

Disability and Teleworking

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1. Introduction

1.1 Objectives and Scope

This report has been commissioned by BT to examine the issues raised by home based teleworking for the disabled. First, arguments concerning the merits of teleworking for disabled employees and for their employers are examined. Next, the report documents the forms of evidence pertinent to the disabled and telework, including both feedback from existing schemes for these workers and from the disability literature in general. The main part of the report then explores the significance of different types of disability for telework and the implications of different types of telework for the disabled.

1.2 General

It has been suggested that one particular p091 of labour which might benefit from telework are those who for some reasons are relatively tied to the home - especially the disabled. The benefits for this group has been used as a major argument in support of the development of telework. Clearly, teleworking could well become a significant factor in helping companies to achieve the required percentage of disabled employees.

In practice, there has been very little research on the issues which emerge for the disabled. It is therefore important to develop some understanding of the particular circumstances of such potential teleworkers.

2. Literature Review

This study is primarily based on a literature review supplemented by discussions with agencies representing various groups of disabled. There has been one particular scheme of significance in the UK, which is mentioned at several points in this report. As part of its Information Technology Awareness Programme, in 1983 the DTI sponsored The Extended Pilot Remote Work Units Project. The aim was to investigate how teleworking using new Information Technology might benefit the disabled. Sixty people took part in the initial 2-year study, which was managed by IT World. This initiative was subsequently followed by an expanded (100 people) second phase, partly sponsored by the EEC.

2.1 Defining Disability

2.1.1 The Heterogeneity of Disabilities

One point noted by writers in this area is that 'the disabled' are often discussed as if they constitute an homogeneous group. In practice, they are in many ways less alike than the able-bodied population. For example, there is little in common between the wheel-chair bound but articulate person, the mentally handicapped, someone suffering from epilepsy, the blind, the deaf etc. [1].

One thing they might appear to share is the same label - i.e. that people react to them all as 'disabled.' To an extent this is true, with instances of people talking loudly to the physically less mobile or blind as if

they are also deaf. Or the able bodied may generally treat people with disabilities as totally helpless and in need of assistance in every respect - which simply is not true. But, as we shall see some disabilities are less visible than others and certainly some are widely misunderstood (e.g. epilepsy). This factor can mean that some disabled experience very different kinds of response from others.

in addition, the severity of the disability is an important issue. Even within one category of disability, such as spina bifida, there can be great variations in what those afflicted can manage. Out of those registered as being blind, only 10% are totally blind. The rest of the partially sighted can see to varying degrees, right down to being able to read some forms of print. While many with cerebral palsy (spasticity) have often very clear difficulties in terms of loss of control over movement and speech, for some the symptoms are so light that there is almost no noticeable difference from the able-bodied [2].

Lastly, the same disability may have quite different effects. For some, arthritis means that it is difficult to stand up for any time while for others, the effect is the opposite and they cannot sit down for long periods [3]. Clearly, the severity and varied effects have very different implications for work - and for teleworking - where it is not possible to construct some oversimplified list of disabilities and say exactly what that means for a particular worker.

2.1:2 The Invisibility of some Disabilities

It is worth adding a few more points about the case of 'hidden handicaps' such as haemophilia, diabetes, epilepsy and those with a history of heart attacks - where there is nothing visibly wrong and the person looks ordinary. People with these conditions can cope with many types of work without requiring modifications -the main problem is the risk to themselves or to others in some kinds of critical or dangerous work. This is less of a concern for many types of office task than, say, if such employees were working in heavy industry. But there is also a lack of knowledge about the meaning of those handicaps. For example, epilepsy can take many different forms. Many of those with the condition have no seizures or only have them while asleep. But employers confronting the disability have refused epileptics employment on the grounds of it being a dangerous condition even where the people concerned are permitted to drive - and where there is far less risk involved in the actual work than in driving [4].

The other key hidden dimension of disability mentioned by a number of analysts [5] and in interviews with the disabled [6] is the 'fatigue' brought on by various conditions such as multiple sclerosis. Only in the last decade has this started to be recognised as a major stumbling block to obtaining and maintaining employment. Although by no means associated with every condition (e.g. it is not particularly a problem for the blind), it is often not appreciated by employers that many of the disabled can cope while working but need to take rests and to pace themselves more than the able-bodied, in order to save their strength [7].

Apart from general fatigue, there can also be swings in the effect of a disability, such as a flaring up of arthritis. This means that it is very difficult to work on some days. Such flare ups may last for brief spells or for weeks, with much time spent in bed. Employers sometimes underestimate the effects of those fluctuations in terms of what disability means for the person concerned [8]. Other aspects may be drowsiness, reduction of ability to concentrate if pain-killers are being taken, or muscular spasms which can incapacitate for a few moments [9].

2.1.3 Types of Disability

Although there are several approaches to drawing up a list of different disabilities, the following list, drawing on several sources, should provide some idea about the range of conditions involved [10]:

- Epilepsy
- Arthritis
- Spasticity
- Blindness or partial sight Deafness or auditory impairment Multiple sclerosis
- Psychiatric
- Mental handicap
- Malformations
- Amputees
- War wounded
- Polio
- Head injuries
- Heart attacks
- Heart disease
- Spinal injuries
- Tetraplegia
- Paraplegia
- Muscular dystrophy
- Diabetes
- Cancer
- Haemophilia
- Rheumatological disease
- Respiratory diseases
- Cerebral Palsy

An alternative approach to classification [11] is to describe broader categories of disability according to their key abilities which they effect:

- Communication
- Mobility
- Dexterity and movement
- Continuity and speed

Mental disability is a separate category

2.2 Disability and Employment in the UK

2.2.1 The Disabled Population

There are some problems with the definition of disability and therefore with counting disabled. Different agencies have different criteria concerning when a person is sufficiently impaired to count as being disabled - i.e. when he or she has crossed some threshold. These definitions do not coincide, with the resulting confusion in public policy. The same people may count as disabled for one set of benefits and not for another [12].

There have been estimates that as many as 10% of the population may suffer from some form of long term serious physical or mental disability [13]. This is the figure which has also been cited in some Government documents, even though it initially surprised some of the researchers involved. It is so large mainly due to taking into account the 'invisible ailments' discussed previously rather than the more obvious ones.

In contrast to this high figure, there has been a decline in the numbers actually registered as disabled over the last 40 years (936,000 in 1950 to 389,000 in 1986) [14]. When people were asked in surveys why they did not register, the main reasons were that:

- they did not know about the system.
- it had not occurred to them.
- even if they were aware of some physical difficulties, they did not think of themselves as being classified as 'disabled' (which was the case with Jean in the interviews for the report 'Clerical Teleworking - How it affects Family Life').
- they thought it would be harmful if they revealed their problems, through the stigma involved [15].

Even in the DTI project where the disabled worked with IT in their homes, about 20% of the participants were not registered disabled [16].

2.2.2 The State, the Disabled and Work

Since 1944, the Disabled Persons (Employment) Act has meant that if a firm has 20 or more employees, it should aim to have a quota of at least 3% registered disabled. The first problem here is that if many of the disabled fail to register - as observed above - then employing someone with what may appear to be a disability may not count towards that quota.

In practice, there are other problems with the scheme [17]. In fact, fewer than 1 in 3 of the disabled are in employment. The number of employers meeting this quota has fallen from 53% in 1965 to 27% in 1986. The whole scheme has been described by the National Audit Office as 'ineffective and unenforceable'. Although there are some calls to abandon quotas, they are still defended by the voluntary agencies, and at the moment it would seem that they are going to remain [18].

The state benefits situation is complex, with benefits coming from many sources [19]. Various writers have noted that starting employment can mean loss of the disability pension [20]. This factor previously made low paid homework unattractive, (and the same may apply to low paid clerical telework). But in the DTI scheme, most found the telework to be still financially worthwhile. Besides, it is worth noting that the financial incentives are not always the predominant reason for seeking work. In a GLC survey, a key motivation for working was the wish simply to be useful and to be working at something [21]. The other form of state support is in the form of providing aids and equipment for the registered disabled e.g. through the Employment Service Agency [22]. In the DTI scheme, the fact that this was all organised and provided by the state was important for employers, and one of the attractions of the pilot project [23]. On a more regular basis, while formally available, some of the voluntary agencies interviewed commented that the process of obtaining such aids can be a lengthy one.

2.3 The Effect of Disabilities on Work Performance

It is important not to ask about the implications of a disability in the abstract, but to put this into the context of the type of work done. A condition may have little or no effect on the ability to perform some types of work, but be a considerable hindrance or even insurmountable barrier for other tasks [24].

For example, if there are mobility problems (not necessarily requiring wheelchairs) this may make little difference to an employee who only has to operate in a small area, and if facilities such as toilets are not far away. But if the same work has to be done in a large area, involving movement between different departments, perhaps carrying small items from one place to another, then the job may present more difficulties.

It would be inappropriate to go through all the various possible effects of disabilities for various types of work - there are too many. Instead, this report focuses on two aspects which are shared by a proportion of the disabled, including those suffering from different conditions, and which are particularly relevant for telework.

2.3.1 Travel to and from the Workplace

The first issue here is travelling to and from work. For many people who can function perfectly well in the workplace, the greatest difficulty is actually travelling to work - i.e. the commuting. Flexitime to avoid the rush hour is sometimes a solution [25] but it may not be enough. If there is need for special transport, it is not always possible to guarantee the time when the disabled will be picked up, given traffic delays [26]. The travelling factor meant that the DTI study was biased towards candidates with mobility problems. However, the problem may be wider than this. Because of fatigue, a tiring journey to work which the able-bodied might take in their stride may leave some disabled with little energy by the time they have struggled into the office.

The travel considerations suggest one of the main virtues of teleworking for the disabled. Working at home removes these pressures of travel, making it easier for many of those with disabilities to produce a better performance and possibly to make work times more predictable (given the uncertainties concerning when transport would arrive).

2.3.2 Control over the Work Environment

One problem for disabled workers can be the positioning of the items with which they work. For example, bending down or stretching up to reach something can be very painful (e.g. for those with back complaints), as can moving any distance around an office. Now clearly it is possible to make some provision within the workplace, and numerous books point to the possibilities of rearranging desks, seating and filing cabinets (e.g. 3 storey ones for use by those in wheelchairs), or redesigning the work so that there is less need to move around a large area. In other words, the specific place where the disabled employee works can be customised to suit them. Nevertheless, the office is still designed for many people, and it can be difficult to change everything, including shared resources, to match the needs of disabled employees. In contrast, the teleworking disabled have total control over the home environment, where every aspect can be geared to their requirements, albeit after some planning.

2.3.3 The Pacing of Work

From the list of potential symptoms of disability noted earlier, it is all too easy to take too negative a view and see the disabled as incapacitated for work. In fact, most of 'the disabled' most of the time can work perfectly well and cope with these problems. In fact, it is in many senses detrimental to emphasise the list of disabilities because that is exactly what most employers perceive - i.e. the first thing they 'see' is potential problems.

Instead, the advice of most agencies involved with the disabled is to stress that it is important to stress the 'abilities' of this potential workforce - not only that they can do a job, but often that they can do it better than able-bodied counterparts. In fact, the capacities of the disabled are often underused, so that they are involved in tasks below that warranted by their skills and education. Most studies suggest that the disabled are at least as productive as the rest of the workforce, often, being particularly conscientious because of their awareness of the negative perceptions of their disability [27].

On the other hand, it is important to show the hidden side of disability, to appreciate issues such as fatigue and those periods when conditions flare up, because it has implications for telework. Such factors have already led to calls for greater flexibility in work conditions. Over and above issues of fatigue, for many disabilities the work might take slightly longer to do than for the able-bodied [28]. But in many cases this does not matter. Those disabled, often informally, put in longer hours to make sure their work is of a certain standard.

Telework can clearly offer some advantages where it allows the disabled workforce to organise work to suit their condition - e.g. allowing them to pace their work. There are also other benefits from such flexibility. Many of the disabled have other demands on their time not experienced by the able-bodied. For example, flexibility over work hours would make it easier to arrange time for treatment of the disability (eg physiotherapy to ease pains) and also for training to better cope with the disability. But the implication is that managers have to be aware of the need for flexibility when planning the nature of the actual work to be completed at home and of the employment conditions of service for teleworkers. This may mean providing different kinds of task so that the disabled teleworker can juggle less intensive work with more intensive work. It may mean allowing considerable flexibility over the time when teleworkers work. In the case of fluctuating symptoms which flare up, this may mean enabling the person concerned to arrange for others to cover work if necessary, or having contracts which specify that the employee must work for a set number of days within the year while allowing some flexibility as to the specific days. Obviously, the ability to offer such options very much depends on the nature of the work. Conditions of service where teleworkers receive work at unpredictable times and then have to work long periods to meet deadlines would thus be unsuitable.

2.4 Issues

2.4.1 Isolation and Segregation

By far the most important issue concerns potential isolation of the disabled workforce - especially for some types of disability, such as where there are mobility problems. This is a far more acute problem than in the case of the able-bodied who have more potential outside their working lives for generating contact with others. A very general debate has concerned whether people with various types of disability should receive separate treatment in segregated institutions throughout their life (e.g. in schools specifically for the blind) or whether this simply hides disability away from the eyes of the general public and is counter-productive when it does become necessary for the disabled to cope in an environment among the able-bodied. These debates tend to relate most to the more visibly disabled.

Hence, there are discussions among voluntary agencies, in Local Government and in Central Government documents about the desirability of moving away from sheltered workshops where all disabled are together to work in firms alongside the able-bodied. In the light of such a background discussion, home-based teleworking can be viewed in a more negative light. It can be portrayed as a retrograde step which would go against ~y trends towards integration, once more hiding the disabled away rather than changing attitudes in and the arrangement of the mainstream workplace. From this perspective, some of the disabled have seen home-based teleworking as:

.... a cynical attempt by employers to conform with the letter of their statutory obligations to employ a quota of people with disabilities without incurring the expense of making adaptations to the workplace'. [29].

Clearly, alternatives such as enabling the disabled to work in local teleservice centres, alongside the able-bodied, would not attract such strong criticism. Such centres may, for some, provide a form of non-home-based teleworking which avoids some of the problems of isolation and segregation.

2.4.2 Locating and Interviewing Potential Staff

There can be difficulties in locating disabled candidates for posts if many of those people with impairments are not registered disabled. As noted earlier, a sizeable number of those who eventually participated in the DTI pilot project were not registered, which also meant that they were not known to either the disability organisations, or the disability rehabilitation officer [30].

Secondly, some applicants, particularly those with mobility problems, find it difficult to come to interviews. If the personnel manager has to go to the homes of the disabled and see them individually, this entails far greater effort than in the case of normal recruitment. The other factor noted in the literature is that such personnel managers need to be sensitive to factors effecting the performance of the disabled in job interviews. It has been pointed out that many of the disabled often underestimate their capabilities, lack confidence when speaking for themselves or have other difficulties -especially if there are auditory problems - which mean that they do not present themselves well at interviews [31].

2.4.3 Training the Disabled

One circumstance which gives less difficulties for employers and employees (and trade unions), and provides one of the smoothest transition from on-site work to home based work, is where the rationale for teleworking is staff retention. In the case of disabilities, this might include situations where existing full-time staff have an accident or a deteriorating health condition [32]. Often, such staff need little further training.

But especially where a new labour force is being recruited, training can be a problem for those with mobility problems. For the manager, group training on the equipment to hand is likely to be the most cost-effective approach. Yet, it may be difficult for some disabled employees to come (regularly) on-site. It was precisely because they identified this problem in the DTI study that the consultants IT World have set up schemes to provide home based training [33].

2.4.4 Training for Managers

One key note of any policy towards the disabled and telework must be flexibility. The previous discussion has already indicated the heterogeneity of the disabled with their vastly different limitations

and considerations. Hence, features of work or contract options which are advantageous to some have no bearing on the needs of others. Personnel and other managers dealing with the disabled need to be made aware of all these factors, since it is they, through interaction with disabled candidates, who will have to ascertain what appropriate steps need to be taken in each individual case. It is likely that this will require that any such managers, themselves receive the necessary training which would provide some guide-lines for action, possibly considering varied examples of disability and work situations in order to appreciate some of the issues and potential solutions.

2.4.5 Partner's Support

The study 'Clerical Teleworking - How it affects Family Life' indicated the importance of support from the partners of those working at home. This is likely to be even more important in the case of disabled teleworkers, where the partner can help in many ways. However, it is worth noting that some research suggests that the female partners of disabled males are likely to be far more supportive than if the situation is reversed. One indication here is that a higher proportion of husbands leave their wives when the latter become disabled than vice versa [34].

3. Conclusion

To date there has been only a very limited initiative to enable the disabled to adopt teleworking. The DTI scheme was the most significant effort to show that information technology could open up new opportunities for this social group. In various official documents, including EEC ones, the advent of IT has brought some renewed interest in the option of working from home. At the moment, organisations such as the Royal National Institute for the Blind and Remploy are trying to make use of IT for the disabled. Although such initiatives are mainly worksite based, there are some examples of teleworking.

There are a number of problems with telework for the disabled, but by far the most significant is the issue of isolation. In interviews and questionnaires, the disabled have indicated that the financial incentives to work and the desire to be useful are major motivators for seeking employment. These goals can equally well be achieved through teleworking as on-site working. But, more so than the able-bodied, they also cite a desire for social contact as a reason for seeking work, which is less easily fulfilled through telework -although it is always possible that some combination of on-site and homework can be found in individual cases. Secondly, the feelings of isolation have to be located within wider debates about the desirability of integrating the disabled with the able-bodied workforce on-site. This is gathering momentum amongst the bodies concerned with disabled and runs counter to the principle of home-based teleworking. Those objections would probably not be so strong in the case of the disabled working from tele-service centres.

On the other hand, it is simply too difficult in some cases for particular people to get to and from a workplace or even a tele-service centre,* in which case home-based teleworking has a number of advantages in terms of reducing the problems and strain of commuting, enabling greater control over the home working environment and, if the work arrangements permit, being able to pace work in a way that fits in with the disabled condition. For those who are effectively housebound for much of the time, telework involving regular use of the phone can provide an important source of the social contact which people often desire from their work.

There still remain a number of particular issues to be considered in the case of disabled teleworkers. For example, training issues, the fact that employers need to become aware of the circumstances faced by disabled teleworkers and, if the work permits, be in a position to offer some flexibility in the conditions of service and organisation of tasks. But if these considerations are met, then teleworking for the disabled should be a viable proposition.

*A location within a rural area, that provides the local community with access to computer and telecommunications technology.

4. Footnotes

- [1] Croxen (1984), pp.36-8.
- [2] Kettle, and Massie (1979), p.17.
- [3] Kettle and Massie, (1979), p.7.
- [4] Birkett (1988), p.47.
- [5] Croxen (1984), p.37.
- [6] Perry (1980),p.42.
- [7] Perry (1980),p.43.
- [8] Perry (1980),p.42.
- [9] Perry (1980),p.44.
- [10] Grant and Cavanagh (1980), Oliver (1984), Levitan and Toggart, (1977)
- [11] Ashok et al. (1985), p.28.
- [12] Croxen (1984),p.36
- [13] Birkett (1988), p.45.
- [14] Birkett (1988), p.45.
- [15] Greave and Massey (1979), p.51. [16] DTI (1986), p.30.
- [17] Birkett (1988), p.45.
- [18] Greater London Association of Disabled People (GLAD) (1990), p .13.
- [19] DTI (1986), p.36.
- [20] Greave and Massey (1979), p.71.
- [21] Ashok et al. (1985), p.8.
- [22] Greave and Massey (1979), p.71.
- [23] DTI (1986), p.13, 62.
- [24] Perry (1980), p.40.
- [25] Davoud and Kettle (1980), p.57.
- [26] Perry (1980), p.48.
- [27] Birkett (1988), p.45.
- [28] Perry (1980), p.25.
- [29] Ashok et al. (1985), p.8.
- [30] DTI (1986), p.31.
- [31] Croxen (1984), p.37.
- [32] DTI (1986), p.38.
- [33] DTI (1986), p.23.
- [34] Perry (1980), p.52.

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