

TECHNOLOGY-INDUCED ATYPICAL WORKFORMS

Final Study

Working Document for the STOA Panel

Luxembourg, May 1999

PE 167.794/Fin.St.

Cataloguing data:

Title: **Technology-induced Atypical Work-forms**

Initiator: Committee on the Employment and Social Affairs

Workplan Ref.: EP/IV/B/STOA/98/08

Publisher: European Parliament
Directorate General for Research
Directorate A
STOA (Scientific and Technological Options Assessment)

Author: **Fondation Travail-Université asbl**
Gérard Valenduc, Patricia Vendramin (FTU, Namur)
Andrew Gillespie, Randal Richardson (CURDS, Newcastle upon Tyne)

Editor: Mr Dick HOLDSWORTH,
Head of STOA Unit

Date: May 1999

PE number: **167.794/Fin.St.**

This document is a working Document for the 'STOA Panel'. It is not an official publication of STOA.

This document does not necessarily represent the views of the European Parliament

Content

INTRODUCTION.....	4
1. DELINEATING THE LINKS BETWEEN NEW TECHNOLOGIES AND ATYPICAL WORK FORMS	5
2. CHARACTERISATION OF TECHNOLOGY-INDUCED ATYPICAL WORK FORMS	8
2.1. ATYPICAL WORK-TIME	8
2.2. ATYPICAL CONTRACTS	10
2.3. ATYPICAL WORK LOCATION	11
<i>Teleworking from home</i>	12
<i>Mobile working</i>	12
<i>Teamworking</i>	13
<i>Remote service factories</i>	14
2.4. JOB DETACHMENT	14
2.5. SUMMARY	16
3. EMPLOYMENT TRENDS RELATED TO FLEXIBLE WORKING IN EUROPE: SOME DATA... 17	17
3.1. PART-TIME WORKING	17
3.2. FIXED-TERM CONTRACTS	18
3.3. SELF EMPLOYMENT	19
3.4. WORKING TIME	19
3.5. SUMMARY	21
4. CURRENT THINKING OF THE SOCIAL PARTNERS	21
4.1. GENERAL TRENDS.....	21
4.2. SPECIFIC CHANGES LINKED TO NEW INFORMATION AND COMMUNICATION TECHNOLOGY	22
4.3. LEADING EDGE INITIATIVES	23
4.4. NEW CHALLENGES FOR TRADE UNIONS.....	25
5. STATE OF THE DEBATES IN THE SOCIAL SCIENCES.....	26
5.1. ATYPICAL WORK FORMS, FLEXIBILITY AND SCENARIOS FOR LABOUR MARKET REGULATION	26
5.2. ATYPICAL WORK-FORMS, LABOUR MARKET AND UNEMPLOYMENT	26
<i>Flexible Labour Markets oriented towards Social Integration</i>	27
<i>Flexible Labour Markets oriented towards Individualism</i>	28
5.3. ATYPICAL WORK-FORMS AND NEW TRENDS IN WORK ORGANISATION	28
5.4. WORKING TIME REDUCTION	29
6. SOCIAL CONSEQUENCES OF ATYPICAL WORK FORMS	29
6.1. A CONTROVERSIAL APPRAISAL OF SOCIAL CONSEQUENCES.....	29
6.2. ATYPICAL WORKING TIME	30
6.3. FLEXIBLE CONTRACTS	31
6.4. ATYPICAL WORK LOCATION AND TELEWORK	32
6.5. INTERIM WORK AND JOB DETACHMENT	33
7. LABOUR LEGISLATION AND COLLECTIVE AGREEMENTS.....	34
7.1. PART-TIME WORK	34
7.2. OTHER ATYPICAL WORKING TIME (24-HOURS, FLEXIBLE HOURS, ETC.).....	35
7.3. FIXED-TERM CONTRACTS	36
7.4. SELF-EMPLOYMENT AND OUT-SOURCING	38
7.5. ATYPICAL WORK PLACES AND TELEWORK.....	38
7.6. TEMPORARY WORK AGENCIES	39
7.7. DIVERSIFIED RESPONSES TO COMMON EUROPEAN PROBLEMS	41

8. CONCLUSIONS AND PATHWAYS FOR EUROPEAN POLICY OPTIONS.....	43
8.1. FIVE PRELIMINARY FINDINGS.....	43
8.1.1. <i>The development of a core and peripheral workforce.....</i>	43
8.1.2. <i>Decreasing effectiveness of existing labour law for regulating new flexible work arrangements</i>	45
8.1.3. <i>Employability and life-long learning</i>	46
8.1.4. <i>The future of welfare state.....</i>	46
8.1.5. <i>The role of technology.....</i>	46
8.2. PATHS FOR POLICY OPTIONS	47
8.2.1. <i>De-linking work status and social rights.....</i>	47
8.2.2. <i>Atypical work as an answer to social needs.....</i>	48
8.2.3. <i>Developing different levels of industrial relations</i>	49
8.2.4. <i>Promoting flexible schemes for working time reduction</i>	50
8.2.5. <i>Employability and life-long learning</i>	51
8.2.6. <i>The future of the welfare state.....</i>	53
8.2.7. <i>Technology policy</i>	54
REFERENCES.....	55
FIGURES.....	59

Introduction

This report is concerned with the relationship between what we have termed “atypical” work patterns and technology, particularly emerging information and communication technologies (ICTs). The reason for our focus on ICTs is that many commentators argue that we are moving from an industrial economy, where the main impetus to economic growth was the production and exchange of physical goods, to an information economy where value is added by the creation and exchange of information. Information and communications technologies will play a key role in this process.

We use the term “atypical” in two inter-related senses. First, and straightforwardly, to refer to patterns of work which currently affect only a minority of the working population in Europe, but which appear to be growing. Examples of these forms of work include fixed term contract work, where an employer takes on a worker for a set period and has no obligation to provide work when that contract ends. Currently, this type of contract applies to only around 11 per cent of working men and 13 per cent of working women in the European Union; however, evidence suggests that the use of fixed term contracts is has grown rapidly in the second half of the 1990s [CEC, 1998a]. A more extreme example of atypical work might be the “zero hours” contract, where, effectively, the worker is “on call” at any time, but where the employer has no obligation to provide any work. Data is not available which would allow us to measure the growth of this trend, though anecdotal evidence suggests that this form of contract is well-established in lightly regulated labour markets such as the United Kingdom.

The second sense in which we use the term atypical work is to point to an apparent sea-change occurring in how societies organise economic production and work, and to contrast what appear to be *emerging* work patterns with those work patterns which characterised a previous era.

One tendential aspect of the information society is the emergence of new kinds of productive organisations. It is suggested by many commentators that in the period from 1945 to around the early-1980s, the main engine of economic growth in advanced societies were the large, vertically integrated, monolithic, and often monopolistic or cartelistic corporations, with hierarchical and bureaucratic management regimes. Public service organisations such as national civil services and health services were said to share similar characteristics. This production system is often referred to as “Fordist”.

The “Fordist” production model was mirrored by a labour market model which was characterised by core working hours – the nine-to-five, five day working week in northern Europe – , with any deviation from this pattern being agreed through negotiation and tending to attract premium payments. The labour market was mainly male dominated, and workers were generally employed on full time and permanent contracts. In addition to a “job for life” many workers could also expect a career within their organisation.

Many influential analysts now argue that we are moving towards a “post-Fordist” economy, which is also post-industrial and *informational*. The core feature of production in this new economy is *flexibility*. The monolithic, hierarchical, bureaucratic corporation, it is argued, is no longer an appropriate model for coping with a world of global competition and of fast changing customer demands, with concomitant just-in-time and other responsive production

systems. A new, more flexible model is required. Thus, firms must “re-engineer” and become “agile”, adaptable and flexible. In order to succeed firms and individuals must “network”, drawing on particular skills and talents as and when needed for particular projects.

In turn, these new forms of organisation, it is argued, require a new kind of workforce. Both internal and external labour markets must mirror the organisational changes outlined above by becoming more flexible and adaptable. Indeed production may even require a new breed of worker and we may see a fundamental re-balancing of relations between employers and workers. One of the most influential commentators on the emergence of the information society, Manuel Castells [1997], for example, suggests that in the information age there will be a:

reversal of the socialisation/salarisation of labour that characterised the industrial age. The “organisation man” is out, the “flexible woman” is in. The individualisation of work, and therefore of labour's bargaining power, is the major feature characterising employment in the network society [p10].

It should be said that these changes in work patterns are not pre-ordained. Policy-makers have the potential to intervene to shape the extent and direction in which they developed. It is hoped that this report will help provide an understanding of the trends and issues, thus allowing an informed response to economic and social challenges which changes to the production system will generate.

Structure of the report.

- Sections 1 and 2 explore the relationship between information technologies and emerging work patterns and gives concrete examples of organisations which are developing these models.
- Section 3 analyses the available data on the prevalence of atypical working in Europe.
- The following two chapters then explore the responses of various actors to emerging work patterns. Section 4 outlines the current thinking of the social partners, whilst section 5 discusses the state of debates in the social sciences.
- Section 6 considers the social consequences of atypical forms of work..
- Section 7 discusses current labour legislation and collective agreements regarding atypical work in Europe.
- Finally, Section 8 considers some policy options which might be open to European policy makers in response to changing work patterns.

1. Delineating the links between new technologies and atypical work forms

The unifying theme which runs through much of the literature on flexible firms and labour markets is the role of information and communications technologies (ICTs) in stimulating or supporting change. This theme cuts across disciplines from management science [e.g., Hammer, 1990; Applegate, 1994], through economics [e.g., Freeman and Soete, 1994; Rajan, 1997], geography [e.g., Gillespie, 1993] to sociology [e.g., Castells 1996]. It is this relationship between ICTs and emerging work and employment patterns with which we are mainly concerned in this report. Table 1 summarises the recent technological changes which exert the most influencing role on work and employment patterns.

Table 1 : Recent and significant changes in ICTs

Internet technologies	Mobile and portable technologies
E-mail, newsgroups, file transfer, etc.	Mobile telecommunication (GSM and UMTS)
Web sites, webcasting	Portable computers
On-line multimedia products and services	Global positioning systems (GPS)
Intranet and other private TCP/IP networks	Computer assisted driving and transport
Electronic commerce on the Internet	
Distance working technologies	Technologies for remote service factories
Computer supported cooperative work (CSCW)	Automated call distribution systems (ACDS)
Workflow management systems	Vocal switching devices and vocal servers
Videoconferencing (ISDN, Internet or satellite)	Encryption and authentication systems
Data warehouses	

It is important to bear in mind, however, that ICTs do not *of themselves* determine changes in work patterns (or indeed other social outcomes). Castells [1996] suggests that changes in production (and by extension in work patterns) often happen independently of technological change, but are then “extraordinarily enhanced” by the new information technologies. Particular outcomes, however, will be determined by a number of other factors including:

- the sectoral composition of an economy (e.g. the balance between agricultural, industrial and service employment) and the sub-sectoral composition of an economy (relative weight of different industries and services, emerging or declining);
- the regulatory regime and the strength of trade unions and employers’ associations;
- the degree and the forms of competition in the business environment;
- labour market demand at any given time – taking into account the unemployment levels among different categories of the workforce;
- the extent of feminisation of the labour force; and,
- cultural norms;
- consumer preferences and behaviour.

This implies that the impact of new technologies is a political matter in the broadest sense of the term and we would expect to see different outcomes from country to country.

Similarly, at the level of the firm we would expect different employers to offer different work arrangements depending on, *inter alia*:

- the variability of demand for the final product (through the day, week, month and year);
- the way in which the production has been organised in the past (including the gender division of labour);
- the importance of labour costs in total cost;
- the salience of the quality and timelines of outputs;
- the constraints and opportunities presented by the external labour market; and,
- the attitude and morale of employees and their representatives [Casey et al, 1997, p.xi].

New technology may, of course, be instrumental in altering the importance of each of these factors and so increase the options available to firms and other organisations.

Table 2 attempts to outline some work and employment patterns which appear to be becoming increasingly common, but remain atypical. Some of these work forms (most obviously part-time working) are long-standing and pre-date recent developments in ICTs. However, we suggest that ICTs are playing a role in the extension of some of these practices. We have organised work and employment patterns under four headings, that will be used all across the next chapters of this report:

- atypical working times;
- atypical work contracts (also referred to as standby labour or numerical flexibility);
- atypical work location; and,
- job detachment (also referred to as outsourcing or commercial contracting).

Table 2 : Atypical Forms of Working

Atypical work time	Atypical work location
Part-time working	Remote office working
Weekend working	Mobile working
Flexi-time working	Hot desking / hotelling
Twilight-shift working	Home working
Night-time working	Telecommuting
Overtime working (including unpaid overtime)	Telecottaging
On-call working	Remote Computer Supported Teamwork
Atypical Contracts	Job detachment
Fixed-term working	Employed by agency
Job sharing	Self-employed contractor
Annualised hours	Employed by third party supplier
Zero-hours	Work contract transferred to third party supplier
Term-time working	
Piece Work/Performance related pay	

In each category we try to draw out some concrete examples to illustrate the connection between new technologies and the extension of particular practices. These categories are, of course, not mutually exclusive. We have chosen to deal with part-time work under atypical work time, as many part-time staff are “permanent” and have fixed and regular hours, though some part time work would also fall into atypical work contract category. Furthermore, the forms of work and employment can be intimately inter-linked. For example, an individual may decide to telework from home (atypical work location in our categorisation) after becoming self-employed (job detachment) as the result of company downsizing.

2. Characterisation of technology-induced atypical work forms

2.1. Atypical work-time

Employers have always used a range of non-standard or atypical employment and working arrangements for a number of reasons. For example, to overcome peaks in demand within various time periods, to perform tasks of uncertain or limited duration, or to substitute for the temporary unavailability of full-time, permanent employees [Casey et al, 1997]. As described above the use of such arrangements appears to be increasing. It is not clear that new technology provides the proximate cause for these developments. Other drivers including increasing competition, increased feminisation of the workforce, which in particular increases demand for part-time work (given the entrenched nature of family-household systems and domestic divisions of labour in many countries), changes in consumers attitudes and lifestyles (e.g., the demand for longer opening hours) may be at least as equally important.

ICTs are, however, clearly implicated in the timing of work and employment, as can be illustrated by a number of concrete examples:

- In retail, bar-coding and other EPOS (electronic point of sale) data gathering tools, together with data-mining software, allow more accurate collection and analysis of customers' retail patterns, including the timing of shopping visits by the day, hour, and week, thus allowing employers (using further "roster" software) to match the number of employees required to serve the expected number of customers at any given time in a supermarket. This also has implications for labour demand further down the supply chain for example, in transport and warehouse work, as well as in factory production, as just-in-time systems are introduced to reflect customer demand.
- Similarly, in call centres, Automatic Call Distribution systems can predict likely number of callers through combining historical and real-time data. Such matching no doubt improves productivity, but it also intensifies work – all work time becomes busy time – and this has implications for levels of stress and also for work as a social experience.
- The intensification of work in turn may lead some employers to increase the use of part-time workers in order to avoid employee "burn-out". So, for example, some call centre managers (though not all) argue that a four hours shift is optimal for (call centre) agent productivity [Richardson 1994, 1998].
- New technology also plays a role in extending operational hours. For example, 24 hour telephone banking which technology makes possible calls for the extension of operational hours and hence of working hours. This, in turn, results in re-negotiation of standard working contracts to introduce shift working, and weekend and evening working. It may also result in the introduction of a new "peripheral" workforce hired on a part-time or temporary basis to cover the additional hours. This model is now common, for example, in banking and insurance in the UK and Ireland [Marshall and Richardson, 1996]. In countries where employment protection is stricter, and where national or sectoral agreements preclude radical shifts in the employment contracts of existing employees (for example in the Netherlands), employers may prefer to set up new sites, employing agency staff (see section 2.4) [Belt et al, 1998].

The de-skilling or re-skilling of certain parts of the production process around new technology may also be a factor leading to part-time and temporary working. If product and process knowledge is embedded in the software and tasks generally made easier then required levels of training and job experience should fall. This, together with the lower employment costs traditionally associated with employing part-time staff, may make migration towards atypical working time more attractive for employers.

This deskilling effect may lead employers to employ women rather than men, as organisations often see low skilled jobs as “women’s work”. Changes in the production process may also call for new skills, such as the ability to ‘smile down the phone’. Again employers may see these as women’s skills. The resultant feminisation may result in a demand for more flexible working hours (or at least greater acquiescence with employers’ demands), as women will still often be expected to continue to fulfil care duties.

All other things been equal these technologies should lead to a reduction of certain other forms of atypical work as a result of their ability to predict consumer demand and production requirements. The need for overtime should be reduced through more sophisticated planning, though this depends on the availability of labour prepared to work at short notice or on a part-time or temporary basis. Such an arrangement could, of course, be to the detriment of workers who are reliant on overtime for a living wage.

Box 1: Atypical work time – twilight working

One of the major banks in the UK has 're-engineered' itself around new technology. The bank has outsourced its IT department, and has created several call centres and centralised processing units. It has attempted to do this while maintaining a no redundancy policy in negotiation with the trade union. The company has effectively created a 'core-periphery' workforce in that existing staff can expect to retain current conditions. New staff, however, are mainly still employed on a permanent basis, but tend to be offered only part-time work and with hours related to work demand. So, for example, newly-recruited processing workers are offered only evening work, from 5.00pm to 11.00pm. This is taken up by mainly married women. The work is lowly-skilled because of the new technology and career opportunities are few. An Italian bank has also developed a core-periphery model, but in this case by engaging agency staff, not covered by the banking sectoral agreement to handle evening calls in its new help desk dedicated to share dealing and financial instrument trading [Flexcot, 1999].

Box 2: Atypical work hours - A new model of flexi-working

Bremer Landesbank, an organisation faced by the twin problems of increased competition and more demanding customers, invested heavily in advanced information technology and introduced a new variable working time model. A variable hours model based on 'function time' was introduced. This varies from function to function and is determined by, for example, stock exchange and trading hours. Work teams submit proposed function times to a central staff council which has the right of co-determination in this area. 'Time autonomous teams' have been established and are empowered to determine their own staffing arrangements. Each team decides how to meet minimum quantitative and qualitative levels of staffing to ensure effective fulfilment of the tasks required of them. A new system of 'time accounting' has been established whereby the limits to which hours worked may deviate from contractual hours apply on a continuing basis up to plus or minus 30 hours [CEC, 1998b].

2.2. Atypical contracts

A wide range of contractual options between employer and worker are emerging. Put positively the aim of these new contractual options is “developing the potential of the individual, their productivity or to meet business and personal needs” [Murphy, 1996]. More negatively, it has been suggested that employers are using these arrangements to deny contractual benefits and to undermine workers statutory rights [NACAB, 1997]. Although these contracts may be subject to collective agreement, the impact of atypical contracts is to establish a diversity of contractual relations between individual workers and their employers. Thus workers with different employment rights and benefits, reward systems, and career expectations may be doing the same job side-by-side.

Temporary work, where employment is understood to be for only a limited period [Atkinson and Storey, 1994], may be the most rapidly rising form of work in many European countries, though from a low base. Temporary work, however, can mean a variety of things. In this section we concentrate on temporary work where the employee is still directly employed by a particular employer for whom the work is carried out. We deal with temporary workers employed by an intermediary and those employed through commercial rather than employment contracts (e.g., self-employed consultant) in section 2.4.

Fixed-term workers employed directly by the employer are used in a range of service industries, from universities to government administration and banking and insurance. There is considerable variation even within the fixed term arrangement. In the UK civil service, for example, most new staff are employed on the basis of one year contract, which the employer has no obligation to renew, but the reality to date appears to be that contracts are routinely renewed [Marshall et al, 1998].

Box 3: Atypical work contracts – “on-call” workers

Some UK banks now employ what are termed “auxiliary” workers and “on-call” workers. These arrangements include “zero hours” working which means a worker is contracted by an employer but no hours are specified, and that the worker only works when called upon by the employer. Although these staff remain atypical on terms of overall employment. The UK Trades Union Congress, for example, states that one major bank employees 1200 “zero hours” staff, but this is out of a staff of around 60000. Nevertheless, for those workers contracted on this basis employment can be precarious as the following abstract from one bank’s ‘contract’ with such staff makes clear: “You are engaged to provide services to ensure that peaks in the bank’s workflow are covered when an identified operational requirement exists. The provision of services under this arrangement will not constitute employment.” [<http://www.tuc.org.uk/>].

It is not clear that the role of technology is the driving force here. ICTs are implicated in some cases, however, in that (as argued in section 2.2) they may decrease the importance of organisation-specific skills (product knowledge and process experience) and increase generic skills (keyboard and customer service skills). Importantly, ICTs also make it easier to manage the organisation of such working. Another way in which fixed-term workers are utilised by firms is to ‘manage decline’ in the workforce. This planned decline may itself be predicated on the future introduction of new technology. ICTs also facilitate arrangements such as job sharing and term-time work to some extent in that workers can record information on centralised data-bases which can be accessed by other workers, thus (it is argued) giving seamless service to the customer. It is difficult to see, however, that this is much different from ‘leaving a note on the file’ as would have been done in pre-electronic times. In addition

anecdotal evidence suggests that job-sharing, at least for professional jobs, usually means split case loads rather than shared ones.

New technology is more clearly implicated in the revival of various forms of *performance related pay systems* (PRP). A fairly unsophisticated form of electronic piece work, keyboard strokes per minute, has been around for some time. This quantitative mode of assessment is diminishing in most advanced economies as simple discrete processing tasks become less common. On the one hand, processing tasks are being reintegrated with other work activities through distributed processing. On the other, they are being further automated through the introduction of scanning and other technologies. This is not, however, the end of electronic piece-work. A more sophisticated form of PRP is emerging, with a mixture of quantitative and qualitative elements. The acme of this process is in the call centre. Not all call centres have PRP systems, but many do. For sales agents there is an element of basic pay and then “bonuses” based on sales. The unit of measurement is sales per agent. In customer care the PRP matrix is more complex and the unit of measurement may be at team level, rather than at the level of the individual. Here, typically, the Automated Call Distribution (ACD) technology, not only forces calls through to waiting agents, thus removing control over the rate of work from the worker, it also monitors the number of calls taken by an agent within a given period and the amount of “wrap-up” time between calls. Calls can also be listened into by management in real-time and also digitally recorded to ensure ‘quality control’ (digital technology allows the manager to go straight to a particular taped call or to sample a number of calls rather than to wade through a whole tape as with analogue technology). In some cases this means that the agent performance is judged on the basis of how closely they adhere to a script. In other cases there is no set script but certain words and expressions must be used (for example, the agent must give his/her name, must use the customer's name, must ask if there is anything else he/she can do for the customer).

Box 3: Atypical work contracts - temporary workforce

A US-owned telemarketing company based in Ireland. It acts on behalf of a number of clients using telephone-based technology together with sophisticated databases to market products directly to customers in a number of countries across Europe and also offers an out-of-hours service to the US. The Irish office operates 24 hours a day, 7 days a week. The worker profile and contract arrangements of the company is fairly typical of many third party direct marketing companies. The company operates with only a small core of permanent workers, with 90 per cent of workers being on temporary contracts. Employees have individual contracts and there is no collective bargaining. There is also an element of performance related pay. In some cases clients dictate how much staff working on their campaign are paid. [Belt et al, 1998].

2.3. Atypical work location

Remote working or distance working, using ICTs to communicate with other parts of the worker's organisation, business clients or end-consumers, is the area where it is easiest to make the link between ICTs and new atypical forms of work. Network technologies are inherently spatial and it is not surprising, therefore, that firms should adopt new spatial configurations around these technologies.

Much of the literature on work location around ICTs is devoted to the concept of teleworking from home. Indeed, there is now a voluminous literature on teleworking, much of it explicitly or implicitly proselytising, although there are some more reflective and analytical texts [e.g.,

Huws, 1994 and 1996; Teldet, 1994, Gillespie et al, 1995; Valenduc and Vendramin, 1997]. Until recently the term telework has mainly been restricted to the idea of working from home using new technology. More recently the concept has been extended to embrace other new forms of work involving some kind of spatial separation of worker and client or fellow worker [Gillespie et al, 1995; Valenduc and Vendramin, 1997]. Adopting a wider definition of telework, of course, increases the number of workers which are covered by the term. Thus the 1997 EU Status Report on Teleworking using a narrow definition of teleworking suggests 1 per cent of EU employment in telework. The 1998 Status Report which embraces a range of activities including call centre workers suggests a figure of 3.1 per cent. For individual country figures the impact of definitional change is even wider, for example, the proportion of teleworkers in Ireland jumps from 1.40% to 6.1% and in Belgium from 0.1% to 5.3%.

There are good reasons for widening the scope of what we mean by teleworking, but care is required, when doing so. There is a body of “proselytising” telework literature which uses a wider definition of telework to illustrate the quantitative growth in telework (home-based telework having failed to take-off), but still tends to reflect an ideological stance which privileges home-based and neighbourhood office-based working as the ideal teleworking scenario – the 1998 Status Report on European Telework being a case in point [CEC, 1998a]. In this section we briefly discuss teleworking from home and then separately discuss three other forms of atypical work location: mobile working (together with hotelling and hot-desking), computer supported co-operative working (CSCW), also termed remote teamworking, and lastly what we term the “remote service factory”.

Teleworking from home

There is now a substantial literature which suggests that a wide range of types of jobs which involve the handling, processing and retrieval of *information*, can now be teleworked from home [e.g., Stanworth and Stanworth, 1991; Gillespie et al, 1995; Huws, 1996, Teldet, 1994], though in practice teleworking often involves only one or two days a week rather than working at home all the time.

By definition telework is clearly a technology induced atypical form of work – technology being the element which distinguishes it from other forms of home working. How important technology *actually* is for teleworking, however, is a matter of some debate [see Gillespie et al, 1995]. The specific kind of new technologies involved in teleworking will depend on individual circumstances. A minimum requirement would appear to be a telephone and a fax machine. A personal computer to perform information processing tasks and a modem to allow data to be transmitted is likely to become increasingly important. More complex forms of work, or work requiring more data-intensive communications or simultaneous voice and data transmission will require more advanced technologies.

Mobile working

Mobile communication, which at present refers mainly to mobile telephones and lap-top and palm-top computers is one of the most rapid areas of growth in the use of ICTs. These technologies may be supplemented with electronic diary systems and other electronic means of co-ordination. The up-take of mobile technology has grown despite their obvious limitations, including lack of functional capacity; inoperability in certain environments; low data communication speeds; lack of common industry standards; lack of computability

between mobile systems and fixed link systems; high costs and health concerns. Mobile communications service revenues grew eight-fold between 1991 and 1997 and annual mobile PC sales doubled between 1994 and 1998 [FT 19.11.97; FT 2.5.96]. The mobile data market is expected to grow exponentially between now and 2010 [Ovum, 1997]. "Third generation" mobile technologies (Universal Mobile Telecommunications Service in Europe) are expected to enhance the capacity of these communications. Several reports suggest that mobile work is by far the most common form of telework (taken in its wider sense) [e.g. Gillespie et al, 1995; Gray et al, 1993].

Mobile communications are clearly implicated in new atypical forms of working. Most obviously they have the potential to impact on the location of work. In many cases these technologies are used on an *ad-hoc* basis, but some firms have taken a more strategic approach, particularly in relation to field staff, such as engineers, mechanics, sales people and consultants, allowing workers to "hot-desk" [see Box 4]. These arrangements bring advantages for both the firm and the worker, the former saving space, reducing fuel costs and increasing productivity, the latter travelling less and therefore saving time. However, mobile working may also be accompanied by work intensification, with the number of hours dealing with the client increasing. Expectations that a worker will always be contactable is also likely to increase workloads.

Box 4: Atypical location - mobile working, hot-desking and hotelling.

One of the best known examples of mobile working and hot-desking is that of IBM, where many sales and client support staff are expected to spend most of their working day either at or travelling to clients' premises. Mobile communications technologies (telephony and data) mean that workers can access databanks and co-workers and seldom need to visit the office. Workers also work from home more often. An electronic diary system which is accessed through the company's Intranet allows co-ordination. This arrangement is complemented by a system of "hot-desking", whereby there are desks to host only around 30 per cent of staff officially based there. Other firms such as BT are following a similar model. Another telecommunications company, Cable and Wireless, has developed a system of "hotelling" where staff can touch-down at their nearest office. This model has now spread to the public sector in countries such as the UK and Sweden, with client-oriented staff such as social workers hot-desking and hotelling. In a further development to this model a number of private sector companies such as Regus are now providing serviced touch-down facilities, including a suite of ICT-based services, for client firms. The company has 38 such centres in the UK and Ireland.

Teamworking.

The concept of teamworking is now well known. ICTs are becoming increasingly central to extending teamwork over space and time through what is generally referred to as *Computer Supported Co-operative Working* (CSCW). Thus teams of experts in areas such as architecture [Harper and Carter, 1994], engineering [Rogers, 1993], medicine [Egger and Wagner, 1993; Simon, Long and Ellis, 1996] and research and development [Howells, 1998] can use groupware, shareware, "computer-mediated communication" in order to form "on-line communities" [Turoff and Hiltz, 1983, in Qvortrup, 1992, 83]. Egger and Wagner, for example, describe a system which encompasses computerised personal calendars and automated resource planners to stimulate more efficient use of limited resources within a single site, in that particular case surgical theatres, expensive technical equipment and staff, through synchronising activities.

CSCW is also used to bring scarce human resources together over space, in a form of remote team working. As would be expected it is mainly large firms or organisations which establish these on-line communities. IBM for example established a multinational software research network to draw on its world-wide research labour force [Boutellier, 1998]. Examples of collaborative projects within smaller multi-site firms, however, can also be found [see Box 5].

Box 5: Atypical work location - Computer Supported Team Working

ASPLAN-VIAK, a medium-sized Norwegian engineering company, has used ICTs to link together its 16 regional offices in order to overcome the problems imposed by distance. Through the use of e-mail, conferencing, intranet and telephone technologies the company was able to create virtual teams. This allows the balancing out of work between offices which tends to vary over time. It also appears to allow individuals to more easily tap into other expertise within the organisation to overcome problems [drawn from Line, 1996]

Remote service factories.

Another form of atypical work location, which is becoming increasingly significant, is what might generically be termed the “*remote service factory*”. Here, firms take advantage of spatial divisions of labour to locate ‘industrialised’ office processes such as data processing and call centre activities at a distance from other parts of the organisation and remotely from customers, using ICTs to communicate. The main area of growth in remote service factories is in call centres which are developing rapidly throughout Europe [Richardson, 1994; 1998; Marshall and Richardson, 1996; Richardson and Marshall, 1996; Datamonitor, 1998; Mitial, 1998]. These forms of work location are atypical in the sense that historically many of the jobs now being undertaken in factory-style work environments would until recently have taken place in small branch offices with face-to-face customer interaction. These jobs are different from those outlined in the preceding paragraphs in that the worker is still employed at a particular defined site.

Call centres are particularly relevant from the perspective of this report, however, in at least four respects. First, they are in the forefront of many of the emerging work and employment patterns outlined elsewhere in this section (2.1., 2.2., and 2.4) [Arup/CURDS, 1998]. This includes renegotiating contracts with existing staff and appointing new staff as other parts of the organisation are “downsized”, bank branch closures being a case in point. Second, firms appear to be using the locational flexibility created by developments in ICTs, implicitly or explicitly, to strengthen their negotiating position vis-à-vis the workforce. Third, geographical mobility presents opportunities for some less developed parts of the European Union to attract employment, as is clearly illustrated by the Irish case [Richardson, 1999]. Fourth, firms may be able to use ICTs to migrate this work offshore, thus displacing European workers. Alternatively, European workers may be able to service markets on other continents [Richardson, 1999].

2.4. Job detachment

We use the term “job detachment” to describe the situation of workers as a result of trends towards the outsourcing of work by companies and the replacement of work contracts by commercial agreements. This takes several forms and includes:

1. the newly self-employed worker whose self-employment is the result of corporate downsizing. Such a worker now has to sell her/his labour and skills, perhaps to her/his former employer or to several employers on a commercial basis;
2. individuals employed by a firm supplying parts or services to a principal firm in a supply chain, and where the principal firm uses suppliers to ensure flexibility;
3. an individual worker who at one time would have been directly employed, but now finds that job opportunities are most readily available through an employment agency which matches labour supply and demand, supplying workers to individual firms on a temporary basis;
4. a worker who has been transferred to a third party provider of services under a transfer of work agreement, for example, where a bank or government agency decides to contract out some element of its operation, whether this be cleaning and catering or IT services.

Technology is implicated in these process in a number of ways, though again it is arguable whether it is the proximate cause. One argument put forward by Bartel [Bartel, 1993, referenced in Ono, 1998] suggests that technological change introduces uncertainty into labour markets through triggering short-run fluctuations in demand. As technology is in a state of flux firms must decide whether or not to internalise a particular technology and whether or not to train workers to use such technology. As the pace of technological change increases higher rates of obsolescence are likely to decrease the amount of investment in human capital. Recent work at CURDS suggests that much outsourcing is specifically undertaken to overcome the legacy of under-investment or inappropriate investment (for example, investment in mainframe computing which is largely being replaced by distributed processing) in new technology. New forms of inter-firm networking, particularly in manufacturing, depend on technology. Just-In-Time (JIT) practices, for example, establish ‘an intricate hierarchical network of subcontractors in order to minimise market risk by maintaining low levels of inventory and reducing their work force to the core.....JIT is production using parts *and* labor on an as-needed basis [Ono, p9, italics in original].

The argument from uncertainty over investment in capital can be seen to apply to 2 and 4 above where specialist suppliers in both services and manufacturing sectors invest in capital (including technology) and train and manage the workforce. It is less clear in 1 and 3. Indeed, in the case of employment agency working temporary workers often work on the principal firm’s site operating that firm’s technology. Temporary Staffing Firms (TSF) [Ono, 1998], or employment agencies are one of the fastest growing sectors in Europe, playing a crucial role in deregulated labour markets such as the UK and more tightly regulated markets such as the Netherlands and France. TSFs may be small and local, though multinational players such as Manpower, Kelly and Randstad have emerged. The agency negotiates a rate for providing workers, pays the worker and retains a (usually substantial) proportion of the fee. Temporary staffing is the main service provided, but they also provide outplacements where the TSF allocates an entire division of workers to fulfil a specific function of the client firm. This division may be located on the clients premises. The UK’s main telecommunications provider BT, for example, has developed such a relationship with several TSFs. Clients firms may also develop what has been termed a “blended workforce” [William Olsten Center for Workforce Strategies, 1997, cited in Ono, 1998], with a core workforce being joined at particular times by temporary workers. Grimshaw et al [1998] argue that the flexibility which computers

provide management in terms of additional information make it easier to employ temporary staff. However, based on case study work they conclude that there were other reasons other than new technology why firms used temporary staff provided by agencies, namely:

- to reduce “headcount” figures to increase profit per employee (which is seen as a major factor driving investor expectations of company performance);
- to manage workload flexibility, particularly important because the company mainly carries out short-lived marketing campaigns;
- to reduce costs, since agencies pay local (rather than nationally negotiated) rates;
- to cover for staff absences; and,
- to complete tasks related to new IT systems, such entering information on the Internet.

The growth of outsourcing in manufacturing is well documented, but it is also an increasing phenomenon in the service sector, particularly in the area of IT and IT related services. Major suppliers such as EDS (Electronic Data Services) Anderson Consulting, ICL, and Sema are taking over large chunks of what would at one time have been regarded as core elements of other organisations’ business through outsourcing agreements and workers are being swapped to new employers at the same time [Coe, 1997; Arup/CURDS, 1998]. This occurring in both private and public services.

Box 6: Job detachment - work contract transferred to a third party

One firm which specialises in IT outsourcing work is EDS (an American owned company, which emerged from the IT Department of General Motors). EDS has contracts from organisations throughout Europe in both the public and private sectors. Outsourcing deals often entail workers being transferred from one employer to the another. These deals tend to be covered by the Acquired Rights Directive. In the case of EDS most workers tend to move from collectively negotiated contracts to much more individualised contracts. Formally, it could be argued that the worker's situation becomes more precarious, though the reality for skilled workers may well be greater opportunity as the new employer has multiple clients and a global reach.

Box 7: Job detachment – using agency staff for flexibility

A major Dutch Bank has set up a call centre in order to develop a more cost effective customer service delivery channel using new technology. The organisation decided to locate in a suburban area with a large female labour pool. Ninety per cent of employees are female, mainly female returners in their thirties. The majority of staff are part-time and are employed by a temporary employment agency rather than directly by the bank. This means that the bank does not have to meet the terms of banking sector social agreements. These staff fall under a different (less advantageous) sectoral agreement. There is an element of performance pay related to the number of phone calls made. [Belt et al, 1998]

2.5. Summary

We suggested in the introduction to this chapter that information and communication technologies do not *necessarily* lead to particular organisational outcomes or work patterns. It is clear, however, that firms are re-engineering work processes around new technologies in order to reduce costs and maintain or enhance competitiveness, for example, by responding to

new consumer demands for extended opening hours. Within this context, and within the context of increasingly liberalised labour markets (which it could be argued result partly from the enhanced bargaining position of employers which result from their access to and control over technology) ICTs facilitate certain new work patterns. In this section we have explored the main atypical forms of working that appear to be emerging (see Table 2) and have given concrete examples of models that our research suggests are becoming widespread. In the next section we turn to explore official data sources relating to flexible or atypical working.

3. Employment trends related to flexible working in Europe: some data

This section looks at those key trends in flexible working in Europe for which data exist (1). Unfortunately, *illuminating* and *consistent* data is not available for some of the key new areas of flexible work which are of interest to us in this report. The data available regarding new forms of work such as zero hours, annualised contracts and twilight shifts, for example, “is limited and hard to find” [CEC, 1996]. Here we concentrate on part-time working, temporary working, self-employment, night work and weekend work. Even here, however, there are limits to what can be said regarding trends, because in several of these areas figures have only recently begun to be collected and it is only possible to draw out changing patterns with respect to the first three categories.

3.1. Part-time working

Part-time working is by far the most significant form of atypical work in Europe. Indeed, in some countries, such as the UK and the Netherlands, this form of work might be seen as typical rather than atypical, at least for the female half of the population. The 1990s has seen an increasing trend in this direction in most European countries. So, whereas in most years of the decade there has been no increase in net full employment, part-time employment has grown throughout the 1990s. This imbalance has been apparent both in periods of economic growth and recession. The importance of part-time work has grown further as the decade has progressed. In the 3 years from 1994 to 1997, the number of part-time jobs in the Union went up by almost 2.4 million, a rise of over 10%, while the number of full-time jobs fell by 125 thousand.

The shift towards part-time working occurred for both men and women (see figures 1 and 2). By 1997 the proportion of men working in the Union working part-time rose to 6% compared to only 4% in 1990. This represents an increase of 50% in just seven years. In the previous five years (1985-1990) the increase was only 8%. The situation has varied across the Union but only in Austria and Luxembourg has there been a decline in the proportion of males working part-time. The country with the highest proportion of part-time male employment was the Netherlands where the figure stood at 17% in 1997.

(1) Unless otherwise stated the data cited in this chapter draws upon data generated by Eurostat. In particular data provided in CEC, 1998A, CEC, 1996a and CEC, 1996b. The data is well diffused and there is room here only to give a brief overview of the main points.

The proportion of women working part-time grew less sharply during the 1990s, but from a higher base. Again the rate of growth has been higher during this decade than in the previous one, 13% during the period 1990 to 1997, compared with only 2% during the preceding five years. Only Denmark, Finland, Sweden and Greece have seen a fall in the proportion of female employees working part-time.

Data from the European Labour Force Survey (1996) suggests that much part-time work is voluntary (see figure 3).

It is also clear, however, that a significant number of part-time workers would prefer full-time work. This is more pronounced for men, where those working part-time on an involuntary basis represented more than a quarter of the male part-time workforce in a majority (eight) member states. In three member states, over half those male workers working part-time did so on an involuntary basis. Over a quarter of women working part-time did so on an involuntarily basis in six member states.

These figures suggest that part-time work is being used by employers to promote flexibility and that many workers are benefiting from this approach. They also suggest, however, that the much of the available workforce is being under-utilised and that many individual workers are unable to fulfil their potential and are likely to be suffering both financially and in other respects as a result.

3.2. Fixed-term contracts

Fixed-term or temporary contracts have traditionally been used by firms as a way of operating efficiently where demand is unpredictable or is likely to be of limited duration. There are significant variations in the use of fixed-term contracts across Europe. In several countries the use of this form of contract has changed little since the 1980s, and in others it has actually declined (see figures 4 and 5). The overall trend, however, is a steady rise in the proportion of the workforce on fixed contracts. This applies to both men and women.

The growth of temporary employment contracts appears to be accelerating in the second part of the 1990s, with new jobs being disproportionately temporary rather than permanent. Although temporary jobs, or those with fixed term contracts, represent only a small proportion of the total in the Union (11% for men and 13% for women in 1997) the proportion is increasing steadily [CEC, 1998a]. For men temporary employment accounted for all net addition to employment in the Union between 1994 and 1997.

A similar picture emerges for women (figure 5), with only two countries (Germany and Portugal) experiencing a reduction in those working in temporary jobs over the period 1994 to 1997. Over the Union as a whole, temporary jobs accounted for some 40% of the net addition to employment of women over this period. It can be concluded, therefore:

“for both men and women, the resumption of employment across the Union since the recession of the early 1990s has seen a continuing rise rather than a reduction in the relative numbers working in jobs with fixed term contracts. Since the importance of temporary working also increased in most Member States during the previous period of upturn in the late 1980s, it would appear that the growth

signals an ongoing structural change in the characteristics of European labour markets towards more flexible terms of employment” [CEC, 1998a: p29].

The growth in temporary work has brought forth a growing number of organisations which specialise in providing temporary workers to organisations. These Temporary Work Businesses (TWBs) may be small firms operating at the local level or firms working at the international level such as Manpower. The industry structure varies from country to country, depending on regulation and market conditions, though there appears to be a growing concentration in this relatively new sector [Zoetmulder, 1999].

As can clearly be seen from figure 6, the UK and the Netherlands have the most developed private sector (TWB) industry in Europe, with penetration rates of 3.9% and 3.7% respectively. There are a range of regulatory approaches to the TWBs across the Union and this has resulted in different rates of growth. There is, however, evidence of a general, though differentiated move towards liberalisation of the TWB market across Europe, and there is likely to be significant growth in the sector over the next few years. In Germany, for example, which, with the exception of Belgium, is the most strictly regulated northern Member State, temporary work supplied by TWB's appear to be the fastest growing sector in the economy [Rudolph, 1999]. The nascent TWB sector is also growing in the more heavily regulated southern Member States such as Italy and Spain, though slowly and from a low base [Cipolletta, 1999; Vicente, 1999].

3.3. Self Employment

Much of the literature on flexibility suggests that self-employment should grow as the result of processes of downsizing as large corporations become leaner and more focused on their core-businesses. This, in turn, many commentators suggest, should create external flexibility with a cadre of dynamic small firms able to supply specialist services to other firms on a commercial basis. It is not possible to tell from the available statistics how accurate this claim is. Official figures are insufficiently disaggregated to give much insight to this phenomenon. Certainly, taken overall, there has been little change in the self-employment as a proportion of overall employment (see figures 7 and 8). Self-employment is greatest in the southern Member States, following the general rule that the more advanced an economy the lower the proportion of self-employed. This is accounted for to some extent by the greater proportion of people employed in agriculture, though even when this controlled for these countries tend to have larger proportion of self-employed.

3.4. Working Time

There was an overall decline in the average number of hours “usually worked by workers” in Europe between 1983 and 1995. This trend, however, is mainly due to two factors, the shift from agricultural and industrial production to service sector production, and the increase in part-time work. Once these two factors are controlled for “the remaining reduction in average hours worked, i.e., the reduction which resulted from a change in the length of the working week for those employed full-time or part-time, amounted to only 10 minutes a week over the 12 years 1983 to 1995” [CEC, 1996]. This suggests that for many people there was an actual increase in the number of hours worked. In the UK and the Netherlands, perhaps the most liberalised economies in the Union, there was an average increase in hours worked of around

1 hour per worker during that period. In only four countries, Belgium, Denmark, Germany and Luxembourg, was there a negotiated reduction in hours of employment.

It is widely asserted that we are moving towards a 24-7-365 society. The evidence which is available in this area does not really support this contention, though some Member States may be moving in this direction more rapidly than others.

The number of people *usually* working at night increased during the period 1992 to 1995. However, this rise was very small, under half of one per cent in total. There is considerable difference across member states, with the UK having most night-time workers, when those working nights usually and sometimes are taken into account. Night-time working which is defined as “work carried out during normal sleeping hours” [CEC, 1996], appears to have little direct connection with new technology, being most prevalent in sectors such as transport and communications and the police and armed forces, as well as areas such as nursing. One area which case study evidence suggests is becoming increasingly important, particularly in white collar service sector work and in retail work, is ‘twilight’ working. Unfortunately the Community Force Labour Survey appears not provide information on this topic.

Developments in weekend working are obviously relevant when considering the idea that we might be moving towards a 7 day working week. Weekend working can be seen as one element in the move towards more flexible working. Some 23% of employees in the Union usually worked on Saturdays in 1995, with a slightly smaller proportion sometimes doing so. Saturday working was most common in the service sector. Figures suggest an increase in Saturday working, with 1% more men *usually* working on a Saturday in 1995 than in 1992. There was a similar rise in those working *occasionally* on a Saturday.

Women are more likely than men to work on Saturdays on a regular basis, and this probably relates to their dominance of employment in retail and hotels and restaurants. Men, however, are more likely to work on an occasional basis. Greece and the UK have the highest proportion of people working on Saturdays, though Italy has the highest proportion of employees usually working on Saturdays. The UK also has the highest number of male employees working on an occasional basis on a Saturday, as many as 44%.

Overall there are signs of a general move towards Saturday working. There appears to be little sign of convergence across member states, however, with countries with most Saturday workers experiencing the largest rises. This may change, however, with, for example, retailers in Germany now being allowed to open on Saturday afternoons.

Sunday working is less prevalent in the Union than Saturday working. In 1995, just under 10% of both men and women employees (9% of men, 8% of women) had jobs which involved them in usually working on Sunday, while some 17% of men and 12% of women had ones which entailed them occasionally doing so. The main areas where people usually worked on a Sunday were transport and communications (for men) and hotels and restaurants for women. There was a rise of around 1% in the number of employees working on a Sunday between 1992 and 1995. In some sectors (other services for men and distribution and hotels for women) the rise was closer to 2%.

Again the UK is the country which, in the Union, which is “most flexible” in respect of Sunday working, with almost 50% of men and a third of women either usually or sometimes

working on a Sunday. Again the main increase in Sunday working came in countries where it was already prevalent.

3.5. Summary

From the figures available it is clear that there is a trend towards more flexible working in the European Union. There have been increases in the proportion of the European workforce working on a part-time basis, with the majority of new jobs being created in this area. Similarly there has been an increase in temporary work for both men and women. This has been accompanied by the growth of specialist temporary work businesses, supplying temporary workers. Weekend working has also risen and there was also some rise in night work. In most cases there is considerable differentiation across Member States. Unfortunately data is not available to give us a picture of the growth in other forms of 'flexible' work, such as twilight working, and new forms of contract such as annualised hours and zero hours.

4. Current thinking of the social partners

4.1. General trends

Analysts of industrial relations usually agree that an important change occurred at the beginning of the nineties in the attitude of the social partners towards flexible working.

- During the 1970s and 1980s, flexibility was often associated with strong ideological debates. From the employers' side, flexibility was put forward as a necessary constraint upon competitiveness. This link between flexibility and competitiveness was based on the results of various comparative studies of the labour markets in Europe and USA / Japan, mainly from OECD. These results were interpreted by employers' organisations as an evidence for a lack of flexibility in the European labour regulation. Policy measures of deregulation of the labour market were undertaken in some countries (mainly UK), but they were more controversial in other countries. From the trade unions' side, flexibility was interpreted as a "managers' demand". It was a conflictive point in social relations, in almost all the European countries. The general result of conflicts and negotiations was that restrictions were made to the development of flexible work forms and that protective rules were added to the labour legislation and collective agreements.
- Nevertheless, dogmatic attitudes of both social partners have lost progressively their influence to the benefit of more pragmatic attitudes. Since the end of the 1980s, experience has shown that positive agreements were possible. General declarations at the European level, such as the successive agreements on social dialogue (1986-1990), recognise that flexibility is both an economic necessity to be accepted and a social challenge to be negotiated. The recent Green Paper "Partnership for a new work organisation" [COM(97)128 final] represents a typical achievement of this kind of compromise in policy statements. But most of the negotiated agreements and policy documents continue to refer to "typical workers": wage earners with stable work contracts with well-identified employers.

- From the beginning of the 1990s, more attention is paid to atypical workers, such as part-time, temporary and interim workers, and to atypical industrial structures, such as network firms, outsourcing, etc. It corresponds to a move from bargaining “restrictions to flexibility” to bargaining “social corrections to flexibility”. As mentioned by Baglioni, negotiated agreements on corrections to flexibility have been facilitated by the new orientation of trade unions, most of which have realised how important it is to bargain over these issues, thus abandoning their earlier tendency to introduce accumulating protective work rules [Baglioni, 1990: 23]. Concrete examples of this change of mind of the trade-unions are: collective agreements for interim workers in the Netherlands and Belgium, for the teleworkers in Italy, negotiation of full social rights for part-time workers in the Netherlands, European chart for distance workers proposed by Euro-FIET, etc.

The development of atypical employment is perceived as a challenge for the modernisation of trade unions. Traditional union solidarity was built up on the principle that all the workers had common and uniform interests. More collective was the action, more efficient was the result. Solidarity with atypical workers was thought as getting them from atypical jobs into standard jobs. Nowadays, it appears that the interests of atypical workers are not really uniform and that some of them reject the model of standard job. Some trade unions, such as FNV in the Netherlands and LO in Denmark, have incorporated in their strategy a new approach to the diversity of interests among atypical workers [Valkenburg & Beukema, 1996]. The key question is how to organise solidarity on the base of differentiated wishes and demands (see 4.4. below).

From the employers’ point of view, the approach to flexibility has known little renewal. Besides the well known economic and organisational arguments, some social arguments in favour of flexibility are put forward. Employers argue about the convergence between atypical work forms and new life styles. They also argue that atypical work forms create jobs, while legal constraints on “standard work” prevent from job creation. In France for instance, job creation is mainly due to short-term work contracts – unfortunately, job destruction too. Nevertheless the balance remains positive and about one third of temporary work (interim and short time contracts) results in stable contracts [Fougère & Kramarz, 1997]. From the unions’ side, these arguments are often perceived as a deliberate strategy for increasing precariousness in a context of high unemployment. It reinforces the “classical” aspect of their attitude towards flexibility.

4.2. Specific changes linked to new information and communication technology

Two important topics of industrial relations are concerned with the changes induced by new information and communication technology: working time and work location. Definitions of working time and work location are basic characteristics of the organisation of industrial relations.

- Labour legislation and collective agreements are based on many “spatial” notions. For instance, the notion of working place is at the core of regulations on working conditions, health and safety standards, as well as in the agreements on mobility and work organisation. Workers councils are organised according to the spatial organisation of firms, even at the European level.

- Working time is a basic component of the work contract and the wage relation. In many European countries, a law fixes the boundaries of work duration. Historically, the negotiation of work duration arose when piece wage was replaced by hour wage. Control upon the workers is realised through measurement and control of their working time. Many agreements concern flexible working hours, holidays and special leaves, night work, shift work. When some work situations do not fit in this general framework, they are regulated by specific agreements: itinerant work, atypical working hours, working time of professionals and executives, etc.

ICT makes the boundaries of time and location more and more blurred. Atypical workers are the most confronted with blurred working time and work location. Both questions are difficult to handle in industrial relations. The fuzziness may be used by employers in order to escape from regulatory constraints and promote individual arrangements with workers, instead of collective agreements with union representatives. This is the general feeling among trade unions, even if many trade union officers recognise that regulatory changes are unavoidable.

Among the employers, flexibility is more and more linked to the promotion of the “knowledge society”. The European Round Table of Industrialists [ERTI, 1997] puts forward the need for a more flexible approach to competencies and employability, directly linked to the diffusion of ICTs and the role of knowledge as a direct productive factor in the economy.

4.3. Leading edge initiatives

As the development of atypical work is a new challenge for industrial relations, it is interesting to look at innovative “actors of change” among the trade unions and the employer’s organisations. These actors can modify the vision of the future within their own organisation.

Among the trade unions, the most innovative attitudes come from:

- Unions of clerical workers of the private sector (federated by FIET at the European level): these unions are confronted with a wide range of atypical work and to a continuous process of technological change. Even if the unionisation of services is lower than in industry, their membership is more diversified: high proportion of women, large amount of part-time workers. They organise more surveys, studies and training activities than the blue-collar unions. Generally speaking, they also improve their internal democracy and are more open to the diversity of interests of their members. Nevertheless, their influence on the positions of their national confederation may be weak, by lack of membership.
- Unions of professionals and executives, in the countries where they have specific structures (France, UK, Belgium for instance): for a long time they have worked out proposals for flexible working time reduction, professional mobility, distance working, etc. They represent however the “upper level” of the labour market, where the social detriments of flexibility are less visible.
- Groups of women within unions, who had to fight in order to bring part-time work at the agenda of the trade unions and who are more sensitive to issues such as quality of life, flexible working time along the whole working life, links between work and life styles, individualisation of social rights, etc.

In most of the trade unions, new ideas and new debates are organised through training activities, where workers can exchange practical experience, raise open questions and discuss with external experts. Union trainers are thus important actors of change. At the European level, the activities of the European Trade Union Academy and the AFETT have helped for many years in developing emerging topics such as technology, flexibility, organisation, participation, etc. But the influence of training activities on official positions is often a long-term process.

Among the employers' organisations, a specific role is played recently by some big interim companies, which are among the main organisers of atypical work. More than just providing their clients with temporary workforce, interim companies now organise social security plans for the workers. They also care, much more than before, for the respect social rights by the firms (working conditions, health and safety); in some countries, they have signed collective agreements on these topics. This change of attitude may be linked to the next liberalisation of public labour market services; interim companies will then play an extended role on the labour market and they need to improve their social policy.

Among "leading edge agreements" between social partners, agreements on telework are good examples. Compilations of such agreements have been collected by FIET [Bibby, 1996] and more recently by the European MIRT project [MIRTI, 1998]. Such agreements take place at the enterprise level, more rarely at a sectoral level. A common character is that they integrate the diversity of work situations and workers attempts, without trying to normalise them. They specify how workers' rights are practically implemented in telework situations, including union representation and participation. They often organise the reversibility of atypical work situations, taking into account that they can be transitory.

Another new area for leading edge agreements and new forms of regulation is the issue of working time reduction. There are however controversies on the role devoted to the social actors and the governments in the process of working time reduction [Cette & Taddéi, 1997; Boisard, 1997]. They are well illustrated through the debate on the implementation of the "35-hours laws" in France and Italy [Taddéi, 1998]. The two main options exist:

- On the one hand, there are advocates of the reduction of working time through regulation with a law applicable to all sectors and large degrees of freedom for the social partners at all the levels. This is the recent option of the French and Italian government; but it was experienced in Sweden and Denmark for a long time [Hoffmann & al., 1995]. Opponents perceive such a law as unacceptable and dangerous for the enterprises.
- On the other hand, there are advocates of progressive and voluntary actions taken at the sectoral level or the enterprise level, through agreements among the social partners, within a general framework defined by the State. This is, up to now, the German and Belgian way towards working time reduction; in these countries, they are important variations of working time between sectors and even among enterprises in the same sector [Martinez, 1997; Garhammer, 1995]. Opponents to this scenario argue that most of the agreements are concluded in situation of crisis, only to avoid redundancies but not for creating jobs.

4.4. New challenges for trade unions

In the existing literature on industrial relations, the expansion of atypical work forms is identified as one of the key challenges for the future of trade unions. This challenge concerns basic values of the trade union movement:

1. *Solidarity.* As mentioned above, atypical work forms lead to the decline of the principle of uniform collective interests of all the workers. The concept of solidarity must be reconstructed on new bases. Some authors suggest that “differentiated solidarity” should replace the principle “actions resulting from a common agreement” by “actions that do not damage the others” [Valkenburg & Beukema, 1997, and other references cited by them]. Differentiated demands and actions related to atypical workers could rely on this principle that differentiated interests may be promoted and defended to the extent that they do not threaten any other category of workers. This concept is closer to the ethical concept of “social responsibility” than to the classical working class solidarity.
2. *Personal autonomy.* Today’s workers (not only the atypical ones) wish both more self-determination in the organisation of their professional life and a new approach to stable social rights. Personal autonomy is a quite new matter in collective agreements. According to some authors, it is the only way that allows the trade unions to reach new publics among atypical workers, high-tech professionals, young workers, etc. [Mückenberger & al., 1995]. In order to achieve the compromise between personal autonomy and security, the concept of “civil rights in employment” is put forward by some researchers in industrial relations.
3. *Participation.* Classical structures of workers’ representation (union delegations, workers councils, etc.) are not easily accessible for atypical workers, so that they are under-represented in the structures of social dialogue at all the levels. But the EPOC survey suggests that their involvement in “informal” consultation processes (working groups, quality circles) is better.
4. *Internal democracy.* What is true for participation at the firm level is also valid for internal union democracy. Some experiences already exist that use the potential of information technology (mainly the Internet) in order to implement new union services (social or juridical information) or new forums designed for atypical workers. But internal democracy is not only a question of access to services and participation in debates, it also concerns the fact that interests of minorities have to be taken into account, and not only the positions of the majority.
5. *Concept of work.* Considering that full-time permanent employment is not anymore the single model is like a Copernican revolution for some trade unions. Up to now, the only future they envisaged for atypical workers was to let them become typical workers. Within the trade unions, the debate can only be organised at the level of national or regional confederations, as far as the sectoral unions are less sensitive to the problems of the lower segment of the labour market, which is the most confronted with atypical work forms.

5. State of the Debates in the Social Sciences

5.4. *Atypical Work Forms, Flexibility and Scenarios for Labour Market Regulation*

Some authors put forwards two different and opposite ways of organising labour flexibility and atypical work-forms in Europe [M'hamed Dif, 1998]. A first model, the dominant one, seems to be essentially based on *external* flexibility, through outsourcing, subcontracting, self-employment, short-time contracts, and interim. This model has clear impacts on employment: segmentation of the labour market, mass unemployment, increasing precariousness. A second model, at present mainly limited in its application to the North of Europe, is more based on *internal* flexibility. The two mains adjustment tools are functional flexibility through polyvalence, education and training and working time flexibility with various working time arrangements. This second model contributes to an improvement in working conditions and employment.

Other authors examine the issue of labour market regulation in a more prospective way. The increasing diffusion of flexibility and the erosion of labour-related security represent new challenges for social and labour policy in order to redress the associated inequalities and insecurities. It also requires a renewal of labour market regulation. A profound re-regulation of the labour relations is already in progress and different ways are still possible. Different scenarios are explored [Standing, 1997]:

- The first scenario tries to restore the contextual conditions of the former era of labour market regulation through social policies (legislation, agreements). Some analysts believe that full employment could be restored, because mass unemployment, inequality and poverty are the consequences of inadequate aggregate demand and misguided deflationary macro-economic policies. The main answer to the labour market problems lies in growth and in an internationally co-ordinated expansion of demand and consumption. This school of thought also believes in a wide range of active labour market policies.
- The second scenario extrapolates from the currently dominant perspectives of labour market deregulation, considering that legislation and collective agreements may be an obstacle to job creation and a source of unemployment. But this scenario is threatened by the contradictions of labour market deregulation. There are increasing social and economic costs for a growing minority of excluded people and the exclusion process threatens the principles of retributive justice.
- A third scenario examines the idea of a new model of economic democracy, through an extension of democracy and the promotion of retributive justice. In a context of highly flexible labour markets, two conditions seem to be essential: the workforce representation and the income security.

5.2. *Atypical Work-Forms, Labour Market and Unemployment*

Atypical employment is growing, precariousness and unemployment too, not only in the “peripheral” labour markets but also in the “core” labour market. Beyond a classical labour market with a classical organisation of economic activities and “typical” status conditions, a

lot of new forms of organisation and status conditions are developed, analysed or taken into account. Flexibility is a common character of these “atypical” labour markets. The debate in the social sciences about atypical work-forms and the future of work can be divided in two main trends: a vision of flexible labour markets oriented towards social integration and another opposite vision of flexible labour markets that leads to a growing individualistic culture. In this last vision, one goes from a logic of employment to a logic of a supply of services. As technology is only one parameter in these general scenarios for the future of work, this section does not focus directly on ICTs.

Flexible Labour Markets oriented towards Social Integration

In the social sciences some authors develop a vision of atypical work-forms and flexibility oriented towards social integration, through ideas such as the development of a society in which work is no longer the only reference for the socialisation of individuals. Some authors introduce the idea of *pluri-activity*. It means the recognition of a diversity of activities, a plural economy and a plurality of social times in which the individuals can find their social identity and their incomes. The idea of a society of pluri-activity is in opposition to the model of a society completely organised around the salaried work [Gauillier, 1997].

In this category of literature, the future of work and society is envisaged through radical changes. Other corpuses of literature also consider the future of work in a perspective of integration, but in a less radical and more practical way.

Some scenarios consider new fields of activities, new status conditions or new general conceptions of full employment in order to favour the integration of unemployed people. Their approaches try to introduce security in the peripheral labour markets in which atypical work-forms dominate. Here are two examples of proposals:

- The notion of the *transitional labour markets* [Schmid, 1998] that starts from a distinction between on the one hand, what is considered as full employment and on the other hand, what *could* be considered as full employment. The key idea is that working time can diverge from a common norm, according to economic conditions and specific circumstances or periods during someone’s life. The purpose is to introduce some security in the peripheral labour markets, particularly in the multiple passing forms from core labour market to peripheral labour markets during someone’s life. A key idea of Schmid is to consider atypical ways of working as socially useful labour markets. But these markets need to be regulated and not regarded as paths into precariousness.
- Another way to organise atypical labour markets oriented towards social integration is to develop *intermediary activities* devoted to specific publics, in particularly difficult position on the classical labour market (unemployed people, young people, people getting out poverty). These activities aim at completing unsatisfied needs through socially useful work. They are also considered as transitional and organised by the State or by the non-profit sector [Elbaum, 1997]. The evaluation of programmes such as ABM in Germany, TCT in Belgium or TUC in France is however controversial. A pessimistic interpretation considers that they maintain precariousness and reinforce a “dual” labour market. An optimistic interpretation recognises the dual character, but emphasises the benefits for society and the workers; precariousness is attributed to a lack of financing and investment in the non profit sector and the social economy.

Flexible Labour Markets oriented towards Individualism

Beside the scenarios of the future of work turned towards social integration, other visions of the future of work are more individualistic and consider the future of work through self-employment, self-management, employability. Atypical work-forms become a model and flexibility becomes a general attribute of all the work practices. How to gain some security is left to individuals.

- For some authors the worker of the future will be a *self-employed, poly-active* man or woman, managing his or her own carrier in an individualistic world. Tomorrow's worker must be able to manage the "enterprise of himself" [Bühler & Ettighoffer, 1995] in an autonomous and responsible way. One goes from a logic of employment to a logic of a supply of services. This strategy suits some companies, which prefer to buy the skills they need, when they need them, where they are to be found, rather than to pay to have them constantly at their disposal. In these views, the worker becomes his or her own manager.
- In the literature about telework, a way of working based on ICTs, *self-employment* is also often envisaged and the workers are supposed to become "free-lancers". The term "contingency workforce" is also used [Forsebäck, 1995].

5.3. Atypical work-forms and new trends in work organisation

The new organisational models have a common purpose, they try to gain more flexibility and they are based on principles such as just-in-time, network enterprise, outsourcing, etc. Beside the general trend, some specific characteristics of these new organisational models have an impact on the workers' status and the development of atypical work-forms; these characteristics are [Agro L., Pichault F & al. 1998]:

- A shift *from social right to commercial right* that is put forwards with the development of sub-contracting, externalisation, piece work, etc. Sub-contractors or self-employed people have commercial contracts with others enterprises; these commercial contracts give the specifications of the tasks that have to be done. Flexibility by the sub-contractors will be organised on the basis of these specifications. The relation between employee and employers becomes less clear.
- The development of *hybrid organisations*, this means the coexistence of different organisational models and human resource management models in a same enterprise. From the point of view of the workers, this means the coexistence of various status, payment systems, promotion systems, evaluation systems, etc.
- An increasing *place for external partners* (mainly clients) in new organisational models in which market relation is dominant; for example, in the organisation of a call center, clients are now playing the traditional roles of a hierarchy.
- New technologies support *dissolution of time unit and space unit* through the development of new work organisations; this makes the space and time boundaries of work more and more blurred. With ICTs, work can now be done anywhere at any time (work at a distance, mobile work, teleservices, etc.).

- The new organisational models also put forwards the concept of *competencies* rather than the classical concept of qualification with a trend to an individualistic rather than a collective approach of job qualification.

5.4. Working Time Reduction

Three tools are to the core of a lot of policies that try to fight unemployment: growth, flexibility and working time reduction. Working time reduction is not presented as an alternative to growth or flexibility, but as a complementary tool that can be a possible response to mass unemployment [Boisard, 1997].

Since the end of the seventies, macro-economists have taken an important part in research on working time reduction [Elbaum, 1997]. In their analysis, three components are central: the productivity gains in working hours, the reorganisation of the production models, and the wage-counterpart [Cette & Taddéi, 1994]. The different interpretations and assumptions about these components are at the core controversies in the various impact studies of working time reduction on competitiveness, production costs and job creation.

Moreover, there are often important differences between the forecasts of macro-economic models and the results of the implementation of working time reduction in enterprises, and the findings are always the same: job creation is less than expected. A lot of factors can explain this discrepancy:

- there is a great variability between the theoretical or legal duration of working hours and the real working time, due to such factors as effects of overtime, out-sourcing, self-employment or pluri-activity;
- the mechanism of working time reduction is non-linear for many “atypical” workers: part-time workers, self-employed, workers employed by more than one employer, lump-sum contracts, etc.;
- the increase in productivity is evaluated in a very generic way, without studying the specific effects of new technology in each sector.

Besides this issue of working time reduction, there is also a recent renewal of “time studies” in sociological research. For a long time, such studies were mainly devoted to the use and breakdown of “time budgets” in society, with a particular focus on leisure and consumption, gender roles in the family, etc. Recently the focus of “time studies” has changed and flexibility becomes a core topic. New features such as scattered work hours, precariousness and time sovereignty become more and more important in this research area, establishing an explicit link between quality of work and quality of life [Paolucci, 1996; Breedveld, 1998].

6. Social consequences of atypical work forms

6.1. A controversial appraisal of social consequences

We can only give a brief overview of what the consequences are for workers as the result of emerging, but still atypical forms of work. It is clear that the concept of atypical work is a

broad one covering many aspects of new work patterns, and some, such as part-time work, which are not so new. It is also clear that a range of workers at all levels of organisations are affected by the emerging patterns and it is likely that workers will be differentially affected by atypical work. For example, someone with few skills and/or located in an area where there are few alternative employment opportunities will be effected differently from a person with many skills and qualifications based in a thriving metropolitan economy. It is not clear, however, what this growth in atypical work means for individuals. A recent report on the UK [Felstead et al, 1998], which is purported to be the most flexible European economy, for example, pointed out that the average job tenure of men has not decreased much since the mid-1970s and that women's job tenure had increased. *Perceptions* of job and employment insecurity had increased between 1986 and 1997 (when the different objective economic conditions were taken into account) particularly amongst high paid occupations – managers, professionals and associate professionals.

There is a literature which tends to be very positive about the impact on workers of the new “flexibility” resulting from organisational re-engineering. Handy [1995], for example, who tends to concentrate on “knowledge workers”, mainly those in the managerial and professional classes, suggests that we are seeing the emergence of “portfolio workers” who are autonomous, independent and entrepreneurial once freed from the shackles of working for a large bureaucratic firm. Authors writing from this perspective tend, however, to deal with these questions at the theoretical level or at best present individual case studies to make their point. Several empirical studies [e.g., Rajan, 1998; Belt et al, 1998; Arup/CURDS], as well as studies by the European Union and OECD suggests that there are advantages to workers of the emergence of new work and employment patterns. There is also a more critical or pessimistic literature which explores the downside of new patterns of working both from a theoretical perspective [Beck, 1992] and from an empirical perspective [e.g., BIFU, 1996; Allen and Henry, 1997; Belt et al, 1998]. Allen and Henry [1997], attempting to put empirical bones on Beck's “risk society” concept and alluding to the widespread, indiscriminate use of the term “flexibility”, suggest that “If flexibility is the language of the firm, then perhaps risk is more appropriately the language of the workforce”. Both terms – flexibility and risk – will have different connotations for different sets of workers, pointing in particular to gender differences.

6.2. Atypical working time

Atypical work-time, in theory at least, allows workers to organise their work to suit their own lifestyles. In particular, flexi-time, twilight and weekend working allows two-income households to undertake caring duties as well as paid work. In some ways these arrangements can be regarded as ‘family friendly’, though perhaps research is required to consider the long-term effects of an arrangement which sees one spouse go out to work as the other comes home, thus creating a ‘split shift household’. The actual level of flexibility in negotiating preferred hours will, of course, vary across organisational settings and in many cases the degree of choice for workers will be limited. One danger for some workers is that as new forms of work such as temporary work and evening and weekend work become the norm, premium payments for options such as overtime working and unsocial hours working disappear, thus in effect reducing income. Another danger is that unpaid overtime and “presenteism” become the norm, particularly for managerial and professional workers to the detriment of their non-work life.

Remote service factories. Call centres have been described as the ‘new sweatshops’ of the service economy. Recent reports based on industry surveys have highlighted some of the downside of call centre work [e.g., Calcom/Austin Knight, 1997; Hook, 1997] as have reports from trades unions [e.g., Reardon, 1996]. Health concerns, have been expressed, including tension, sleeplessness, headaches, eye strain, RSI, voice loss and burn-out. Other problems include low pay, repetitiveness of work and consequent boredom, and unsociable hours. Individual managers are not always keen to reveal rates of turnover. These conditions are reflected in levels of staff turnover, with rates in the 20-30% bracket not uncommon [Calcom/Austin Knight, 1997]. Other work on the other hand [Belt et al, 1998], whilst agreeing that work intensification is a key characteristic of a call centre, suggests that they are often friendly workplaces, with a good esprit-de-corps and reasonable worker management relationships. Environmental and ergonomic conditions provided for the workforce in the majority of call centres are far in advance of those provided in many clerical settings. Training is also good albeit limited in scope.

6.3. Flexible contracts

The introduction of certain atypical working and employment arrangements clearly have benefits for both employers and workers.

Part-time work seems to benefit women in particular (this, of course, assumes an acceptance of the wider status quo regarding gender divisions of labour in wider society) as well as, potentially, older employees who do not wish to work full-time hours [Backer, 1996]. Several studies suggest that part-time work is growing in response to supply-side factors (i.e., labour force preferences) [e.g., Rajan, 1998]. Employers demands for increased hours working may, however, impact negatively on part-time workers. This is because many part-time workers are not entitled to overtime payments until they have worked the number of hours which full-time workers work.

Job sharing, where a job is split between two people, say two and a half days per week each, also provides the opportunity for people with non-work responsibilities or goals to continue to work. Potentially, job sharing makes a particularly useful contribution to ‘family-friendly’ work policies, allowing parents to continue to pursue a career while child-rearing. Anecdotal evidence from recent research, however, [Belt et al, 1998] suggests that job sharing is more acceptable to women than to men and that the lack of men wishing to undertake job-share undermines many schemes. Another positive example of atypical work is term-time work, where people with children (this can be both sexes but in practice is usually women), can work normal hours during school term, but do not work during school holidays [Belt et al, 1998]. A particular problem for workers working on a part-time basis is access to promotion. Given that women are the main group in this category they may be systematically discriminated against. Overcoming this problem and ensuring the possibility of a part-time career, as opposed to a part-time job will be a key challenge for equal opportunities initiatives.

The impact of other forms of atypical contract, however, may not be so positive from the perspective of the employee. Ono [1998], for example, reviewing a number of studies of temporary work suggests that temporary work, probably the key area of atypical contract growth, was not desired by employees. He suggests that there is consensus that it is demand side factors (intensified competition in product markets, volatility in product demand, the

decline in bargaining power of labour, and the search for lower production costs) rather than supply side (changes in worker preference towards non-traditional work arrangements) which is driving increased temporary employment arrangements.

This view is supported by Rajan who contrasts temporary work which appears to be mainly involuntary with part-time work which is often a preferred option for workers [1997; 1998]. The assumption must be that, with certain exception such as students and some other young people most temporary work is “involuntary”. Career prospects for temporary workers are, almost by definition, likely to be less assured than for permanent workers and they run the danger of becoming part of a “peripheral” or “contingent” workforce. It has been argued that many employers are using short term contracts, specifically to remove these workers’ employment rights [BIFU, 1996]. They may also receive less training, though on the positive side they are likely to pick up broader experience and be more flexible, thus ironically making them more employable. It has been argued that performance related pay discriminates against part-time workers (and thus women) as increases are generally awarded to those working longer hours [BIFU, 1996], though this does not appear to be true in some of the newer work environments such as call centres.

6.4. Atypical work location and telework

Of the types of atypical work location outlined in Table 1 of this report only teleworking from home has been subject to the most exhaustive study. Table 2 below summarises the advantages and disadvantages of teleworking from the employee/worker’s point of view.

As suggested previously in this report not all workers will be effected in the same way by new work patterns. This also applies to teleworking from home. Olson [1987] indentifies four categories of motivation for home-based teleworking: *exploitation*, the worker who has no choice but to work at home; *autonomy*, the worker who needs to be independent; *trade-off*, the worker who chooses to work at home giving up certain comforts to suit their own personal circumstances; *privilege*, a small elite of workers whose bargaining position si strong enough to allow them to dictate their own working conditions. Unsurprisingly gender is one of the key differentiators, but it is perhaps the gender occupational segregation which carries over from the traditional workplace into the home which is the key issue. A number of studies in the 1980s [e.g., Huws, 1984; Vedel and Gunnarsson, 1984; Goldman and Richter, 1987] found that in the northern European context at least workplace occupational segregation was replicated in home-based teleworking, with higher level professional jobs overwhelmingly held by men, with women concentrated in low skill work. In more recent work, Huws et al [1996a; 1996b], argue that telework is capable of both reinforcing gender roles and of challenging them. And cautiously, these authors claim that there is some evidence for convergence between male and female gender roles amongst teleworkers and that when other factors are controlled for teleworking seems to break down to some degree traditional patriarchal relationships.

*Table 3 : Advantages and Disadvantages
of Telework from the Employee’s Perspective*

Perceived advantages of telework	Perceived disadvantages of telework
flexibility of work hours [“lifestyle entrepreneurs” included]	impoverishment of labour relations

efficiency advantages	less division between work and private life
more work motivation	poorer pay and benefits
improved employment opportunities	social isolation
enhanced autonomy	increase in routine tasks
bridge "career gap"	career marginalisation
eliminating commuting costs and time	

Source: Gillespie et al., 1995

There is only a limited literature on mobile working and on CSCW. In neither case does it have much to say on outcomes for workers. In each case it can be hypothesised that some travel time will be saved, though this does not necessarily mean that the "saved" time is returned to the worker. Indeed, case study evidence suggests that other organisational changes which are associated with mobile working may increase work intensification [Gillespie et al, 1995]. There is a need for more empirical research in this area, specifically focusing on outcomes for workers.

6.5. Interim work and job detachment

The trend towards job detachment is perhaps one of the most important aspects of atypical working. Each of these forms of work is likely to lead to greater precariousness and uncertainty for individuals. For the newly self-employed, for instance, particularly those who possess scarce skills and the ability to embrace the new "entrepreneurial" culture, there may be opportunities to sell their services to the highest bidder and to negotiate rewards which far exceed those earned by salaried staff. Recent and on-going work at CURDS also suggests that there are opportunities for staff with scarce skills, particularly IT skills, who transfer from large bureaucratic and hierarchical organisations to specialist service providers as the result of outsourcing agreements. New individualised contracts replace traditional contracts, giving additional rewards and work opportunities to those staff who are skilled and are prepared to be flexible and geographically mobile. The outlook for those staff who are unable to be flexible or mobile are less certain. There is evidence to suggest that they may be pressurised to change the terms and conditions under which they work and that this will make employment and remuneration less secure. This process is constrained to some extent as a result of legislation, notably the Acquired Rights Directive. However, the impact of the Directive may in reality be limited once organisations which are determined to introduce individualised contracts take over packets of work and parcels of workers.

The growth of workers contracted to private sector employment agencies is also a significant development. Further research is required to examine the role of these bodies. They clearly play an increasing role in allowing firms to manage their labour requirements more flexibly. Within this context they also provide a key role matching the unemployed with firms. However, there are several disadvantages to these arrangements for the worker. First, the agency may take over half of the fee which the principal firm pays, leaving the worker with an hourly income well below other workers. There is little opportunity for career development, though temporary workers may get an opportunity to show their abilities within the principal organisation and be employed on a longer term basis. The situation regarding the legal status of the worker's relationship to the agency varies from country to country. In some

cases the agency has no obligation to provide work and often appear to treat workers as a stand-by labour pool on which to draw.

7. Labour legislation and collective agreements

In the first section of this report (Table 1), we identified four categories of atypical work forms, of which relationships with ICTs were analysed in section 2 and social consequences in section 6: atypical working time, atypical contracts, atypical work location and job detachment.

If we consider the responses of labour legislation and collective agreements to these challenges, we need to split or to detail some of these categories. The following work forms will be considered in this section:

- part-time work, as the most widespread form of atypical working time;
- other atypical schemes of working time, such as 24-hours operations and flexible hours;
- fixed-term contracts;
- self-employment and outsourcing;
- atypical work locations, including telework;
- temporary work through agencies;
- global challenges and local problems.

For each of these categories, we will give an overview of the main responses in labour legislation and negotiated agreements, both at the European level and at the country level. At this country level we will not draw a systematic comparative overview, which is already made by the European Industrial Relations Observatory (EIRO), but we rather point out some leading edge agreements or legislation.

7.1. Part-time work

In all the European countries (except Denmark), part-time work has increased during the last decades. In some countries it represents more than one worker over four; in the Netherlands, it represents more than one worker over three. It concerns mainly young women working in the service sector. Part-time work is used in a wide range of employment policies and regulatory situations, among others:

- Part-time work represents the main tool actually used for working time reduction, although with proportional wage loss.
- Part-time work allows the employed active population (total amount of employed people) to increase, even if the total amount of full-time equivalents decreases.
- In some countries, part-time work may also be combined with part-time retirement, according to specific conditions at the sectoral or enterprise level.
- Part-time work is often used in collective agreements at the enterprise level or the sectoral level, as a mean to reduce total employment while avoiding or reducing redundancies.

At the European level, there is no standard definition of part-time work. The existing national definitions only specify something like “less than the regular or standard weekly working time for full-time employees”. A recent overview of the diversity of definitions and regulations about part-time work was published recently by the European Industrial Relations Review [EIRR, 1997a]. Some aspects of this overview are interesting to be mentioned here:

- In some countries, there is a minimal threshold level for part-time work (e.g. 1/3 of corresponding full time in Belgium and the Netherlands, 15 hours/week in Denmark, 8 hours/week in Ireland). Above this threshold, part-time workers have access to the social security system. In the other countries there is no minimum level of part-time work. National legislation determines to what extent and what conditions casual part-time workers have access to social security and social rights.
- In many countries, part-timers enjoy employment rights on a pro-rata basis. But in some countries, social rights do not depend on part-time or full-time situation.

A European agreement on part-time work was concluded on 6/06/1997 between ETUC, UNICE and CEEP. This agreement achieves a double purpose: to remove discriminations against part-timers and to facilitate the development of flexible working time on a voluntary base, taking into account the needs of employers and employees. The main content of this agreement concerns:

- Non discrimination: part-timers shall not be discriminated in respect of employment conditions. However, employment conditions may be calculated on a pro-rata basis and, when justified by “objective reasons”, access to full social rights may be subject to restrictions such as period of service, time worked, earnings or qualification.
- Opportunities for part-time work: Member States will identify and review obstacles which may limit the opportunities for part-time work. Employers should pay more attention and remove obstacles to transfer from part-time to full-time and vice-versa. Workers’ refusal of transfer from full-time to part-time or vice-versa should not constitute a valid reason for lay-off.

Most of the comments underline that a considerable amount of scope as to the interpretation of the agreement is left to the Member States, particularly for the “objective reasons” justifying that there would not be equal access to full social rights [EIRR 1997a]. The case of casual workers is also left to the legislation of the Member States or to sectoral agreements.

Up to now, the protection of part-time workers’ rights can highly diverge from a country to another and within some countries from a collective agreement to another.

7.2. Other atypical working time (24-hours, flexible hours, etc.)

In industrial sectors, atypical working hours are classical and regulated for a long time, especially twilight and shift work. In some branches of the service sector, like transport, catering or health, atypical working hours (weekend, night) have always existed and are regulated through national legislation and sectoral agreements. An overview of these aspects of labour regulation is out of the scope of this report and is already available from other

sources (European Industrial Relations Observatory, Dublin Foundation, European Commission DG V)

The new factor of change linked to recent developments of ICTs is the extension of atypical working hours to services where they were quite unusual: financial services, business services, customer services, and more generally any kind of teleservices.

This extension is linked to a deep restructuring in service activities, in both industrial and tertiary sectors. "Telemediation" becomes a major trend, which characterises the future of service activities in the information society. Telemediation consists of replacing or completing a "face to face" relationship with clients, by a "mediation by telephone"; i.e. offering advice and services based on a telephone call. In a growing range of industries many functions of services involve mediation by telephone, particularly sales, marketing, technical assistance, booking, insurance, market studies, etc. Call centres have developed the supply of services in this promising new niche. Employment in call centres in Europe is estimated at 900 000 workers in 1998 and expected at 1.3 million in 2000 [Datamonitor, quoted by Le Monde, 3/02/1999]. The common characteristic of services based on telemediation is that they are perfectly mobile, both in space and time, meaning that they can be executed from any place and at any time. In this kind of services there is an increasing use on flexible working time (24-hours-office operation).

These new trends in the use of flexible hours in service activities are not yet regulated at the policy level. Three observations are worthwhile:

- Up to now policy measures in the Member States mainly consist of attracting call centres with adequate regional policies, in order to create new jobs. Facilities are given to call centres : free zones, discount on real estate, public investments in telecommunication infrastructure, public initiatives in vocational training, reduced telecommunication rates.
- Call centres often result of an outsourcing process from core enterprises to external services. In this context, the workers recruited in call centres are not submitted to the same collective agreements as the workers doing the same job in "core enterprises"; wages and employment conditions are lower.
- Some collective agreements however exist in call centres, where they have been negotiated case by case; their main purpose is to regulate the organisation of flexible working time.

7.3. Fixed-term contracts

At the European level, there is up to now no specific legislation related to fixed-term work contract. The present section deals with forms of temporary work organised by fixed-term contracts with a single employer. The case of temporary work through agencies will be treated further, as it refers to a quite different regulatory framework.

A new European agreement on fixed-term contracts was concluded on 14/01/1999 among ETUC, UNICE and CEEP. It considers that unlimited work contract are the "general form" of employment and that fixed-term contracts must be implemented as a specific response to

particular circumstances and particular needs of employers and employees. This agreement has two main consequences:

- it enhances the dynamics of sectoral negotiation at the national level, where agreements must be concluded on the “particular circumstances” allowing fixed-term contracts;
- it will result in a European directive that will force Member States to adapt their practices and reduce some current excess in the use of repeated fixed-term contracts.

The implementation of this brand new agreement, that has still to be ratified by the three partners, should lead to important changes in the current situation.

Temporary employment is increasing rapidly in a lot of European countries. The number of new entrants into the labour markets finding temporary work increased. In each country it mainly concerns young women between 20 and 30 years old. The Dublin Foundation realised, in 1992, a study on temporary work contracts. It distinguishes two kinds of reasons that explain the development of these contracts [EFILWC, 1992]:

- traditional reasons linked to the limited duration of the tasks for which the worker is engaged;
- a new set of reasons such as uncertainty about the future of the enterprise as regards the required human resource, the constraints of the legislation that protect permanent workers against redundancy, the impact of public programmes fighting unemployment, etc.

Up to now, each European country has specific legislation and sectoral or enterprise agreements on fixed-term contracts, based on two general principles:

- The first general principle is to limit the use of fixed-term contracts by employers, either to specific circumstances or to specific publics of workers. National legislation specifies in what cases temporary contracts can be used and which groups of workers can be concerned by these contracts (public and / or private sector, all workers or only white or blue collars, specific categories of young or unemployed people, etc.). Nevertheless, recent empirical and comparative surveys, carried out by the European Trade Union Institute [Clauwaert, 1998] and EIRR [EIRR, 1997b], show that “specific circumstances” allowing fixed-term contracts are more and more widespread: flexible and just-in-time production, seasonal tasks, new recruitment strategies using fixed-term contract as a trial period, etc.
- The second general principle in each national legislation is that temporary workers must have the same rights that permanent workers. Nevertheless, the above mentioned studies show that there are discriminations in areas such as access to training and working conditions. There are also important differences among the Member States [EIRR, 1997b]. For example, when an employer interrupts a fixed-term contract before the end of the contract, each member state does not allow a redundancy payment for temporary workers.

7.4. Self-employment and out-sourcing

There is a widespread assumption that attempts by employers to cut labour costs support the growth of non-waged forms of employment. Self-employment allows externalising a lot of costs linked to personnel management and social protection. Figures are not so clear on this topic. There is a great diversity in the European countries as regards the level of self-employment. This level is particularly high in some countries where the level of small production units is important. There is no spectacular evolution in this field (excepted in UK); the average level of self-employment is not very different now from what it was some years ago. It is however relevant for the purpose of this study to notice that the distribution of self-employment between sectors has changed with a decline in agriculture and a growth in services.

From the point of view of the workers, the development of self-employment is a component of the development of an external labour market where commercial rules are prevalent as regards labour rules.

From the point of view of regulation, the key issue is that commercial legislation replaces labour legislation. Commercial legislation does not usually organise social protection for independent workers; besides basic legal obligations, options for social insurance are left to the individual.

7.5. Atypical work places and telework

As mentioned in the previous section, telework has been a controversial issue for a long time. It was perceived on the one hand, as a threat for employment (placing employees against their wishes in independent work, isolation, de-skilling, etc.) and on the other hand, as a job potential and a tool for integration and cohesion (new spatial distribution of work, etc.).

Nowadays, home-based telework is only one very limited form of what can be termed telework. Others forms of telework are being developed and the current reality of telework covers both old forms of telework inherited from the past and new forms of telework emerging from the context of the late nineties. Six major categories of telework can be distinguished; they constitute the hard core of telework today. The first three are declining; the last three are flourishing:

1. home-based telework;
2. telework in satellite offices;
3. telework in telecentres or telecottages;
4. distance working companies, such as call centres;
5. mobile telework;
6. "mixed" telework (a few hours per week at home, a few hours on the road or in the field, a few hours with clients, but the main reference is still the office and colleagues).

It appears that the declining forms of telework often concerned few groups of workers here and there. These forms of telework were often limited experiments within a company, or some kind of pilot projects, often oriented towards social integration or cohesion. Conversely, the flourishing forms of telework (the last three) concern entire categories of workers in entire sectors of economic activity.

According to the European Commission [Sylvester V., 1998], regulatory aspects at the European level potentially concern a lot of topics, which can be regulated by law or by collective agreements:

- legal status of teleworker,
- principle of equality of treatment,
- privacy and data protection,
- labour issues (working time, functions, voluntary character),
- occupational health and safety,
- social security,
- gender issues,
- trans-border issues.

The ILO agreement n°177 (4/06/1996), gives a framework for collective negotiation of these topics at the national level. But the ILO agreement only concerns homework. It has not yet been ratified by many countries and cannot be really implemented.

An overview of existing collective agreements in Austria, Germany, Italy, Sweden and UK was carried out by the MIRTI project (for the Telematics Application Programme, DG XIII). This study compares 24 enterprise agreements and 3 sectoral agreements and gives guidelines for negotiation of further agreements. In most of the cases, agreements concern employees of the companies and not independent workers. The main purpose of the agreements is to specify the practical aspects of teleworking: work organisation, working time, relationships with central offices, etc. [Mirti, 1998].

Besides collective agreements, general legislation on telework mainly concerns home-based telework. National legislation on telework, when existing, deals with typical issues concerning homework: equipment, occupational health and safety at home, responsibility and control, access to training, communication costs, etc.

Currently, the needs for better regulation appear to be more important for the new forms of telework or more generally all forms of distance working supported by ICTs. For example: distance working companies such as call centres are laboratories as regards flexibility, they put forwards issues such as security, control, wage systems, flexible hours, etc.; the development of mobile work and mixed telework put forwards issues such as the boundaries between working life and private life, control, organisation of working time, etc.

7.6. Temporary work agencies

There is a distinction between fixed-term contract and temporary work through agencies (interim work). An agreement (n° 96) adopted in 1949 by the International Labour Organisation gave public authorities a monopoly as employment agency. But the economic context has changed and private agencies are now specialised in the recruitment and placement of workers. In 1997, the agreement n° 96 has been replaced by a new one (n° 181) that try to give minimum rights to interim workers in the following areas: collective bargaining, pay, working time, health and safety, maternity, and social security. Until now, it is the only international agreement.

The incidence of temporary work through agencies is growing in many countries and situation remains controversial. A study, in 1996, by the European Foundation for the Improvement of Working and Living Conditions suggested that:

- Over half (57%) of temporary agency workers are exposed to painful postures at work or fatigue, compared with 42% of permanent workers, and 49% of fixed term workers;
- Twice as many temporary agency workers than permanent workers consider that their job does not match their competencies or skills;
- Only 12% of temporary agency workers had any internal training (1 day or more) in the previous year. This contrasted with 22% of fixed term contract workers and 35% of permanent workers.

As regards regulation, great variations exist between European countries. Only Greece maintains its ban on this form of employment, while countries such as Italy and Spain have recently been taking steps to legalise temporary work through agencies. In most countries, the recruitment of temporary workers is only permitted in specific circumstances. There are also a number of regulations regarding the financial position, the commercial role, and the agencies' responsibilities towards their workforce. In other countries, including Austria and Germany, an employer is obliged to consult workplace representatives before recruiting temporary workers, while in the Netherlands, in certain circumstances, employers must obtain authorisation from the labour authorities to hire temporary employees. Finally, in country such as Sweden or Belgium, collective agreements protect the terms and conditions of temporary agency workers. [EIRR,97]

These variations in regulation relating to temporary work agencies are summarised in a study by CIETT [Zoetmulder, 1999] that distinguishes four categories of regulatory framework existing within the EU: liberal, time-restricted, reason restricted, prohibited. Another possibility 'sector restricted' was present in Norway.

Table 4
Legal situation regarding agency work in Europe

Liberal	Austria, Denmark, Eire, Finland, Netherlands, UK
Time-restricted	Germany
Reason-restricted	Belgium, France, Italy, Luxembourg, Portugal, Spain
Greece	Prohibited

Source: Zoetmulder, 1999

The overall direction in Europe is towards greater liberalisation of the agency market. Liberalisation has been more pronounced in northern countries, though there are some indications of a move to a slightly more restrictive approach being taken in France and Luxembourg. Recent pronouncements by the UK government suggests that it may also be moving to slightly more restrictive position, but from an extremely liberalised position. Here the aim seems to be to encourage higher standards from agencies, in terms of treatment of

both workers and user firms, thus allowing agencies to play a constructive role in the flexibilisation of the economy.

Of the northern countries Germany (and also Belgium) is probably the least liberalised country in respect of agencies. Even here, however, a process of « controlled liberalisation » has been taking place over the past 20 years. Agencies must still be licensed, however, and must report statistics to the Federal Employment Service.

In the southern countries (Italy and Spain) regulation remains important and in Greece employment agencies are still prohibited.

7.7. Diversified responses to common European problems

Atypical work forms and flexibility are global challenges that need to find answers at the European level but they also represent daily and concrete problems that need urgent solutions. In most countries, social partners and/or public authorities at the level of an enterprise, a region, or a country try to find punctual solutions to specific problems. The common purpose is to trial pathways that can link security to atypical work and flexibility.

For example, some recent dispositions taken in different countries are described below. They do not solve the problem of atypical work forms but they give pieces of answers to a crucial challenge of the future of work: how to find a balance between economic requirements for flexibility and job security and social rights.

- *Illustration in the Netherlands: status of flexible workers and employment security*

In May 1998, the First Chamber of the Dutch Parliament has adopted a law on “flexibility and security” and a law on “workers’ affectation by non-official organisations”. The first law is effective since 1 January 1999 and the second one since 1 July 1998. These laws improve the situation of flexible workers. They will be allowed to claim remuneration for a minimum of three hours even if the number of hours worked is lower than three hours. The possibility to have a permanent contract is also improved. Now a worker can claim a permanent contract after three temporary contracts for a same employer. These new laws clarify the juridical status of flexible workers. If a worker is working on a regularly basis for a same employer during three months (for example on the basis of 20 hours a week) he is supposed to have an employment contract. The number of hours of his contract refers to the number of hours that have been worked during the former three months [CE, MISEP n° 63, 1998].

Trade Unions and Employers discuss new forms of work, which are thought to follow a trend from job security to employment security. A prominent example is the so-called “job pool”. This is an organisation that allocates workers within a pool to a company or a co-operative structure of several companies (within a certain region or sector), depending on the actual demand for labour. Job pools aim at enhancing the employability of workers, while at the same time promoting organisational flexibility and protecting employment. The number of job pools is increasing rapidly in the industry and service sectors. [EFILWC, EIRO, Annual review, 1997]

- *Illustration in Austria: social protection for casual workers, flexible working time and promotion of employment*

In the framework of a reform of the pension plan and the preparation of the budget 98/99, the Austrian Federal Government took a new disposition concerning the social protection of workers engaged in casual activities (minimal activities), this refers to employees earning less than 3.880 ATS per month (i.e. those in limited part-time employment). Without this disposition, these workers are only subject to injury insurance. With this disposition the enterprises where the pay packet for casual employees is 1,5 higher than 3.880 ATS have to pay proportional contributions to social security. This means that an enterprise with two casual employees has to pay contributions. The worker that earn more than 3.880 ATS, as the combination of more than one activity (salaried, self-employed and/or casual activities), must pay his own contributions to social security. [CE, MISEP n° 61, 1998]

Still in Austria, since the beginning of 1998, two laws (on work contract and unemployment insurance) have been modified in order to organise three forms of flexible working time that can enhance flexibility and promote employment. These three dispositions concern:

- Training leave

If he has a contract of minimum three years, and on the basis of an agreement with the employer, a worker can live his job (for a minimum of six months to a maximum of twelve months) for training activities During his training he receives an allocation and he is protected against dismissal. Three years after a specific training, it is possible to ask once more for a training leave. The employer is not obliged to engage another worker.

- Leave on personal grounds

The rules are quite similar as for the training leave. However the employer has to engage another worker and the possibilities of doing other jobs during this leave on personal grounds is limited.

- Solidarity allowance

In the framework of collective agreements, groups of employees can reduce their working time in favour of the engagement of unemployed people. Both parts receive a solidarity allowance during a maximum of two years. [CE, MISEP n° 61, 1998]

- *Illustration in Germany: social protection in flexible schedules*

A law for the social protection of flexible schedules is effective since 1 January 1998. Before this law, social security was linked to an employment contract and remuneration but different forms of capitalisable working hours were possible. Now social protection is extended to the periods of unemployment in relation to the capitalised hours. [CE, MISEP n° 62, 1998]

- *Illustration in Denmark: flexibility for social purposes*

Creation of 40.000 flexi-jobs by the year 2005, aimed at offering jobs on special terms to people with disability, illness or reduced ability to work. Employers would receive a wage contribution of between one-third and two-thirds of the minimum wage, depending upon the employee's ability to work [EFILWC, EIRO, Annual review, 1997].

8. Conclusions and Pathways for European Policy Options

In this section we present our general conclusions, which are related to pathways for policy options suitable for consideration by the European Parliament. First of all we summarise five key findings from the previous sections, and afterwards we draw seven policy areas which are related to the findings. The next table indicates the structure of our approach.

<i>Findings</i>	<i>Paths for policy options</i>
8.1.1. The development of a core and peripheral workforce	8.2.1. De-linking work status and social rights
	8.2.2. Atypical work as a possible answer to social needs
8.1.2. Decreasing effectiveness of existing labour law for regulating new flexible work arrangements	8.2.3. Developing different levels of industrial relations
	8.2.4. Promoting flexible schemes for working time reduction
8.1.3. A central concern for employability and lifelong learning	8.2.5. Specifying the roles of the different stakeholders in employability and lifelong learning
8.1.4. The uncertain future of the welfare state	8.2.6. Welfare: a right balance between flexibility and security in the long term
8.1.5. The supporting, but not determining role of technology	8.2.7. Developing the diversity of technological options.

8.1. Five key findings

8.1.1. The development of a core and peripheral workforce

The future of work in the information society is likely to be characterised by *the development of a segmented labour market* as employers seek devices which provide the maximum flexibility in production in order to minimise costs. Atkinson suggested as far back as the 1980s that a core-periphery workforce was developing. The components of this core and peripheral workforce are illustrated in the following diagram (figure 12).

“Core jobs are jobs where it is essential for the employer to be assured of the availability of labour at all times. The characteristics of these jobs reflect this need in the form of permanent or stable relationship between employer and employee. Such jobs often require high levels of skills and have conditions of employment designed to limit labour turnover: good pay and conditions, ‘permanent’ employment, career structures and so forth. Jobs in the periphery are designed to offer the opportunity for variation in labour supply by, for instance, variation in hours of work or by intermittent employment. Such jobs are often part-time, temporary or casual, and even if full-time, low paid and unstable with a high risk of layoffs or dismissal. Such a division of jobs may be expected both within

organisations (with some being core and other peripheral) and between different employers” [Hasluck and Duffy, p.14].

So not only might the principal firm adopt this model, but so too might the sub-contracting firm. Some commentators have suggested that it is larger monopolistic firms and others which have a secure market that will tend to provide core jobs while smaller businesses, especially those dependent upon sub-contracted work from other organisations, and firms which operate in volatile markets which will offer peripheral jobs [Hasluck and Duffy, 1992].

It may be argued, however, that we have now moved beyond this point. First, many would suggest that with increasing competition in all areas of economic activity and with greater demand for shareholder value, few firms are in the position not to promote internal and external labour flexibility. Second, the “management ideology” which underpins the notion of the core-periphery workforce has permeated even those organisations which are not under serious threat. In the public sector “quasi-market” mechanisms have been introduced to replicate market uncertainties. Thus the core workforce is likely to have shrunk and the periphery workforce grown over the decade or so since Atkinson’s model was first formulated. Third, there has been a huge growth in organisations which outsource work from other firms. Some of these firms are now themselves clearly core to the production process, offering strategic advice and services in “strategic-partnerships”.

It has been suggested that the situations of individual workers will be depend on where they stand in relation to this core-periphery model (see table 5):

Table 5
Core and peripheral workforce model

“Core”	“Periphery”
functionally flexible	numerically flexible
full-time	part-time
permanent	temporary, casual
job security	job insecurity
stable	unstable
high skill levels	low skill levels
average pay	low pay
training	limited training
career structure	no career structure
good terms/conditions	poor terms/conditions
standard hours of work	intermittent hours of work
low turnover	high turnover

Source: Cited in FLEXCOT – Valenduc & al., 1998

This core periphery model, of course, only a model and some elements can be questioned. For example, it could be argued that part-time workers could still be core to an organisation and have, for example, as stable employment as full-time workers. Furthermore, it is necessary to question notions such as job insecurity. For example, an outsourced IT expert may have a fixed-term contract with an employer and thus be insecure in a formal sense. The reality,

however, may be that he/she is very secure in the knowledge that this contract will be renewed or that opportunities elsewhere are plentiful. A cleaner or a clerk on a similar contract, by contrast, may not have this security. Indeed, in the age of compulsory redundancies even someone with a permanent contract may be less secure. Despite such caveats, however, it is clear that a core-periphery labour market is emerging. ***The main determinant of an individual worker's place within this market appears to be the skills and competencies which he or she possesses.*** The core skills and competencies will change over time, but increasingly are likely to be those described by Reich as characteristic of the "symbolic-analyst".

8.1.2. Decreasing effectiveness of existing labour law for regulating new flexible work arrangements

As has been shown in this report there appears to be fundamental restructuring of traditional patterns of work, of employment, and of work relationships underway. Some commentators suggest that ***the "demise" of traditional work is eroding the fundamental bases of labour law since this was built around the full-time lifelong employment*** of the "Fordist" company. The main elements that are changing radically can be summarised in the following trends [Simitis, 1997]:

1. The growth of the tertiary sector, while the legislative regulation of work developed in accordance with the needs of the industrial manufacturing sector.
2. The decrease in importance of the factory as the typical workplace. This goes with other characteristics as lifelong employment, job contents hierarchically determined, the integration of workers in a "community" that implied a higher relevance of the collective rather than the individual.
3. The increase of entrepreneurship, but in terms of quasi-self-employment which does not mean the end of the basic condition of dependence on the employer. Simitis calls these workers "minimal entrepreneurs". Instead of *just in time*, a *just in case* mode of production could be part of our future.
4. The end of the equivalence between work and lifelong employment, caused by structural downsizing processes and demographic trends.
5. The end of collective bargaining as a means of improving working conditions. Now, collective bargaining in many cases reduces workers' past achievements.
6. The end of the overlapping between workers' interests and social improvement, as the case of environment protection illustrates well.
7. A global organisation of the production process which lead to the decrease in importance of national regulatory frameworks.

In general, all these trends might be interpreted as a way back to a regulation typical of *Code civil*, that is based on individual bargaining. For this reason, an important redefinition of the legislative framework is required.

8.1.3. A central concern for employability and life-long learning

There is a widespread assumption that the pace of change in the workplace (and in wider society) is accelerating as we move into the information society. If this is correct it follows that more attention will have to be paid to up-dating people's skills and knowledge bases, if they are to remain employable. This will apply to both the core workforce and to the peripheral workforce and will become a continuous process. This process has been termed "life-long learning".

A related question is that of the *portability of skills* gained during a particular period of employment. There appears to be a move by many employers away from qualification-based assessment of a worker's potential to a competence-based assessment at the point of recruitment. It is clear, therefore, that a worker must both have portable skills and also be able to prove that he/she has these skills. *A key question regarding life-long learning and skills portability is who will take responsibility for providing and funding the required training.* There would appear to be a number of "stakeholders" here: government, enterprises, employment agencies, trade unions, and, most importantly, if such schemes are to work, individuals.

8.1.4. The uncertain future of welfare state

Several issues pertaining to the role of the welfare state will have to be considered if the changes which have been pointed to in this report become more deeply embedded.

- *The role of the welfare state as a provider of education:* to what extent should the role of education be merely to promote employability which seems to be required to allow firms to work in a more flexible way.
- *The role of the welfare state in supporting the unemployed,* whether that be for short-periods in between fixed-term work contracts or for longer term periods. If traditional forms of employment are declining, a new system for financing more flexible work patterns will be required.
- *The role of the welfare state in providing or promoting pensions:* current ways for funding (particularly state) pensions are already under threat in many European countries, as the population ages. The emergence of a more flexible work patterns means that some employment-related pensions no longer appear relevant (with some schemes requiring forty years in a single company in order to obtain a full pension).

Similarly, though not strictly speaking part of the "Welfare State", though certainly part of the "Fordist State", current arrangements for mortgages, other forms of credit, and insurance often presuppose full-time and permanent employment. The provision of these services will also have to be examined.

8.1.5. The supporting, but not determining role of technology

Information and communications technologies are clearly important in underpinning the processes of change occurring in work and employment. It is important to bear in mind, however, that ICTs do not *of themselves* determine changes in work patterns (or indeed other social outcomes). Changes in production (and by extension in work patterns) often happen

independently of technological change, even if they are enhanced by the new information technologies. Particular outcomes, however, will be determined by a number of other factors.

Similarly, at the level of the firm we would expect different employers to offer different work arrangements depending on a range of factors. New technology may, of course, be instrumental in altering the importance of each factor and so increase the options available to firms and other organisations.

All this implies that the impact of new technologies is a *political matter* in the broadest sense of the term and we would expect to see different outcomes from country to country. ICTs provide both challenges and opportunities. ***It is the “institutional filter” that influences to a great extent their net impacts on societies and economic systems.*** A very important point is that the available institutions are probably not suitable for facing effectively the challenges and profit from the opportunities that ICTs bring with them.

8.2. Paths for policy options

8.2.1. De-linking work status and social rights

One of the reasons why atypical jobs can lead to social exclusion is the fact that social rights and social protection are closely linked to work status. ***Atypical work status only gives access to partial social rights.***

As the diversity of work forms will probably continue to increase, due to deep trends in the organisation of the economy, it becomes more and more necessary to find concrete systems allowing a disconnection between work status (that are changing and unstable) and social rights (that should be guaranteed). It is clear that new systems will be required for the financing of two areas of central concern, namely, unemployment benefits and pensions. New attitudes will also be required from the private sector providers in pensions and in other areas such as credit provision, particularly long-term credit provision such as home mortgages.

For many years, some well known proposals develop “radical” reforms of the income structure: universal allocation, second cheque, etc. There are also other proposals only related to the financing of the social security system. Systems based on taxation (such as in the Nordic countries) are reputed to be less harmful to atypical work forms than systems based on employers’ and employee’s contributions.

More recent proposals, which are already discussed at the European level (2), develop ***policy proposals leading to a de-linking of work status and social rights, without weakening any of them.*** The central purpose is re-think labour law in a context of deep mutation of the labour world. Actual labour laws have been developed in an economic context characterised by Fordism. The reality of labour world is quite different now and new principles of regulation for labour relations have to be found. Innovative ideas are proposed:

(2) An expert group, representing eight European countries and co-ordinated by A. Supiot (University of Nantes), has submitted in June 98 a report for the European Commission, entitled “The future of labour law in Europe”. It will be published in French in March 1999 (Editions Flammarion).

- *The concept of “individual professional state” instead of “work status”.* This concept of professional state is based on the idea of a continuity of social rights on a long period, attached to the individual whatever should be his work status. It is a way to include different periods (wage-earning, self-employment, training, individual leaves, etc.) in a “trajectory of working life”, with opportunities and means for passing from a situation to another.
- *The concept of “social drawing rights”, complementary to universal social rights.* A “capital” of social drawing rights should be accumulated by the individual along his working life, and used whenever they need. These social drawing rights should allow some freedom to wage-earners, as regards for example training or private leaves, but without losing their employment security. Such trends in labour law explicitly include atypical work in the global regulation of labour relations.

In the same framework, the evolution of the concept of “subordination” in work contract, which characterises wage-earning, is also discussed. Pathways are explored between wage-earning and self-employment. The concept of “para-subordination” is developed. This refers to a status “in-between”. As the distinction between employment and self-employment becomes blurred, and since the autonomy and bargaining force of self-employed cannot be taken for granted, some of the traditional protection assured to employees might be extended to some group of self-employed workers. At the same time, wage employment will need some flexible characters usually connected to self-employment. “Para-subordination” already exists in Italy, but in a rather precarious way; the Italian experience must be evaluated in order to check to what extent it could be improved and integrated in a new model of social rights.

EU institutions (Parliament, Social and Economic Council, Social Dialogue) must explore leading edge scenarios and proposals which aim at de-linking workers’ status and social rights without weakening any of them. This appears to be the only way to remove the “atypical” character of current atypical work forms, rather than trying to attach them at the margin of existing schemes of social security.

8.2.2. Atypical work as a possible answer to social needs

Atypical work forms and technology induced work forms can propose an answer to specific social needs. They can encounter the need for integration of specific groups of individuals: people with disability, illness or reduced ability to work. They can also offer pathways for the development of remote area. But in these cases also, the key issue is the workers’ status and their social rights.

Atypical work forms can also be considered as alternatives to traditional routes into work. A number of intermediate labour market projects have been undertaken. The costs and benefits of these projects are still under debate, in particular it is questioned whether they merely undercut the market. There are examples of such projects, however, which are specifically designed to avoid crowding out the private sector. In the Netherlands, for example, a public sector driven project which carries out work on behalf of private sector firms appears to have had some success. The scheme is time-limited, pays the minimum wage, and seeks to place workers in ‘real’ jobs, often with those firms for whom they have worked during the scheme.

Anyway these examples of “social usefulness” of atypical work forms may not hidden the necessity of policy measures in the core areas that we have described above: employability and life-long training, working time, industrial relations, workers’ status and social rights, evolution of the welfare state.

Flexible transitional labour markets can present a social usefulness in order to achieve societal purposes that are not taken into account in the core labour market. This kind of policy should however be associated with accompanying measures in order to ensure equal social rights in the diverse transitional atypical work forms.

8.2.3. Developing different levels of industrial relations

Two complementary trends are observable in the recent evolution of industrial relations: the enhancement of centralised social dialogue and the development of decentralised negotiations at the enterprise level.

The “central” level of social dialogue (National or European level) is closely related to the objective of redefining a new regulatory framework which would enable to combine flexibility and security. At this level, only two means can improve the regulatory framework: social dialogue, promoted by the social partners, and legislation, promoted by parliaments and governments. The use of collective bargaining rather than legislation might help finding solutions which are more suitable to the needs of workers and enterprises and offers a tool which has a more flexible character, also in view of possible future modifications. Controversially, legislation covers a wider range of situations, including those which are peripheral in the system of industrial relations: SMEs, independent workers and many other forms of atypical work described in this report.

Legislation and social dialogue are however not exclusive. They refer to two complementary forms of democratic debate: parliamentary debates and social relations. Negotiated agreements at a centralised level can result in European directives or national laws. And social dialogue can receive decisive impulses from political decisions, for example on working time. ***But if emerging atypical work forms are not taken into account by the social partners, the balance between legislative and negotiated tools will become unfavourable to social dialogue.***

The decentralised level of social dialogue has other specific advantages: it is the only one where practical aspects of economic constraints, work organisation and workers’ demands can be encountered together. Social partners can be involved in the concrete definition of flexible work forms, with particular reference to new forms of organisation. At this level, participatory practices go beyond traditional industrial relations and involve work organisation and human resource management issues and can also improve “*economic democracy*”. The results of the EPOC survey of the Dublin Foundations give clear indications about the relevance of decentralised dialogue and / or participation.

Both centralised and decentralised levels of social dialogue can develop a common qualitative feature: they refer to ***a bargaining process which tries to go beyond “zero sum games” and to reach “win-win” situations.*** If problems to solve are defined together by social partners (and public authorities), a “win-win” process will aim at finding shared solutions that would

improve the situation of all participants. The focus this kind of social dialogue is not redistribution, but creating net benefits for all.

The variety of atypical work forms and the diversity of workers' interests requires a plural system of social dialogue, combining legislation and collective agreements at European, national, sectoral and enterprise levels. EU policy should enhance the cohesion of such a complex system. Participatory practices involving work organisation and human resource management can also improve “*economic democracy*” in the EU.

8.2.4. Promoting flexible schemes for working time reduction

Although the main policy goal of working time reduction is to reduce unemployment and create new jobs, there are many indirect links between the issues of working time reduction and atypical work. Whatever should be the way to achieve working time reduction – either through direct bargaining between social partners or through a law followed by decentralised negotiation of its application – the concrete experience shows that many practical measures deal with problems related to atypical work.

- Flexible working time schedules (over longer periods than “x” hours a week) appear to be a very frequent way to achieve sectoral or enterprise agreements on working time reduction. The general trade-off can be summarised as “less working time against more flexible working time”. As flexi-time becomes more negotiated and regulated, some negative side-effects for atypical workers may disappear, or at least decrease.
- Working time reduction and flexibilisation can also change the status of some categories of part-time workers, i.e. those having a part-time contracts but working regularly “complementary hours” for peak or seasonal reasons (as for instance in retail trade or health sectors). If working time is reduced and calculated over six-monthly or yearly periods, these workers can become full-time workers with flexible time schedules, and then cease to be discriminated as part-time workers.
- Overtime is another atypical work form that is threatened by working time reduction. Potential job creation requires that overtime must be included and “distributed” in general working time calculations. As overtime often results of conjuncture or occasional peaks of production, its distribution partly relies on flexible working time and enhances atypical working hours. This is however a complex bargaining issue, as overtime distribution is linked to the cancellation of overtime premiums.
- Working time reduction can also give better opportunities for life-long training, as mentioned before.

In the short term, such *flexible schemes of working time reduction can lead to an improvement of workers' status in atypical work forms*. In the long-term however, deeper changes will be necessary in the basic concept of the work contract.

Flexible schemes of working time reduction can improve the trade-off “less working time against more flexibility” and reduced the negative side-effects of flexible work practices. They can also improve the employment conditions of part-time workers, reduce overtime and give better opportunities for life-long training. EU policies should provide general guidelines for flexible working time reduction and spread best existing practices.

8.2.5. Specifying the roles of the different stakeholders in employability and life-long learning

If the concepts of employability and long-life learning are to become more than “buzz-words” a number of “*stakeholders*” will need to take positive action. These include government, enterprises, employment agencies, trade unions, and, most importantly, if such schemes are to work, individuals.

1. *Government* has several roles as a provider of training, as a promoter of change, and as a regulator.
 - As provider government must ensure primary, secondary and tertiary education provides core basic skills, such as “numeracy”, literacy, IT literacy and communication skills. Increasingly, however, the curriculum will have to promote less measurable competencies such self-sufficiency, adaptability and confidence-building, all of which will be required if individuals are to sustain themselves in world characterised by impermanent employment.
 - Government will also be responsible for ensuring that the infrastructure is in place to enable the other stakeholders to fulfil their roles in the process. Allied to this will be a promotional and educational role for government. As with any change many actors and institutions will be slow to change. Government must promote change in a way which makes clear both the social and individual benefits
 - Finally, governments have a regulator role. They must provide both ‘carrots’ and ‘sticks’ to ensure that the other stakeholders fulfil their obligations; on the one hand, introducing tax-breaks and other credits for providing or undertaking relevant training, on the other hand, obliging enterprises and agencies to provide training, or at least time for training, where they do not necessarily see it as benefiting their own enterprise. If government is unable to convince enterprises of the merits of the case then a hypothecated training levy may be appropriate. Government, in its regulatory role must also seek to ensure that those who exit the labour market such as women expecting children are able to receive the required training to re-enter the labour market in a position (if they so desire) at a similar level to the one they vacated.

One way forward in the area of skills portability may be to insist that firms and other employing organisations issue “skills passports” to workers. These passports would itemise the competencies developed by workers. This would both help workers in finding jobs and cut recruitment costs for firms. Such schemes are already practised in firms with significant use of temporary workers, both in the Netherlands and the UK (Belt et al, 1998). The main critique against skills passports argues that the definition of skills is

attributed to the only employers, without any active role of the education system, and that it and remains quite dependent on the state of the labour market. An alternative is the encouragement of vocational qualifications based on competencies, but this involves extra time costs for both worker and firm.

2. *Enterprises* also *have* a role to play. Attitudes to training vary across the Union, best practice must be transferred to other Member States. It may also be necessary to ensure that currently best practice countries or industries continue to build on these practices. As the direct relationship between workers and employers becomes more attenuated, and the relationship between worker training and an individual firm's performance less clear, the temptation to cut back on training or restrict training to an increasingly small "core" workforce may become stronger. Firms should be required to provide a certain amount of training time and resources for both core and non-core workers. A balance will have to be sought between this social obligation and the primary role of firms as profit-maximising enterprises. However, a suitably skilled labour pool from which to select, even on an as required basis, must help individual firms in the longer-run. Measures will be required, however, to ensure that the best practice firms in this area do not suffer from poaching by less scrupulous organisations. The development of "skills passports", as discussed above, would be a relatively inexpensive way of facilitating skills portability to the benefit of workers.
3. As this *report* shows *temporary employment agencies* are beginning to play a significant role in the emerging flexible economy. They are differentially represented across the Union, and there are variable levels of regulation across countries. If these organisations are to become a key lubricatory element within the flexible economy, as the larger organisations in the sector are beginning to argue, then they must meet certain social obligations, either alone or in partnership with other stakeholders. In particular they should have an obligation placed upon them to encourage and facilitate training and skills portability for staff. Here the respective roles of agencies and the enterprises to whom they supply staff would have to be clearly specified.
4. Another actor in this process would be the *trade unions*. Many unions are seeking to develop new roles which take into account the evolving flexibilisation of work. Working in partnership with other stakeholders the unions may be able to replicate certain elements of the craft of guild unions, with regard to training, without, of course, replicating the rigidities. This would, of course, require a dialogue between the various partners. There are clear difficulties here, particularly in countries such as the UK where many of the more flexible firms see only a minimal role, if any, for trade unions. However, in a process of social dialogue Unions could become "agents of change in the skills revolution".
5. Finally, *individuals* will be the key players in this process and each person will have to take the responsibility for her or his own advancement, but without the support of other actors (as outlined above) only those who are already advantaged will prosper. The new flexibility in working time and working contracts must be similarly reflected in flexible training. Individuals must have access to training at a time (period of the year or time of the day) which best suits their needs. As there will not be a limitless budget, this suggests that training and education will often need to be self-directed. This, in turn requires at least two things. First, that all individuals will have the underpinning skills to identify and access the appropriate training. Second, each individual must have access to the

appropriate infrastructure to access *timely* training. Given the rapidly changing nature of the work environment this will increasingly mean ICT-based training, but ideally with a human based back-up.

The key policy issue is the delimitation of stakeholders' roles in the development of employability, in order to achieve a suitable balance between the interests of employers and employees and the regulating role of public authorities, without restricting the margin of individual initiatives for lifelong education. Such an issue has an undeniable European scope, even if negotiations must also take place at decentralised levels.

One of the areas where European initiatives are the most important is the "skills portability", practically illustrated by the debate on "skills passports". Social agreements and / or legislation at the EU level should ensure that skills passports will not be implemented at the detriment of the worker and that they should achieve long-term qualifying purposes rather than short-term solutions in segmented labour markets. European institutions such as the Dublin Foundation and CEDEFOP can support the development of practical measures for skills portability and employability.

8.2.6. Welfare State: a right balance between flexibility and security in the long term.

If atypical work is growing and traditional employment decreasing, a new financing system of social security will be required which will not be centred on employee contribution. More generally, often *much of the flexibility required by enterprises and economic systems is obtained at the expenses of social security nets*. The social sustainability of flexibility is guaranteed by public intervention, both in the development and redefinition of education system, which appears to be the main meaning of assuring employability, and in directly supporting unemployed people.

Among the challenges for the Welfare State linked to the development of atypical work forms, the question of pensions is one of the most problematic. Already many pension schemes are coming under pressure as a result of population ageing. State pension schemes are likely to continue to decline in importance for most people, as governments move away from 'pay-as-you-go' systems whereby the contributions of current workers are used to pay the pensions of the retired. Some recent studies show that this system is no longer sustainable in many Member States. For many flexible workers, its substitutes (company pensions and private pensions) can also cause detriments due to the irregularity and multiplicity of their work status along their working life. The *transferability among different pension schemes* will need to be ensured.

Although, in general, governments are seeking to withdraw from direct pension provision they will need to be closely involved in the creation of alternative arrangements which suit flexible workers. The State may have to find some underpinning mechanism to ensure that the potentially intermittent nature of payments by flexible workers does not make them worse off. Private pensions in such circumstances may not be suitable, as the market may not be prepared to take the risk. It may be more appropriate to have individually funded personal pensions, but administered by (or on behalf) of the State, rather than relying on the market.

Private sector providers of other financial services will also have to come to terms with the notion of flexible working. For example, it may no longer be possible for banks to expect that a worker has been with a single firm for a significant period or has a “stable” employment record, before undertaking long-term lending.

In a general framework characterised by de-regulation, budget squeezes, spending cuts, it is necessary to define a new set of regulations which would assure the “right balance” between flexibility and security, while at the same time distributing the “right burden” among employees, self-employed, enterprises and general fiscal systems.

One of the most urgent problems is the complementarity and transferable character of the various pension schemes that atypical workers may encounter along their working life. As pure market mechanisms are unable to ensure equity and solidarity in this transfer mechanism, new forms of State regulation will be necessary.

8.2.7. Developing the diversity of technological options

Previous considerations about the role of ICTs in the promotion, diffusion and support of atypical work forms suggests that technology does not determine specific forms of flexible or atypical work. *Technology however influences the range of possibilities and opportunities for such work forms.* More open and diversified are the technological options, wider is the margin for intervention of the social partners in the organisational changes and the work patterns induced by those technological options.

As a consequence, the main recommendation for technology policy should be to enhance the diversity and openness in the various options in the development of ICTs systems, applications and services, in such a way that social forces can play an active part in the selection and development of “socially sustainable” technological options.

References

- Agro L., Pichault F. & al., *Organisation du travail dans un nouvel environnement*, position paper, Agora 98, Ministère des Affaires Economiques, 1998.
- Allen J. and Henry N. [1997] *Ulrich Beck's Risk Society at work: labour and employment in the contract service industries*. Transactions of the Institute of British Geography, 22 180-196
- Applegate, L.M. [1994] 'Managing in an Information Age: Transforming the Organisation for the 1990s' in Baskerville, R., Smithson, S., Ngwenyana, O. and DeGross, J.J. [Eds], *Transforming Organisations with Information Technology*, North-Holland: Elsevier Science B.V., 15-94.
- ARUP/CURDS [1998], *Changes in Working Practices in the Service Sector*, Draft Final Report to the UK Department of the Environment, Transport and the Regions. Arup Economics and Planning and the Centre for Urban and Regional and Development Studies, University of Newcastle upon Tyne.
- Atkinson, J. [1987] 'Flexibility or fragmentation? the United Kingdom labour market in the eighties. *Labour and Society*, 12, 87-105
- Atkinson, J. and Storey, D. [1994] *Employment, the Small Firm and the Labour Market*. London: Routledge.
- Backer, G. [1996] 'Demographic change, labour market and perspectives of employment of older workers' in *Zeitschrift Fur Gerontologie und Geriatrie*, 29.1, pp23-28
- Baglioni G., Crouch C. [1990], *European industrial relations: the challenge of flexibility*, London, Sage Publishers.
- Becattini, G. [éd.], [1987] *Mercato e forze locali: il distretto industriale*, Bologna, Il Mulino.
- Beck, U. [1992] *The Risk Society: Towards a New Modernity*. London: Sage.
- Bell, D. [1979] 'The Social Framework of the Information Society' in Dertonzos M.L. and Moses J. [Eds] *The Computer Age: A Twenty Year View* Cambridge Mass.: MIT Press.
- Belt, V., Richardson, R. and Webster J. [1998] Work Opportunities for Women in the Information Society [WOWIS]: Call Centre Teleworking. State of the Art. Deliverable to Information Society Project Office.
- Bibby A. [1996], *Les syndicats et le télétravail*, FIET, Geneva.
- BIFU [1996] 'An Overview of Women in the Finance Sector in the UK.' Banking, Insurance and Finance Union, London.
- Boisard P. [1997], "Partage du travail: les pièges d'une idée simple", dans *Le travail, quel avenir ?* [collectif], Folio/Actuel, Gallimard, 1997.
- Boutellier, R., Gassman, O. Macho, H. and Roux, M [1998] 'Management of dispersed product development teams: the role of information technologies', *R&D Management* 28, 1: 13-25.
- Breedveld K. (1998), "The double myth of flexibilisation: trends in scattered work hours, and differences in time-sovereignty", in *Time & Society*, vol. 7(1): 129-143, Sage Ed., London.
- Bülher N., Ettighoffer D., "L'homme polyactif", dans Blanc G. & al, *Le travail au XXIème siècle*, Eurotechnopolis Institut, Dunod, 1995.
- Calcom/Austin Knight [1997] Call centre practice not theory: the first national survey of call centre management and staff attitudes. London: Austin Knight UK Ltd
- Casey, B. Metcalf, H. and Millward, N. [1997] *Employer's Use of Flexible Labour*, London: Policy Studies Institute.
- Castells, M. [1989] *The Information City: Information Technology, Economic Restructuring, and the Urban-Regional Process*, Oxford: Blackwell.
- Castells, M. [1996] *The Information Age: Economy, Society and Culture, Volume 1. The Rise of the Network Society*, Oxford: Blackwell.
- CEC [1996] Employment in Europe, Brussels

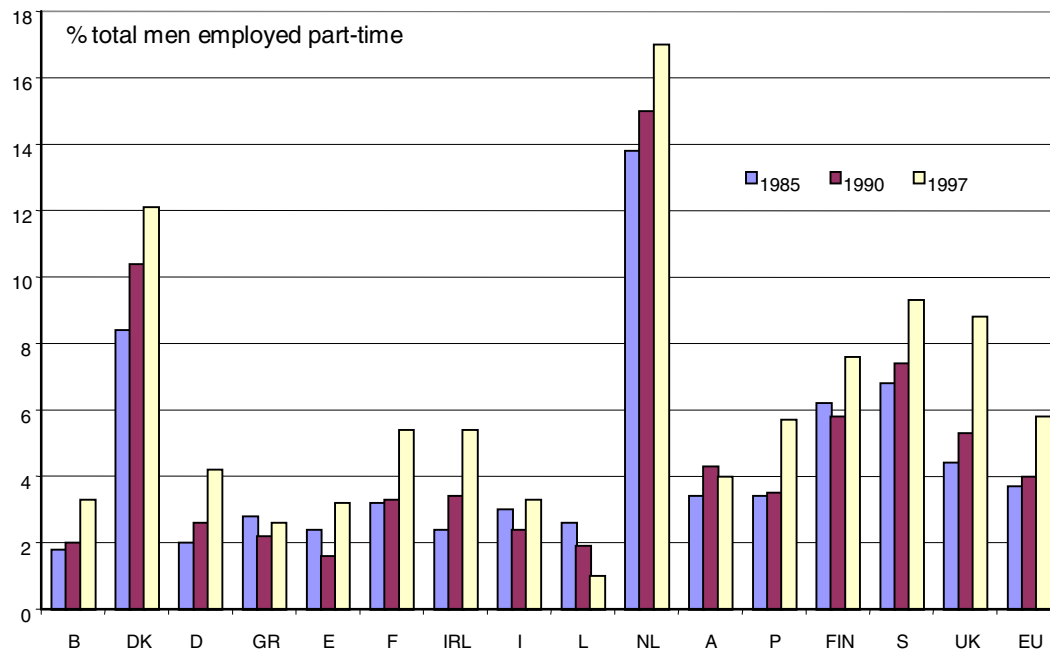
- CEC [1998a] Status Report on Teleworking, Telework '98, Brussels.
- CEC [1998b] New Forms of Work Organisation: Case Studies. Final Report. Prepared for the Directorate General for Employment and Social Affairs, Brussels.
- Cette G., Taddéi D. [1994], *Temps de travail modes d'emplois*, Ed. La Découverte, Paris, 1994.
- Cette G., Taddéi D. [1997], *Réduire la durée du travail, de la théorie à la pratique*, Ed. Le livre de poche, coll. Inédit, sciences sociales, 1997.
- Cipolletta, I. (1999) "The Temporary Worker in Italy", Paper presented at Temporary and Agency Worker - Their Role in Europe's Workforce Conference a conference organised by the Transport and General Workers Union and Manpower PLC, London, 28-29 January, 1999.
- Clauwaert S. [1998], *Survey on fixed term contracts*, European Trade Union Institute, Brussels.
- Coe, N. [1996] 'The Growth and Locational Dynamics of the UK Computer Services Industry'. Unpublished PhD. Thesis, University of Durham, UK.
- Commission européenne, DG V, Observatoire de l'emploi, MISEP Politiques N° 61 à 63, 1998.
- Coriat, B. [1990] : *L'atelier et le robot*, Paris. , Christian Bourgois Editeur, Paris.
- Datamonitor [1998] *Call Centres in Europe*. London: Datamonitor.
- EFILWC [1992], *New forms of work and activity: survey of experiences at establishment level in eight European countries*, Dublin Foundation.
- EFILWC, European Industrial Relations Observatory, EIRO, Annual review, 1997.
- Egger E. and Wagner I [1993] 'Negotiating Temporal Orders: The Case of Collaborative Time Management in a Surgery Clinic', *Computer Supported Cooperative Work*, 1, 255-275.
- EIRR [1997a], "Atypical working in Europe, part I: part-time work", in *European Industrial Relations Review*, n°282, July 1997.
- EIRR [1997b], "Atypical working in Europe, part II: fixed-term contracts and temporary contracts", in *European Industrial Relations Review*, n°284, September 1997.
- Elbaum M. [1997], "La réduction du temps de travail: un avenir à quelles conditions ?", dans *Le travail quel avenir ?*, Folio Actuel, 1997.
- European Round Table of Industrialists (ERTI), "Investing in Knowledge. The Integration of Technology in European Education", Brussels, 1997.
- Felstead, A. Burchall, B. And Green, F [1998] 'Insecurity at Work', *New Economy*, 5.3., 180-184.
- Fernie, S. and Metcalf, D. [1997] '[Not] Hanging on the Telephone: Payment Systems in the New Sweatshops' Working Paper 891, London School of Economics.
- Forsebäck L. [1995], *20 seconds to work, home-based telework, Swedish experiences from a European perspective*, State of the art 1995, TELDOK report, 1995.
- Fougère D., Kramarz F. [1997], *Le marché du travail en France: quelques pistes d'analyse*, in *Problèmes économiques* n° 2545, La Documentation Française, 3.12.1997.
- Freeman, C. and Soete, L. [1994] *Work for all or Mass Unemployment?: Computerised Technical Change into the 21st Century*. London: Pinter Publishers.
- Garhammer M. [1995], "Changes in Working Hours in Germany: the Resulting Impact on Evbery Day Life", in *Time & Society*, vol. 4[2]: 167-203, Sage Ed., London.
- Gaullier X. [1997], "La pluriactivité à tout âge", dans *Le travail, quel avenir ?*, Folio/actuel, Gallimard.
- Gillespie, A, Richardson, R and Cornford, J [1995] *Review of Telework in Britain: Implications for Public Policy*, report prepared for the Parliamentary Office of Science and Technology, Centre for Urban and Regional Development Studies, University of Newcastle upon Tyne
- Goldman M, and Richter G. [1987] 'Business Interests and Flexibility and the Origin of Home-based Telework Practices for Women: Empirical Examples from the Printing Industry', in Gehrman, F (ed).

- Gray, M., Hodson, N. and Gordon, G. [1993] *Teleworking Explained*. Chichester: John Wiley and Sons Ltd.
- Grimshaw, D., Ward, K., Rubery, J. and Benyon, H. [1998] Organisations and the transformation of the internal labour market. Paper presented at the Work Employment and Society Conference, University of Cambridge, September 14-16, 1998.
- Hammer, M. [1990] 'Reengineering Work: Don't Automate, Obliterate' *Harvard Business Review*, July-August, 104-112.
- Handy, C. [1995] Trust and the Virtual Organization, *Harvard Business Review*, May-June: 40-50.
- Harper R. and Carter K [1994] Keeping People Apart, *Computer Supported Cooperative Work*, 2, 199-207.
- Harris, M. [1998] 'Rethinking the Virtual Organisation' in Jackson, P.J. and Van der Wielen, J.M. *Teleworking: International Perspectives: From Telecommuting to the Virtual Organisation*, London: Routledge, pp 74-92.
- Hoffman R., Lapeyre J., *Le temps de travail en Europe*, Ed. Syros, 1995.
- Hook, K. [1997] 'Evolving Human Factors and the New Call Centre Agent' Paper presented to Voice Europe 97, Call Centre 2000 Conference. Olympia, London, 7th October, 1997.
- Howells, J. [1998] 'Innovation Outsourcing and Externalisation: Implications for Conceptualisation Innovation Systems'. Paper presented at the ESRC Centre for Research in Innovation and Competition [CRIC], Systems and Services Innovation Workshop, CRIC, University of Manchester, Manchester, UK, 17-18 March 1998.
- Huws [1984] *The Homeworkers: New Technology and the Changing Location of White Collar Work*, London, Low Pay Unit.
- Huws [1994] *Home Truths: Key Results from a National Survey of Homeworkers*, National Group on Homeworking.
- Huws [1996] *Teleworking: An Overview of the Research*. Report to the Departments of Transport, Environment, Trade and Industry, Education and Employment, London: Analytica.
- Huws, U, Podro, S, Gunnarsson, E, Weijers, T, Arvantial, K and Trova, V [1996] *Teleworking and Gender*, Brighton, Institute for Employment Studies
- Line, L. [1997] *Virtual Engineering Teams: Strategy and Implementation*. Itcon, Vol.2, <http://itcon.org/>
- M'hamed Dif [1998], "Flexibilité du travail et ses implications pour l'emploi : réflexions sur les modèles émergents", in *Economies et Sociétés, Economie du travail*, Série A.B., n° 20 , 3/1998, p. 231-246.
- Marshall, J.N. and Richardson R. [1996] 'The Impact of 'Telemediated' Services on Corporate Structures: The Example of Branchless Retail Banking in Britain' *Environment and Planning A*. 28: 1843-1858.
- MIRTI [1998], *Implementing telework*, cd-rom published by the Telematics Application Programme, European Commission, DG XIII, Brussels.
- Mitial [1998] *European Location Study: Call Centres in the UK, Republic of Ireland, Belgium and the Netherlands*. Wrexham: Mitial.
- Ono, H, [1998] "Technological Change and the Temporary Workforce: A Spot Market Model ?", Paper presented at the Work Employment and Society Conference, University of Cambridge, September 14-16, 1998.
- Paolucci G. (1996), "The changing dynamics of working time", in *Time & Society*, vol. 5(2): 145-167, Sage Ed., London.
- Rajan, A. [1998] *Tomorrow's People*. London: Centre for Research in Employment and Technology in Europe.
- Rajan, A., van Eupen, P. and Jaspers A. [1997] *Britain's Flexible Labour Market: What Next?* London: Centre for Research in Employment and Technology in Europe.
- Reardon, G. [1996] 'At the Other End of the Telephone: New Technology in Retail Banking and General Insurance. Report prepared for the Banking, Insurance And Finance Union.
- Reimer, S. [1998] 'Working in a Risk Society' *Transactions of Intsitute of British Geography*, 116-127.
- Richardson R. [1999] 'Teleservices and the Relocation of Employment: Lessons from Western Europe' in S.Mitter and A Bartzokas [eds] *Europe and the Developing World in the Global Tele Economy*, Routledge/UNU Press [forthcoming].

- Richardson R. and Marshall, J.N. [1996] 'The Growth of Call Centres in Peripheral Areas of Britain: Evidence from Tyne and Wear', *Area*, 28.3, 308-317.
- Richardson, R. [1994] 'Organisational and Locational Implications of New Telemediated Services' in R. Mansell [ed.] *Information Control and Technical Change*, pp 309-335. London, ASLIB
- Richardson, R. [1998] 'Developing the Call Centre Industry in the North-East of England'. Report prepared for the Northern Development Company, Newcastle upon Tyne.
- Rizzo R. [1997], *Prime esperienze italiane di telelavoro: capire i bisogni e contrattare gli accordi*, Mondadori Informatica, Roma.
- Rogers, Y. [1993] 'Coordinating Computer-Mediated Work' *Computer Supported Cooperative Work* 1, 295-315.
- Rudolph, H. (1999) 'Employment Patterns of Agency Work in Germany' Paper presented at Temporary and Agency Worker - Their Role in Europe's Workforce Conference a conference organised by the Transport and General Workers Union and Manpower PLC, London, 28-29 January, 1999.
- Schmid G., "Towards a new Employment Policy in Europe : the Emergence of Transitionnal Labour Markets as a Policy Target", in *Work, Employment and Environnement*, Papers of Wissenschaftszentrum Berlin WZB, FS II 97-208, 1998.
- Simitis S. (1997), "Il diritto del lavoro ha ancora un futuro ?", in *Giornale di diritto del lavoro e di relazioni industriali*, n. 76, pp. 609-641.
- Standing G. [1997], "Globalization, Labour Flexibility and Insecurity : The Era of Market Regulation", in *European Journal of Industrial Relations*, Ed. Sage, vol. 3, Number 1, 1997, p. 7-37.
- Stanworth, J. and Stanworth, C. [1991] *Telework: the Humand Resource Implications*, London: Institute for Personnel Development.
- Supiot A. (Ed.), *Au-delà de l'emploi: transformations du travail et devenir du droit du travail en Europe*, Rapport pour la Commission Européenne, Editions Flammarion, Paris, 1999.
- Sylvester V., "Social aspects of telework regulation in Europe", in *Telework* 98, Lisbon, Sept. 1998.
- Symon, G. Long, K. and Ellis, J. [1996] 'The Coordination of Work Activities: Cooperation and Conflict in a Hospital Context', *Computer Supported Cooperative Work*, 5, 1-31
- TEDLDET [1994], Pan-European Telework Surveys, 1994, TELDET.
- Toffler, A [1971] *Future Shock*, New York: Bantam Books.
- Valenduc, G., Vendramin, P. [1997], *Le travail à distance dans la société de l'information*, Bruxelles: EVO.
- Valenduc G., Vendramin P., Richardson R., Gillespie A., Belt V., Carré D., Combès Y., Maugéri S., Ponzellini A., Pedersini R., Seassaro M. [1998], *Flexible work practices and communication technology: state of the art of current research*, FLEXCOT report for the European Commission, DG XII, Brussels, July 1998.
- Valkenburg B., Beukema L. [1996], *The organisation of flexibility: atypical jobs as a challenge for the modernisation of trade unions*, in *Transfer* 4/96: 738-754, European Trade Union Institute, Brussels.
- Vedel G and Gunnarsson E [1985] *Just Pick up a Telephone! Remote Office Work in Sweden*, Copenhagen School of Economics and Business Administration.
- Vendramin P., Valenduc G., "Société de l'information, nouvelles formes de travail flexible et nouveaux enjeux de négociation", dans *Technologies de l'information et sociétés*, Dunod, 1999.
- Vincente, P. (1999) "Spanish policy on agency labour". Paper presented at Temporary and Agency Worker - Their Role in Europe's Workforce, Conference a conference organised by the Transport and General Workers Union and Manpower PLC, London, 28-29 January, 1999.
- William Olsten Centre for Workforce Strategies [1997] "1996 Research Survey: Meeting Business Objectives with a Blended Workforce" Melville: Olsten Corporation.
- Zoetmulder, E. (1999) "The European Market for the Temporary Agency Worker", Paper presented at Temporary and Agency Worker - Their Role in Europe's Workforce, Conference a conference organised by the Transport and General Workers Union and Manpower PLC, London, 28-29 January, 1999.

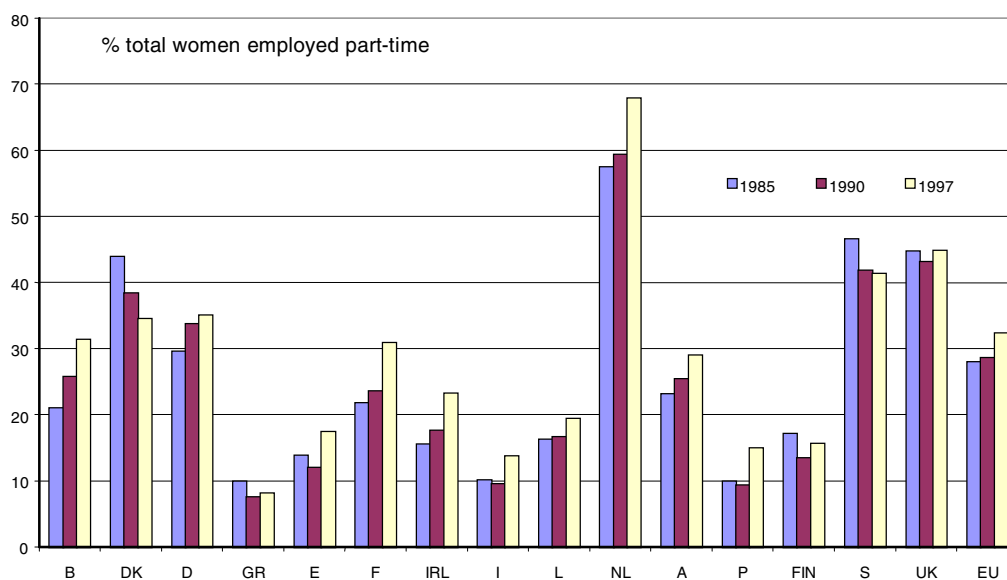
Figures

Figure 1
Men employed part-time (% total employment), 1985, 1990 and 1997



Source: CEC (1998)

Figure 2
Women employed part-time (% total employment), 1985, 1990 and 1997



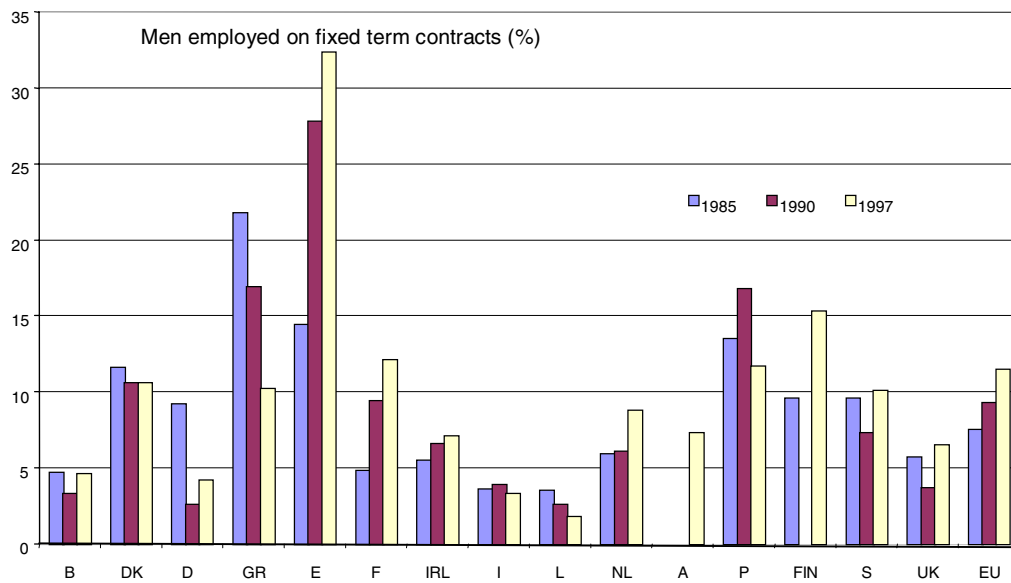
Source: CEC, 1998a

Figure 3 Share of involuntary part-time in the part-time employment



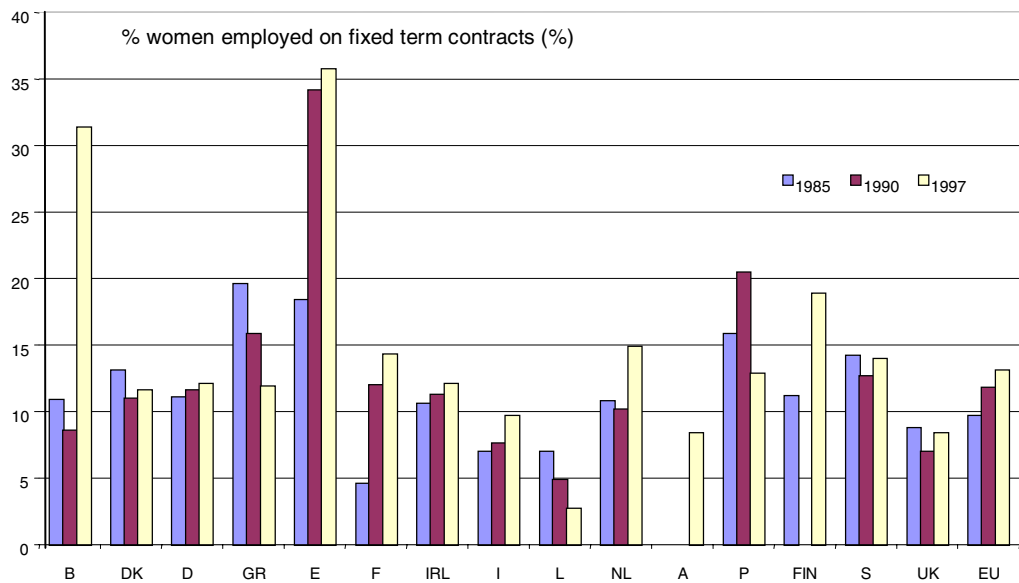
Source: Eurostat, 1996

Figure 4 Men employed on fixed-term contracts (%), 1985, 1990 and 1997



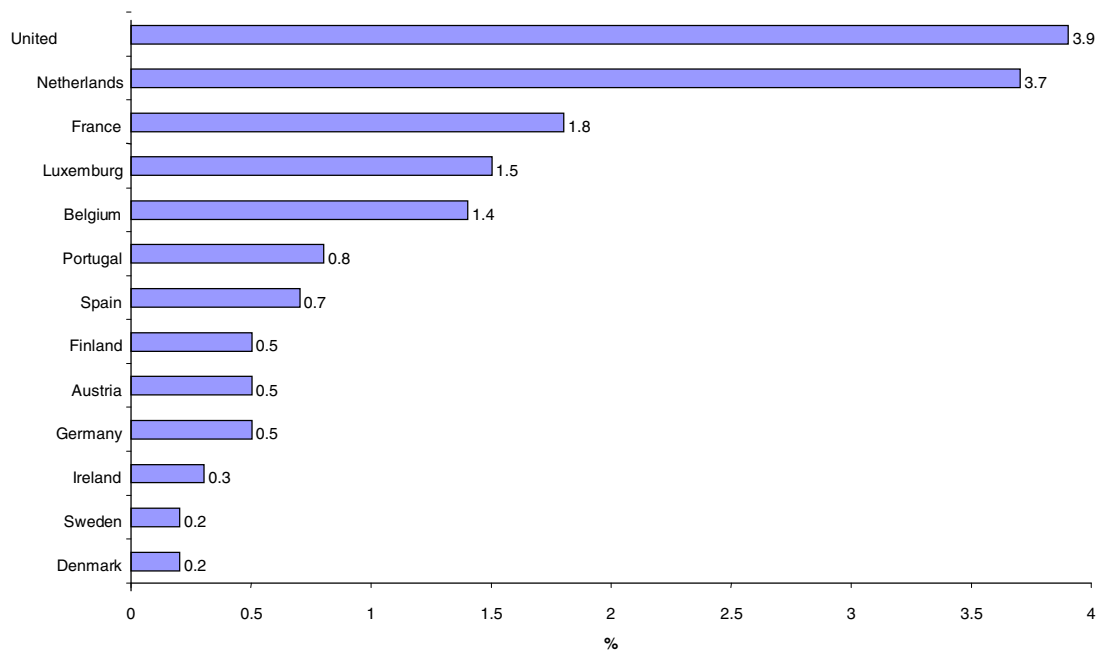
Source: CEC, 1998a

Figure 5
Women employed on fixed term contracts (%), 1985, 1990 and 1997



Source: CEC, 1998a

Figure 6
Market penetration of temporary workers via agencies by country (1996)*



* Italy prohibited TWBs until 1997. They remain prohibited in Greece

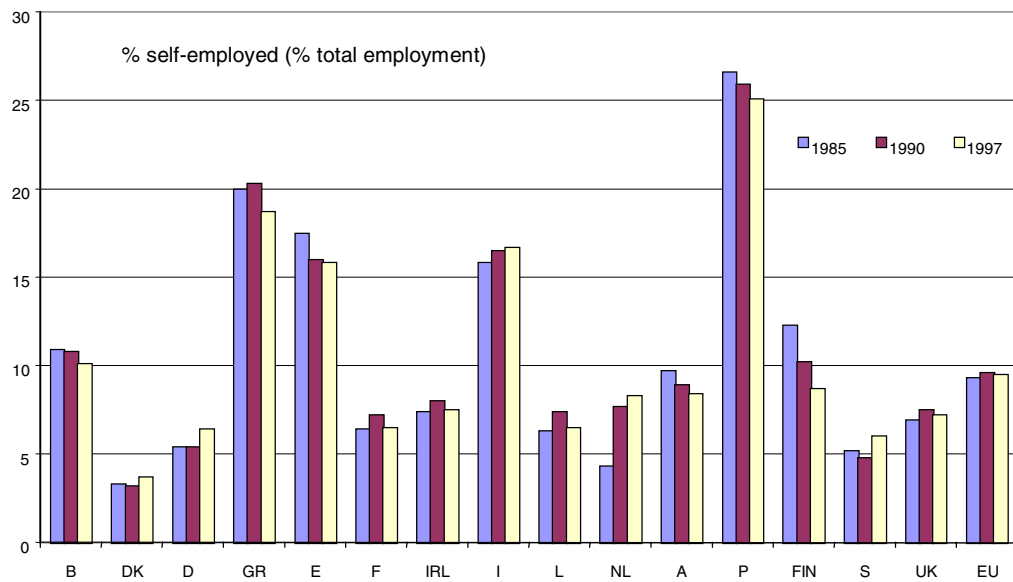
Source: Zoetmulder, 1999

Figure 7
Men self-employed (% total employment), 1985, 1990 and 1997



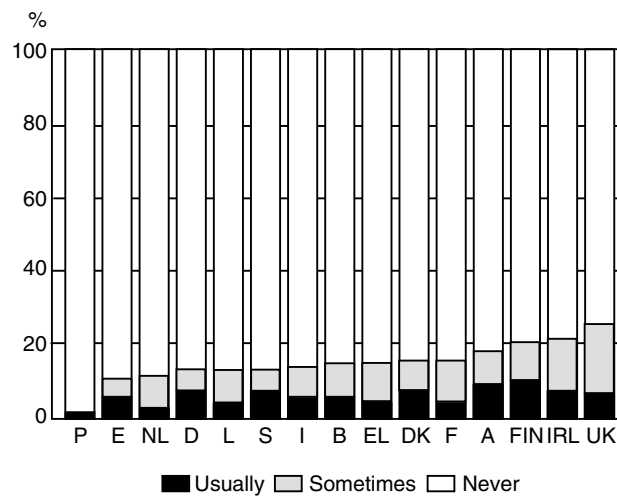
Source: CEC, 1998a

Figure 8
Women self-employed (% total employment), 1985, 1990 and 1997



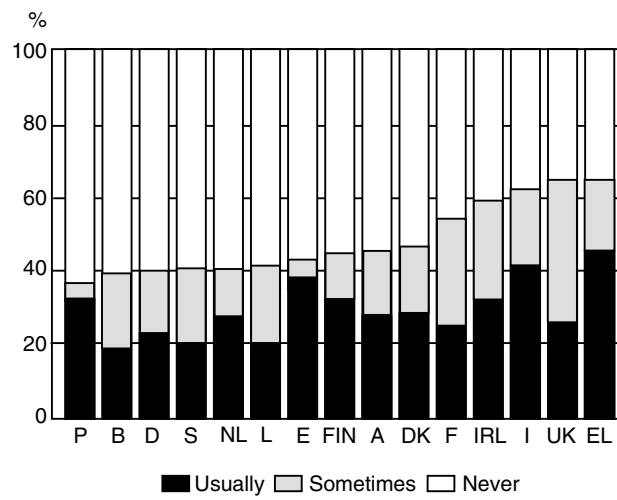
Source: CEC, 1998a

Figure 9
Night work in the European Union, 1996



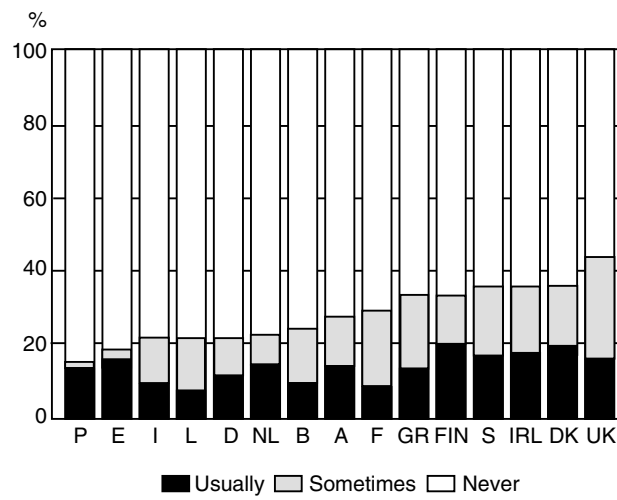
Source: Eurostat, 1996

Figure 10
Saturday Work in the European Union, 1996



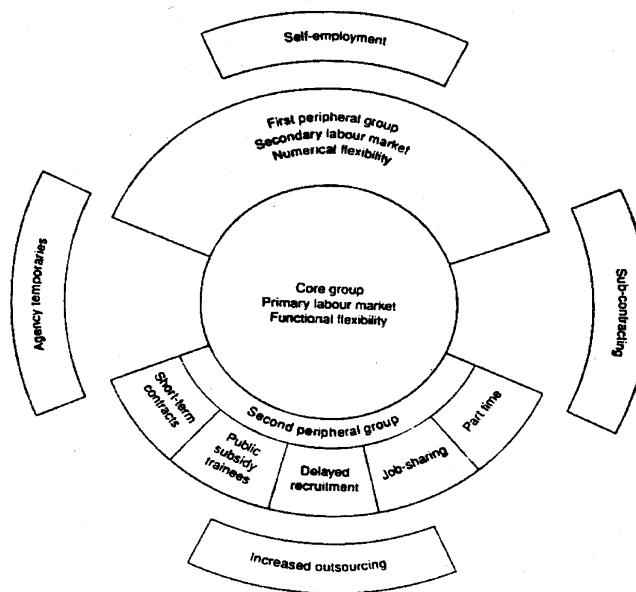
Source: Eurostat, 1996

Figure 11
Sunday Work in the European Union, 1996



Source: Eurostat, 1996

Figure 12
Core and Peripheral Workforce



Source: CURDS, based on Atkinson [1989]