake paid work activities according to their own internal clocks. Nevertheless, claims for increased time use and flexibility often fail to take account of the gender dimension. The so-called harmonisation between paid work and domestic/family times/spaces might be more stressful for women than men.. Sullivan & Lewis (2001) highlighted that men tend to use time released to extend time in paid work whereas women use it to fulfil family and domestic demands, and therefore increase their productivity. Phizacklea and Wolkowitz (1995) note that motivations underlying the option for teleworking may be external to the technology. Sullivan & Lewis (2001) argue that women have managed their lives and social roles according to a polychromatic time whereas men have organised their lives according to a monochromic time, around a professional career. This is supported by Sullivan and Gershuny (2001) who also argue that women experience greater stress and pressure in managing different uses of time and different obligations as they combine domestic roles with paid work. Mirchandani (1999b) highlights that for men working at home allows them to obtain privacy and uninterrupted work times, whereas women do not make this separation of home and work just for work related reasons. Furthermore, men and women embark on teleworking for very different reasons, with women generally taking it up in order to manage their domestic responsibilities more easily.

Productivity or Workaholism

It has been argued by some authors that work productivity increases because teleworkers may have more control over interruption and take less informal breaks and work (Olson, 1988). However this is an organisational advantage and there is evidence that the lack of regimentation of telework can have disadvantages and may lead to

'workaholism' as the primary source of the increased productivity is the teleworkers own motivation (Mirchandani, 1999). Armstrong (1999) observes that telework's advantage of 'being close to work all the time' is also its disadvantage. In teleworking situations the household challenges the temporal boundaries between work and home and home-based teleworkers need to rely on their self-discipline to devise a temporal structure for their days spent at home. The removal of existing time-space barriers and the incorporation of work and leisure into the domestic setting can cause negative effects such as longer working hours. This may be because some teleworkers are unclear as to the boundary between work and leisure and others introduce stricter boundaries to separate work and leisure times than office-based workers. Hence it is difficult to count work and non-work-time resulting in the exclusion of breaks and interruptions (Steward, 2000). This psychological inability to create a home/work division may lead to the employee to become a workaholic, unable to separate herself from work when it is physically present in the home. (McQuarrie, 1994) Workaholism may be beneficial to the firm in the short term because of increased output, but it is obviously detrimental to the individual's physical and mental well-being and an intrusion on family life. In the long term it may also be damaging to the organisation.

The Case Study Organisation

This case study presents the findings from a temporal examination of the benefits of telework, derived from observations and in-depth interviews of 10 teleworkers during 2005. The research was exploratory, combining observation of planning and evaluation meetings, analysis of company documentation, quantitative time use questionnaires, identifying patterns of work, and qualitative interviews. The research was conducted in the North West region of a public sector organisation with teleworkers who were based at home as part of a pilot project to support relocation. The case study organisation is a government agency and the opportunity to telework arose as an alternative to relocation following the closure of a local office. Following the planned closure of the Liverpool office and the transfer to Manchester, the opportunity to work from home was introduced for the two Liverpool based teams. A number of planning meetings involving management and one involving all staff took place prior to the start of the project. The Liverpool office was decommissioned and the team were given the opportunity to participate in the flexible working project as teleworkers.

Criteria for inclusion in this study were that participants worked from home two or more days per week and used a computer to communicate and/or carry out their work. There were some employees who occasionally worked from home but they did not meet the criteria for teleworking for the purposes of this study. Therefore, only those who were provided with equipment to work at home were included. The participants were all senior and experienced professionals, who were used to working independently but had never worked from home in the past on a permanent or formal basis. In total ten staff including two managers agreed to participate in the teleworking initiative. After three months all participants and their managers met to evaluate the pilot project. The research instrument comprised the observation of four meetings to discuss and plan the teleworking initiative (including one away day with all staff), analysis of company documentation, observation of the evaluation meeting, two interviews with senior management, analysis of time use charts, several interviews with all teleworkers (both during and after the completion of the initially agreed pilot period of six months). One manager took a job elsewhere prior to the completion of the study. Although two teleworkers chose to take voluntary redundancy and one returned to conventional office work at the end of the pilot project they were able to participate in the study. The analysis of findings is therefore based on 9 participants, all of whom were professional or managerial workers. There were two male and seven female participants, all of whom were married and all but two were employed full time. Six of the nine workers had children under 16 living at home and of these three had children under 5. The amount of time spent teleworking each week was similar for all participants with most spending more than half their working time at home.

Observation of planning and evaluation meetings took place in the Liverpool Office prior to its closure in July 2005. The first two meetings were only attended by managers including the manager who was championing the project. The third meeting was an away day held at Liverpool Hope University. This was attended by all participants, their managers, senior management, human resource management, administrative and ICT support staff. This away day event was followed by another meeting of managers and administrative staff to discuss proposed systems and procedures. An evaluation meeting took place at the end of May with teleworkers and their managers, ICT support and administrative staff. All attendees were asked to complete an evaluation questionnaire, however the results of this may have been affected by the actions of senior management during the lunch break, when they told two administrative staff they were being made

redundant! The interviews of teleworkers took place in two stages, firstly to explain the research process and later to discuss their evaluation and perception of the telework project. The interviews all took place in the participants' homes during May and June 2005. All interviews were recorded for later analysis and field note observations were made. At the initial explanatory interview, participants were asked to complete a time audit over a three month period. It was hoped that data from the analysis of these audits would be validated by participants in later interviews. However, the time audits proved to be problematic and ineffective as participants found the recording and estimating of time use was difficult and many were incomplete. Therefore the findings from the audits were not used to provide any statistical evidence but to identify trends or patterns in time use for further discussion in the follow-up in-depth interviews. At the evaluation interviews, participants were asked to comment on the pilot project but also to discuss their time use patterns of their working day and working week including non-work and work boundaries. They were also asked about the specific benefits outlined in the literature review.

An Examination of the Benefits of Telework in the Case Organisation

Although, overall all participants were positive about the pilot project and they believed they were working more flexibly, there was evidence that tensions arose around some of the benefits claimed. The increases in productivity, reduction in overtime, cost savings on office space and an overall reduction in absenteeism, could be realised by the organisation but at the expense of the individual teleworker. There was little evidence that the teleworkers had increased control over working conditions, flexibility of working hours, assistance with childcare arrangements or increased autonomy in balancing work and life (Baruch 2000). The following sections go through each of the benefits of telework as identified earlier and examines them in relation to time. Each benefit is discussed and empirical data is used to inform the emergent issues and themes.

Cost Savings

Teleworking, created many difficulties for those on the pilot as the employer was using it as means of reducing costs. None of the teleworkers had a permanent desk in the Manchester office which caused problems if all of one team were in the office at the same time. There were only three desks allocated for teleworkers but as most teleworkers planned their day in Manchester around attending a meeting or training this

often meant the whole team were in at the same time trying to use the same desks. There had been no planning of office time and the use of office space was not evaluated as part of the pilot project. When visiting the Manchester office, teleworkers were expected to travel in their own time and although travel expenses were paid the teleworkers were expected to travel together in a car to reduce costs and not to use the train.

“We’ve have been asked to travel together to save costs so myself and [G] travel together. Believe it or not going in the car takes longer than it does on the train....and you can’t work in the car, even as a passenger”. (Female, part time)

One teleworker was given a Manchester based contract which meant she was responsible for her own travel time and travel expenses to the Manchester office.

“I want to work from home but my contract says Manchester.....it costs me £12 a day to travel to the Manchester office.....it takes about an hour and a half” (Female fulltime)

During the pilot the teleworkers kept their Liverpool based contracts and were not given formal homeworking contracts which would have entitled them to tax relief. The organisation did not make any contribution to heating nor lighting expenses even though the Inland Revenue would allow a contribution of £2 per week exempt of tax. The cost reduction benefits (avoiding relocation costs and reduced office space requirements), and weakening terms and conditions (by delaying the issue of homeworking contracts) benefited the employer. By contrast cost reduction for the employees did not necessarily occur, especially when costs were viewed in terms of time as well as monetary expenditure. Although some teleworkers highlighted potential cost savings such as not having to pay for parking, using less car fuel and ability to prepare meals all highlighted the time cost in travelling to the Manchester office. On average this was 3 hours per day that could not be used for other activities.

To work at home the organisation invested in furniture and computer equipment. All teleworkers were provided with a desk, a chair, laptop, docking station with mouse and keyboard, a printer and a mobile phone. Where possible broadband was installed for the teleworkers to use, however initially two teleworkers had to use dialup until broadband became available in their area. The equipment could not be used for personal use despite some teleworkers offering to contribute to the cost.

“It’s a trust issue; the technicians have done something to the router or something to stop us buying anything online. We can browse but nothing else.” (Female, fulltime)

Some teleworkers reported the need to use their own personal computer equipment and internet access to book train tickets. One teleworker who used specialist software in the Manchester office reported having to use her own PC for data transfer.

“I can’t use a USB pen or write to the CD drive.....I have to e-mail stuff to myself, save it on my home PC, copy it onto a CD, then use it on the laptop.” (Female, fulltime)

The laptop and desk required assembling and the other equipment needed to be setup. In total this took between 2 and 4 hours, often involving other members of the family. The time to do this work was done outside of the working day, often by other family members and was not paid.

“It took us about two hours, my wife helped she’s good at things like that!” (Male fulltime)

Other non-work time was used for work-related administration activities, such as booking train tickets and posting letters. Again this could involve the use of family members.

“Administration is not clear, we have to book our own or through Manchester but time can be a problem” (Female, fulltime)

Surprisingly, some viewed this use of non-work time for work related activities as a perk.

“I often take the dog for a walk to the post office at lunchtime to post letters to clients” (Male, fulltime)

Although, under Inland revenue tax regulations homeworking teleworkers could claim tax relief for their home office space this was not possible as no formal homeworking contracts were issued. Neither did the organisation compensate the teleworkers for home-based work by paying a portion of rent, mortgage, or utility costs. As McQuarrie (1994) argues changing Liverpool office-based workers into home based teleworkers is an example of a transfer, rather than a reduction, of costs. The teleworkers now bear the costs previously covered by the organisation. Office space, time for administration duties, time taken in assembly and maintenance of furniture and equipment, time taken to assess health and safety issues in the working environment have all been passed to the teleworker and their families.

Child and Eldercare

Despite findings from earlier studies (Oldfield, 1987; Zeleny 1993) none of the teleworkers with existing childcare arrangements reported that they used less childcare. Most believed that had hardly changed since working at home.

“Childcare is no different, the 12 year old still goes to a childminder” (Female, Full time)

Although the amount of childcare required remained the same participants found they were able to share childcare with partners during non-work time more easily. Also, four participants reported that they were able to see more of their children and were able to attend after school activities more easily. Some however found they had to spend more time making arrangements for childcare and found difficulty planning their work time because of lack of forward planning.

“ ’cause I don’t always know what day I am going to Manchester I can’t plan any childcare so I end up being late for meetings...I drop the nine year old off at school and then drive into Manchester. On a good day I can be there at quarter past ten but it can be quarter to eleven.”
(Female, part time)

Neither of the teleworking men contributed to childcare and domestic activities despite the opportunity to remove the barrier between the home and organisational domains.

“Life goes on up there without me, I don’t do anything else when I am working, [S] takes care of the one year old” (Male, Full time)

Work Life Balance

The ability to manage family and other domestic or personal responsibilities (Pitt-Catsoupes and Morchetta 1991; Christensen 1990) was reported by all female teleworkers reporting that they could undertake household tasks whilst working from home. However, they all reported undertaking these tasks during tea or lunch breaks.

“I put the washing in when making tea and hang it out at lunchtime” (Female, part time)

However, even being able to balance work and domestic activity using non-work time left some teleworkers feeling anxious. .

“but even if you do it as part of a break you feel guilty” (female, fulltime)

No-one missed the commuting travel time but a couple of the female teleworkers did miss leaving work on a Friday. They no longer had the opportunity to switch off and move into their other life (Sullivan and Lewis, 2001).

“ On a Friday I try to go into the office so I can have that leaving work feeling – it’s not the same at home”(Female, fulltime)

Although no-one specifically referred to a decrease in non-productive time this was highlighted by their responses to enquiries about short breaks during work time. .

“Does give you flexibility.....it’s a mind set.....maybe put the washing in dryer when I go to the loo. When I am in the office I have less productive time, I spend more time doing non-work in the office!” (Female, full time)

Despite ensuring they had a productive work-time undertaking exclusively work related tasks, none of the teleworkers ensured that non-work time was filled exclusively with non-work activities.

“I have answered mobile and (I’m) tempted to read e-mails and have done this ‘cause I can. If I’ve been off I read before I go back on Monday morning” (Female, fulltime)

All reported using non-work time to undertake work-related tasks.

“I do answer the mobile when I am not working but I am going to try and not do this” (Female, fulltime)

The increase in overlap of an individual’s family and occupational roles and the encroachment of work-related tasks into non- work time have the potential to work against the work life balance and thus increase stress (Brocklehurst, 2001; Steward 2000; Sullivan and Lewis, 2001).

Reduced Absenteeism and Reduced Stress

All participants thought that working from home would make it easier to avoid being off sick when they were ‘feeling under the weather’ rather than too ill to work.

“I’d be tempted to work, especially if you could have heating on and didn’t have to travel...it’s not quite as daunting as going out in the rain for a journey” (Female, Fulltime)

As Steward (1997) highlighted the ability to commute now defines fitness-to-work and teleworking has redrawn the boundaries between the sick and the healthy worker. This was highlighted by the only teleworker to be ill during the research study, who worked through an illness that would have required her to take time off for sickness had she been office based. She was proud that this illness hadn’t left her with a ‘sick record’

“We all had a tummy bug but I managed to do core hours....I did 10 – 12 then had a couple of hours in bed....then did 2 more hours.” (Female, part time)

There was no evidence that stress levels were lowered and for some dealing with the organisation from home appears to have increased stress.

“It took time to explain to help desk that I was a homeworker. They didn’t believe the [government agency] had installed my broadband.....I think they thought I was a bit nutty” (Female, part time)

Another reported how uncomfortable she felt having to look after someone else's equipment.

"It's very stressful, your house but not your stuff" (Female, fulltime)

Others highlighted the attitudes of office based workers as causing them stress:

"They don't publicize it...when I left at 3 I got a comment ...oh one of the part timers. No-one has told them what it's all about. We are allowed to work more flexibly....They can't leave before four to catch the eight minutes past four train but we can." (Male, fulltime)

Control and Autonomy

Rather than provide increased worker autonomy and control, most participants reported that they had little control over their working week. All worked conventional working hours within the allowed 'core working hours' range for the organisation. There was very little flexibility possible. The teleworkers were required to visit the Manchester office at least once a week and as they had to travel in their own time (for most a journey of between 90 and 120 minutes) this meant a short working day. Often two days would be required with the result that they had to make up the time when working from home. One part time teleworker reported that she felt that she had less control over her work time. In addition she was working longer hours now she worked from home but her paid hours were the same, this made her consider whether she could continue working for the organisation.

"...instead of 8 – 4.30 we do 10 to 3.30/3.45..... it's a shorter working day the rest is travelling...yeh...and you've got to make that up somewhere which is why we have said that if this time is then our own time and we have to go to Manchester more than one day a week which is going to happen if we've got training and meetings and various other things going on. That's a lot of time for me to make up in 2 days at home and that's where I am not sure I can do the job anymore" (Female, part time)

Some teleworkers were worried that time spent at home might remove their control over their careers in the government agency. One outlined why he thought it would be be damaging his career prospects.

"When I asked our new head of training and development, where this is all going. She said 'I can't see how you're going to progress as a homemaker as you won't see anyone.'" (Male, fulltime)

Schedule Flexibility

The teleworkers recognised that as they were all professionals there was potential for flexibility in their working pattern.

“There’s a lot of flexibility in our job...twenty years ago we had to be there 9 – 5. Now we have to do the hours but there is some flexibility” (Male, Fulltime)

However, all participants stated that they usually worked the same hours that they had worked when they were office based. Nevertheless during interviews and the evaluation meeting they all described their work as more flexible than when they worked in the office. In the evaluation survey all participants ranked ‘time flexibility’ as the second highest reason to telework after ‘No need to relocate’ but none specifically reported using their time more flexibly since teleworking. Three participants scheduled their telework time within the 9 to 5 day during a conventional Monday to Friday week. The remainder who claimed to work outside the conventional day occurred mostly in marginal times previously allocated to commuting and this was usually early morning. Only the manager openly admitted to weekend working. Others hid their weekend work on the timesheet.

“If I work on a Sunday for a couple of hours I just put that time down on one of my normal working days...I don’t think the [government agency] systems could cope with anything else!”
(Female, part time)

Productivity

All teleworkers reported working the same number of hours as they did when they were office based. However, when asked for typical working days at home they reported working between a half and one and a half hours longer than they did in the office. One recognised that she did work longer some days:

“In Liverpool I would start at same time but leave earlier - but now I work longer as I work through travel time” (Female, fulltime)

Most teleworkers logged on their Laptops before breakfast but didn’t count this as work time, arguing that they needed to logon early as it took so long to get started.

“I always have a shower and wash my hair, get dressed then login, then breakfast ...then I take my tea to my desk” (Female, fulltime)

“It takes 10 minutes if you log on early but it can take 20 or 30 minutes” (Male, fulltime)

As Steward (2000) reported, teleworkers find it difficult to count work and non-work-time resulting in the exclusion of breaks and interruptions. All teleworkers believed that the reduction of interruptions allowed them to work more productively they didn’t always recognise that this increase in productivity maybe as a result of working during non-work times.

“I don’t stop for a cup of tea, I just get it and carry on working” (Male, Fulltime)

When non-work interruptions did occur, teleworkers reported that they ensured the time was made up from non-work time.

“If it’s say 20 minutes then I won’t finish at 4.30 but if its only short I don’t bother making it up” (Male, Fulltime)

Some teleworkers tried to ensure there was a division between work and non-work and reported feeling uncomfortable with blurred boundaries.

“ [D] feels she needs to be here ‘cause I’m here but if I was in the office she wouldn’t see me...but I feel guilty if we have a chat”. (Male, Fulltime)

The inability to create a home/work division means that the teleworker is unable to separate work time and non-work time and this may lead to workaholism. (McQuarrie, 1994) However, one teleworker did recognise that she was now interpreting work and non-work time differently:

“If I am at home and had a bad day I work through lunch. I wouldn’t do this in the office I would go to lunch with the others ” (Female, Part time)

Another recognised that office work was different to home work:

“going to Manchester it’s not the day we do lots of work, it’s a catching up with people” (female, fulltime)

Conclusions

This paper has examined the benefits of telework through a time lens and has highlighted that there are a number of areas where telework through its flexibility can, and does provide individual benefits. However, although these benefits do exist they are not always available and are not always as great as some authors portray them. In particular it has highlighted that the claim of time flexibility cannot necessarily be realised. Furthermore the benefits of childcare savings, increased productivity and reduced absenteeism are seen to only benefit the employer. It has also shown that telework may be detrimental to the individual and their family through difficulties in the separation of home and work life, increased working time, possible workaholism, increased work costs and lack of schedule flexibility.

The literature review sought to investigate the different time perceptions amongst individuals (time personalities) and changing temporal cultures within organisations. It explored the concept that individuals have different time personalities ranging from

monochronic to polychronic and that organisations have different temporal cultures some based on clock time and others on task-based time. This has implications for both the employee and the employer as a teleworkers temporal perception will affect the way in which they define the boundaries between work and non-work and their approach to working at home. However, it was found in the case study organisation that although the nature of the work undertaken by the teleworkers was task based the government agency operated on clock time. The time spent at home teleworking and in the centralised workplace was not as a result of employee choice, but the employers' demands for worker presence at the office. The nature of telework in the government agency was not characterised by temporal flexibility and autonomy, but by external time constraints a rigid clock based time structure. Work time patterns identified in the study suggest that telework does not providing opportunities to use time flexibly. The opportunity for polychronic individuals to work more flexibly and to balance non-work and paid work time was not in evidence. Teleworkers in the case study worked to rigid traditional work times and many were prevented from working in a polychronic fashion at home because of requests to attend office meetings. The institutional rules and managerial constraints retained their powerful influences and ensured teleworkers worked in the monochronic temporal culture of the organisation.

Furthermore the organisation had not considered different individual time personalities and their different approaches telework. There was little evidence that telework provided opportunities for the flexible management of the balance between paid work time and other non-work time. The organisation expected all teleworkers to work in a monochronic style and to complete timesheets to demonstrate they had worked in a linear fashion under clock time.. Although the teleworkers wanted to take a polychronic approach to working at home by undertaking domestic and other non-work tasks at the same time as work tasks they were constrained by the organisational rules and its temporal culture. They reported feeling guilty if the time boundaries were blurred and non-work tasks permeated work time. Many described building temporal barriers for work at home as a means of preventing the blurring of work and non-work time. Furthermore, many teleworkers allowed work time to intrude on non-work time where they could undertake multiple tasks as well as address work issues.

Although this is only the preliminary analysis of one case study it is clear that the identification of the time styles of teleworkers has the potential for better understanding of behaviours. An improved understanding by managers may help to build trust and

reduce conflict, leading to more realistic expectations of behaviours of teleworkers and their supervisors. ICTs are necessitating a change in the temporal culture of organisations and those organisations that use ICTs to assist with flexible working time patterns, such as telework, will need to adjust their work organisation and working styles. A failure by organisations to recognise different individual time personalities and adjust their temporal culture will result in recurring difficulties. Further research into time personalities and temporal cultures of teleworkers and teleworking organisations is needed to explore these ideas in more depth.

References

- Acker, J. (1998) The future of gender and organisations: Connections and boundaries, *Gender Work and Organisations* vol 5 no 4 October
- Adam, B., (1990), *Time and Social Theory*, Polity Press, Cambridge.
- Adams, C and Winston, K (1980) *Mothers at Work* New York: Longman
- Allen, S. & Wolkowitz, C. (1986), The control of women's labour: the case of homeworking, *Feminist Review*, n. 22: 25-51.
- Armstrong, P and Armstrong, H. (1994). *The Double Ghetto: Canadian Women and Their Segregated Work*. 3rd edition. Toronto: McClelland & Stewart.
- Armstrong, N. (1999), "Flexible work in virtual workplace: discourses and implications for teleworking", in Felstead, A. and Jewson, N. (eds.), *Global Trends in Flexible Labour*, London: MacMillan Press, pp: 43-61.
- Atkinson, J (1989) Four Stages of adjustment to the demographic downturn. *Personnel Management*. August
- Bailyn, L. (1988) 'Freeing Work From The Constraints Of Location And Time', *New Technology, Work and Employment* Volume 3(2) Autumn
- Bailyn, L.; Fletcher J; and Kolb D (1997) Unexpected connections: considering employees' personal lives can revitalise your business *Sloan Management Review Summer*, vol; 38 no 4 , p 11 (9)
- Barley, S. R. (1988) 'On technology, time, and social order: Technologically induced change in the temporal organization of radiological work', in Dubinskas, F. A. (ed.), *Making Time: Ethnographies of High-Technology Organizations*. Philadelphia: Temple University Press, 123-169.
- Baruch, Y., (2000), Teleworking: benefits and pitfalls as perceived by professionals and managers, *New Technology, Work and Employment*, 15, 1, 34-49.
- Beechey V (1986) Women's Employment In Contemporary Britain In : Beechey V and Whitelegg E (eds) *Women in Britain Today*. Milton Keynes: Open University Press
- Benabou, C (1999) Polychronicity and temporal dimensions *Journal of Managerial Psychology*, Vol. 14 No. 3/4, pp. 257-268.
- Bluedorn, A. D. and R. B. Denhardt (1988), "Time and Organizations," *Journal of Management*, Vol. 14, No. 2, pp. 299-320.
- Bluedorn, A. D., C. J. Kaufman, and P. M. Lane (1992), How Many Things Do You Like to Do at Once? An Introduction to Monochronic and Polychronic Time, *The Academy of Management Executive*, Vol. VI, Number 4 (November), pp. 17-26.
- Braverman, H. *Labour and Monopoly Capital: The Degradation of Work in the Twentieth Century* (London: Monthly Review Press, 1974).
- Brocklehurst, M., (2001), "Power, identity and new technology homework: implications for new forms of organizing", *Organization Studies*, 22, 3, 445-66.
- Brown, S.L., Eisenhardt, K.M. (1997), "The art of continuous change: linking complexity theory and time-paced evolution in relentlessly shifting organizations", *Administrative Science Quarterly*, Vol. 42 No.1, pp.1-34.
- Bryant, S. (2000), At home on the electronic frontier: work, gender and the information highway, *New Technology, Work and Employment*, 15(1): 19-33.
- BT, (1991) *Clerical Teleworking –How it affects Family Life*, BT Martlesham
- BT, (1995) *Teleworking - A Glimpse of The Future*, BT Martlesham
- Burch, S. (1991) *Teleworking: A Strategic Guide for Management*, Kogan Page
- Burke, J (1997) Are Families damaging to careers ? *Women in Management Review*, Vol 12 Issue 8
- Christensen, K. (1987). A hard day's work in the electronic cottage. *Across the Board*, 24, 17–23.
- Christensen, K. (1990). Case studies of telecommuting arrangements. *Conditions of Work Digest*, International Labor Office, Geneva, Switzerland.
- Davies, K., (1990), *Women and Time. The Weaving of the Strands of Everyday Life*, Avebury, Aldershot.
- DTI (2001) *The Essential Guide to Work Life Balance*, Department of Trade and Industry. Crown Copyright. Accessed at <http://www.dti.gov.uk>
- DTI (2003) *Telework Guidance* September Department of Trade and Industry. Crown Copyright. Accessed at <http://www.dti.gov.uk>
- Duxbury, L., Higgins, C., Mills, S. (1992), "After-hours telecommuting and work-family conflict: a comparative analysis", *Information Systems Research*, Vol. 3 No.2, pp.173-90
- Ellison, N. (1999). "A communications perspective on telework: State of the art." *Social Science Computer Review*, May, 17 (2).
- Felstead, A., Jewson, N., (1996), *Homeworkers in Britain*, HMSO, London.
- Felstead, A., Jewson, N., (1999), *Global Trends in Flexible Labour*, Macmillan, London.
- Felstead, A., Jewson, N., (2000), *In Work at Home. Toward and Understanding of Homeworking*, Routledge, London.
- Felstead, A., Jewson, N., Phizacklea, A., Walters, S., (2001), "Working at home: statistical evidence for seven key hypotheses", *Work, Employment and Society*, 15, 2, 215-31.
- Fletcher, J and Rappoport, R (1996) *Work-Family Issues as a Catalyst for Organisational Change* in Lewis, S and Lewis J (1996) *The Work Family Challenge –Rethinking Employment* Sage: London
- Galinsky, E Friedman, D and Hernandez, C A (1991) *The Corporate Reference Guide to Work Family Programmes*. New York: Families and Work Institute
- Galpin, S. and Sims, D. (1999) Narrative and identity in flexible working and teleworking in Jackson, P. (Ed.) *Virtual Working Social and Organisational Dynamics*. London: Routledge
- Gherardi, S. Strati, A. (1988), "The temporal dimension in organizational studies", *Organization Studies*, Vol. 9 No. 2, pp. 149-64.

- Giddens, A., (1992), *The Consequences of Modernity*, Polity Press, Cambridge.
- Glennie, P, and Thrift, N. (1996) Reworking E. P. Thompson's 'Time, Work-discipline and Industrial Capitalism'. *Time and Society*, 5 (3): 275-299.
- Goldstein J., (1994) Institutional pressures and strategic responsiveness :employer involvement in work-family issues: *Academy of Management Journal* Vol 37 No 2 pp305-82
- Gonyea J and Googins B (1996) A Restructuring of Work in *The Work Family Challenge* by Lewis. S. and Lewis, J. Eds.(1996) London:Sage Publications
- Goodrich, J. (1990). Telecommuting in America. *Business Horizons*, 33, 31–37.
- Graham, R.J. (1981), "The role of perception of time in consumer research", *Journal of Consumer Research*, Vol. 7 No. 4, pp. 335-42.
- Gurstein, P. (2001) *Wired to the World Chained to the Home*. Vancouver: UBC Press.
- Hall, E. T. (1983) *The Dance of Life: The Other Dimension of Time*. Garden City, N.Y.: Anchor Press/Doubleday.
- Handy, C. (1989) *The Age of Unreason*, London Century Hutchinson
- Harris, L. (2003) Home-based teleworking and the employment relationship *Personnel Review* Volume 32 Number 4 pp. 422-437
- Harvey, M., (1999), "Economics of time: a framework for analysing the restructuring of employment relations", in Felstead, A., Jewson, N., *Global Trends in Flexible Labour*, Macmillan, London.
- Hassard, J., (1989), "Time and industrial sociology", Blyton, P., Hassard, J., Hill, S., Starkey, K., *Time, Work and Organisation*, Routledge, London, 13-34.
- Hewitt, (1993) *About Time: The Revolution in Work and Family Life*. London:IPPR Press
- Hochschild, A., (1997), *The Time Bind. When Work becomes Home and Home Becomes Work*, Metropolitan Books, New York, NY.
- Hogg, C and Harker L (1992) *The Family Friendly Employer: Examples from Europe*. London: Daycare Trust
- Holder, R.J. (1992), "Time in the new workplace", *Journal for Quality and Participation*, .
- Huws, H., Jagger, N., Bates, P., 2001, Where the Butterfly Alights, The Global Location of E-work, *IES Report 378*, Institute of Employment Studies, London.
- Huws, U. (1995) Social Europe: Follow up to the White Paper - Teleworking European Commission DGV, Office for Official Publications of the European Commission
- Huws, U., Jagger, N. and O'Regan, S. (1999) *Teleworking and Globalisation* , Institute for Employment Studies
- Huws,U., Korte, W.B. and Robinson, S., (1990) *Telework: Towards The Elusive Office*, John Wiley
- Jackson, P., van der Wielen, J., (1998), *Virtual Working. Social and Organisational Dynamics*, Routledge, London.
- Jacques, E. (1982) *The Form of Time* Heinemann London
- Jauréguiberry, F. (2000) Mobile telecommunications and the management of time. *Social Science Information (Information sur les Sciences Sociales)*, 39 (2), 255- 268.
- Kanter, R.M. (1977), *Work and Family in the United States: A Critical Review and Agenda for Research and Policy*, Russell Sage Foundation, New York.
- Kanter, R.M. (1989) *When Giants Learn to Dance*. New York: Basic Books
- Karsten, L. Leopold, J.(2003) Time and management: the need for hora management *Personnel Review* Volume 32 Number 4 pp. 405-421
- Kaufman, C. and Lindquist J. (1999), "Time Management and Polychronicity: Comparisons, Contrasts, and Insights for the Workplace," *Journal of Managerial Psychology*, Vol. 14, Numbers 3 /4, 288-312.
- Kaufman, C. J., P. M. Lane, and J. D. Lindquist (1991), "Exploring More than Twenty-Four Hours a Day: A Preliminary Investigation of Polychronic Time Use," *Journal of Consumer Research*, Vol. 18 (December), pp. 392-401.
- Kinsman, F., (1987), *The Telecommuters*, John Wiley & Sons
- Kugelmass, J. (1995). *Telecommuting: A manager's guide to flexible work arrangements*. New York: Lexington Books.
- Kurland, N., Bailyn, L., (1999), "Telework: the advantages and challenges of working here, there, anywhere and anytime", *Organizational Dynamics*, Autumn, 53-68.
- Kurland, N., Bailyn, L., (1999), "Telework: the advantages and challenges of working here, there, anywhere and anytime", *Organizational Dynamics*, Autumn, 53-68.
- Lakoff, G., Johnson, M., (1980), *Metaphors We Live by*, University of Chicago Press, London and Chicago, IL.
- Lash, S., Urry, J., (1994), *Economies of Sign and Space*, Sage, London.
- Lee, H. (1999) Time and information technology: monochronicity, polychronicity and temporal symmetry. *European Journal of Information Systems*, 8: 16-26.
- Lee, H. and Liebenau, J. (1999) New time-disciplines in virtual work environments. In B. Adam, R. Whipp, and I. Sabelis, *Making Time*, Oxford University Press.
- Leeds, B. and Leeds, O. (2000) "Telework: A family friendly option " *5th ITF workshop and Business Conference*, Linköping University, Stockholm, August
- Leeds, B.S. (1997) Managing Professionals by Remote Control, in Jackson, P. and Van der Wielen, J. M. (Eds.) *'Building Actions on Ideas'* Tilburg:WORC
- Lewis, S and Lewis J (1996) *The Work Family Challenge –Rethinking Employment* Sage: London
- Marchington, M and Speakman, S (1998) The Bounded Workplace: Issues of identity and Control amongst a male shiftworkers (unpublished paper)
- McQuarrie, F. (1994) Telecommuting: who really benefits? *Business Horizons*, Nov-Dec v37 n6 p79(5).
- Mirchandani, K. (1999) Reforming organisation: contributions of teleworking employees in Jackson, P. (Ed.) *Virtual Working Social and Organisational Dynamics*. London:Routledge
- Mirchandani, K. (1999b) Legitimizing work: telework and the gendered reification of the work-nonwork dichotomy. *The Canadian Review of Sociology and Anthropology* Feb v36 i1 p87(2)

- Mirchandani, K. (2000) "The Best of Both Worlds" and "Cutting My own Throat": Contradictory Images of Home-Based Work, *Qualitative Sociology*, Vol. 23, No. 2
- Morf, M., (1989), *The Work/Life Dichotomy*, Quorum Books, New York, NY.
- Morgan, G. (1993) *Imaginization*. London: Sage.
- Mumford, L., (1934), *Technics and Civilisation*, Harcourt, Brace and World, New York, NY.
- Nippert-Eng, C., 1996, *Home and Work*, University of Chicago Press, Chicago, IL and London.
- Oldfield, M. (1987). The electronic cottage: Boom or bane for mothers? *Resources for Feminist Research*, 16, 42–44.
- Olson, M. H., (1988) Organisational Barriers To Telework in *Telework: Present Situation and Further Development of a New Form of Work* edited by Korte, W. B., Steinle, W. J. and Robinson, S.
- Perin, C., 1998, "Work, space and time on the threshold of a new century", Jackson, P., van der Wielen, J.M., *Teleworking: International Perspectives. From Telecommuting to the Virtual Organisation*, Routledge, London, 40-55.
- Phizacklea, A. and Wolkowitz, C. (1995). *Home Working Women: Gender, Racism and Class at Work*. London, United Kingdom: SAGE Publications Ltd.
- Pieperl, M.A., Baruch, Y., (1997), "Back to square zero: the post-corporate career", *Organisational Dynamics*, 25, 4, 7-22.
- Pitt-Catsoupes, M., & Morchetta, A. (1991). The coming of age: Telework. Boston University, Center for Work and Family, November.
- Pleck J (1997) The Work Family Role System in: *Social Problems* vol 24 pp417-427
- Pollert A (1988) The Flexible Firm Fixation or Fact? *Work, Employment & Society* Vol. 2(3) pp281-316
- Poole, M (1989) Time To Tackle The Labour Supply Problem *Personnel Management* July
- Risman, B. J. and Tomaskovic-Devey, D. (1989) The social construction of technology: microcomputers and the organization of work, *Business Horizons*, May-June, pp. 71-75.
- Robinson, W. S. (1950) Ecological Correlation and the behaviour of individuals *American Sociological Review* 15, 351-357
- Schein, E. H. (1992) *Organizational Culture and Leadership*. San Francisco: Jossey-Bass Publishers.
- Schepp, B. (1990). *The telecommuter's handbook*. New York: Pharos Books.
- Silver, H., (1993), "Homework and domestic work", *Sociological Forum*, 8, 2, 181-204.
- Simkin C and Hillage J (1992) *Family Friendly Working: New Hope or Old Hype?* Brighton IMS report No 224
- Smith, D. (2000) *Leader Column Management Today* April
- Stanworth, C. (1997) Telework and the information age. *New Technology Work and Employment* 13:1 pp 51 - 62
- Steward, B. (1997) Telework and Health: Time, Space and Identity Boundaries, in Jackson, P. and Van der Wielen, J. M. (Eds.) 'Building Actions on Ideas' Tilburg: WORC
- Steward, B., (2000), "Changing times. The meaning, measurement and use of time in teleworking", *Time and Society*, 9, 1, 57-74.
- Sullivan, C., Lewis, S., (2001), "Home-based telework, gender and the synchronization of work and family: perspectives of teleworkers' and their co-residents", *Gender, Work and Organization*, 8, 2, 123-45.
- Sullivan, C..(2000). "Space and the intersection of work and family in homeworking." *Community, Work & Family*, 2000, 3, 2, Aug, 185-204.
- Sullivan, Oriel & Gershuny, Jonathan (2001), "Cross-national changes in time-use:some sociological (hi)stories re-examined", *British Journal of Sociology*, Vol. 52(2): 331-347.
- Thompson, E.P., (1967), "Time, work-discipline, and industrial capitalism", *Past and Presence*, 36, 52-97.
- Tietze, S. Musson, G. (2003) The times and temporalities of home-based telework *Personnel Review* Volume 32 Number 4 pp. 438-455
- Usunier, J.U. (1991), "Business time perceptions and national cultures: a comparative survey", *Management International Review*, Vol. 31 No. 3, pp. 197-217.
- Vendramin, P. Webster, J. Wagner, I. Birbaumer, A. Tolar, M. Ponzellini, A. Moreau, M. (2003) *Widening Women's Work in Information and Communication Technology Conceptual framework and state of the art* Revised. Available at <http://www.ftu-namur.org/fichiers/D1-secondversion.pdf>
- Verespej, M. A. (1994) The anytime, anyplace workplace. *Industry Week*, July 4, v243 n13 p37(3).
- Ward, L. (2000) Policy and Politics: Wider rules on 'family friendly' working *The Guardian*; Manchester (UK); Jun 13, 2000;
- Webster, Juliet (1996), *Shaping Women's Work – Gender, employment and information technology*, London: Longman.
- Wilkes, R. B., Frolick, M. N. and Urwiler, R., (1994) Critical Issues in Developing Successful Telework Programs, *Journal of Systems Management* July p30 – 34
- Winner, L., (1996). 'Who Will Be in Cyberspace?' *The Information Society* 12:1, 63–72.
- Zeleny, M. (1993). Work at home. *Human Systems Management*, 12, 81.
- Zerubavel, E., (1981), *Hidden Rhythms. Schedules and Calendars in Social Life*, University of California Press, Berkeley, CA.