



The transformation of work in a global knowledge economy: towards a conceptual framework

Workpackage 3: Theories and concepts

Edited by Ursula Huws (WLRU)

works
CHANGES IN WORK

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1 Introduction

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It is generally agreed that major transformations are taking place in the organisation of work as corporate structures are transformed in the context of economic globalisation and rapid technological change. But how can these changes be understood? And what are the impacts on social institutions and on workers and their families?

There are many lenses through which one can view the restructuring of work in a global knowledge economy. There are the lenses of different academic disciplines, for instance the sociology of work, economic geography, organisational theory, social psychology, ethnography, gender studies, industrial relations or political science. Then there are the lenses of different social perspectives, for instance those of international development agencies, of national governments in developed and developing countries, of technology providers, of statisticians, of employers, of trade unions, of educators, of civil society, of skilled professional workers who are beneficiaries of change, and of those groups that are potential losers. There are also differences deriving from different national research traditions, different ideological approaches and many other variables. In each of these many fields, a body of literature has grown up, trying to make sense of the changes taking place and supplying fragments of evidence. Piecing all this evidence together, however, is no easy task. The very disparity of the origins of this literature means that it is difficult to find a common frame of reference. Even when the same terms are used, they may be used with different meanings and the lack of commonly-agreed definitions can make the refracted pieces of evidence difficult to compare, often giving them a contradictory and anecdotal character.

This report brings together the work of experts from a range of different academic disciplines and from seventeen research institutes in thirteen European countries. In doing so, it provides a remarkably comprehensive overview of the available evidence. However it does not do so simply in order to provide an exhaustive inventory. On the contrary, the evidence has been carefully sifted with the aim of distilling insights that can help to produce a clear conceptual framework in order to develop hypotheses and research questions to guide the empirical research to be undertaken by the WORKS project.¹ The WORKS project has been funded by the European Commission under its 6th Research Framework Programme with the ambitious aims of: improving our understanding of the major changes in work in the knowledge-based society, taking account both of global forces and of the regional diversity within Europe; investigating the evolving division of labour within and between companies and the related changes at the workplace; exploring the implications for the use of skills and knowledge, for flexibility and for the quality of working life; and examining the impact on occupational identities; time use and learning; as well as the impact on the social dialogue and the varieties of institutional shaping.

¹ More information about the WORKS project can be found on www.worksproject.be.

Balancing the need to take account of these many dimensions whilst still retaining a focus on clear research questions that can be addressed feasibly within a coherent research design in a relatively short space of time was a major challenge, and we begin by presenting the methodology that was adopted to produce this report.

The first task was to achieve a division of labour that on the one hand took full advantage of the specialist subject expertise of partners whilst also recognising the diversity of national research traditions across Europe and the need to take account of the literature in all major European languages. In order to achieve this, topic headings were drawn up, and each topic was assigned to two (or occasionally three) partners based in different countries, one of whom was designated as the lead partner and the others as 'seconds'. It was decided to treat some issues, such as the gender and ethnic dimensions, as cross-cutting issues rather than topics for separate reports.

In a second stage, these partners were asked to produce two documents. The first of these was a list of 'key concepts' for inclusion in a glossary. The purpose of the glossary was to ensure that all partners could share a common understanding and make visible any differences of interpretation or definition of key terms so that they could be discussed and agreed, in a process whereby, in its contribution to the cohesion of the whole group, the dialogue involved in producing the entries was as valuable as the end result. Draft glossary entries were written by the partners and circulated for discussion and agreement before being placed on the WORKS website where they will be made generally available. The second initial document was a brief summary of the contents of the report that these paired partners would write together. These summaries were then circulated to all partners so that synergies and overlaps could be identified.

The next stage involved the production of draft reports covering the main concepts and the associated literature. Despite the authors' broad knowledge of their chosen topics, and the fact that each report included inputs from institutes in more than one country, it was felt that the only way to ensure that each report covered the full range of relevant European scholarship was to add a further, vital stage in the work. This involved circulating each draft report as it was completed to all the other WORKS partners, including those who had not been involved in the actual process of report-writing. In this stage, partners were asked to draw on their knowledge of the literature in their own language or national setting, as well as their specific subject knowledge, to comment on the reports, point to issues that might be regarded as contentious and add references to relevant sources. It was in this stage too that cross-cutting themes were addressed.

When this process of enrichment and refinement was completed, the authors were asked to amend their reports to take account of all these comments and integrate the extra material contributed by their colleagues. Each of these revised reports constitutes a chapter of this report. It thus represents the synthesis of a very large number of inputs from many people, not all of whom are individually acknowledged as chapter authors. However, it is nevertheless possible to identify individual voices in this choir, with their own distinctive points of view. Rather than dissolve these into an undifferentiated whole, we have chosen to leave these substantially intact. Inevitably this has led to some repetition here and there but we hope readers will agree that it can be useful to revisit certain core concepts and view them from a different angle and will see this as an advantage. In some cases too, the topics initially selected were so broad that it was easier from an editorial point of view to break them down into two halves. As a result, some chapters are listed with authorship from only one institute. Because of the very tight schedule for the writing

and revision of the individual reports, it has not always been possible for authors to do justice to the richness and depth of the comments made. All these comments will, however, feed into an ongoing process of discussion between the partners and will illuminate the final report-writing process when the empirical evidence is analysed.

The report opens with an overview of theories and concepts about globalisation and the development of global value chains. The next chapter focuses on policy, social dialogue and institutional structures, bridging the gap between the global and the national dimensions. This is followed by a chapter on work organisation and flexibility. Next, comes a chapter on employment change and labour market restructuring. The next chapter focuses on the use of knowledge and communication, leading to a discussion, in the subsequent chapter, of changes in the demand for skills in the knowledge society. The topic of the next chapter is new career trajectories and occupational identities, bringing a longitudinal dimension to the study of the impact on workers of changes in work organisation. Retaining a focus on workers, the following chapter addresses the impacts of these changes in work on the quality of life. This is followed by another chapter, which provoked some discussion amongst the partners and does not represent a consensus view, which speculates more generally about the development of knowledge-based societies and opens up some broader questions about future developments. Finally, the last chapter synthesises the conclusions of the preceding ones in order to frame some hypotheses and research questions to be addressed in the WORKS research.

2 Globalisation and the restructuring of value chains

URSULA HUWS (WLRI) / MONIQUE RAMIOUL (HIVA-K.U.LEUVEN)

2.1 Introduction

The term 'globalisation' is very widely used in a range of different contexts ranging from popular journalism and protest movements to academic discourse in economics, political science, geography and sociology. However, it takes on different meanings in many of these contexts and is defined in a large number of different ways.

Some of the phenomena to which it is applied include the globalisation of markets (including the globalisation of sourcing and the dominance of global markets by global corporations, the globalisation of capital flows) the globalisation of culture, the hegemonic political dominance of the globe by a few powerful states, or groups of states, the growing power of supranational bodies such as the World Trade Organisation, World Bank and International Monetary Fund, and the development of a global division of labour. Sometimes the term is used as a synonym for concepts such as 'the neo-liberal world order', 'the Anglo-Saxon model' or simply 'US power'. On other occasions it is used with much more specific, not to say technical meanings.

In this chapter, we will attempt to focus on those aspects of globalisation which are of direct relevance to the restructuring of work in the knowledge society. However, in order to do so it is useful to develop some conceptual clarity, if only to exclude those dimensions in which we are *not* interested.

One starting point is to see globalisation as the development of a historical pattern whereby capitalism has a continuing need to expand territorially. In Luxemburg's classic 1913 formulation (Luxemburg, 2003) this tendency is attributed to capitalism's need for a market 'outside itself' in order to dispose of the surplus produce which cannot be bought by workers from their wages (if their wages totalled the same value as the goods produced, then of course there would be no profit and the system could not be characterised as capitalist). It is possible to argue that the search for new markets is only one of several reasons for capitalism's need for territorial expansion, some of which can be seen as evolutions from economic imperatives that predated capitalism (Wallerstein, 1979; Arrighi & Silver, 1999; Abernethy, 2000). One of these is the search for raw materials and new sites for plantation agriculture. Another is the search for new sites of capital accumulation, described by Harvey as a "spatial fix" to capitalism's internal contradictions (most notably registered as an overaccumulation of capital within a particular geographical area) which is necessary because 'without the possibilities inherent in geographical expansion, spatial reorganisation, and uneven geographical development, capitalism would long ago have ceased to function as a political-economic system' (Harvey, 2000: 23). Other reasons for territorial expansion include the search for new activities to commodify (Huws, 1999) and new sites for dumping the waste generated as a result of extraction and production ac-

tivities elsewhere. Most important for our purposes is yet another reason: the search for new sources of labour.

Plotting the interrelationships between these different drivers of expansion is no easy task. Although companies, some of them strongly backed by powerful states, were important agents of capitalist expansion early on (Hopkins & Wallerstein, 1986; Arrighi, Barr & Hisaeda, 1999), the decision by a company to open a branch in another country may be driven by several of these reasons simultaneously, or one reason may be embedded in another, or follow consequentially from another. For instance a company may decide to buy up a subsidiary company in a developing country to invest some of its surplus profitably (a 'spatial fix', in Harvey's terms), but in the process it may also gain access to new markets or to cheap sources of labour. If the location is one where environmental controls are laxer than in the 'home' country, it might also transfer some of its more polluting activities there. Despite the difficulties of disentangling these motives, it is useful to bear such distinctions in mind if we wish to develop an understanding of the dynamics of the global restructuring of work.

According to Radice, globalisation is most commonly defined as 'a process through which an increasing proportion of economic, social and cultural transactions take place directly or indirectly between partners in different countries' (Radice, 2004: 154). However, as he points out, this approach suggests that it is synonymous with 'internationalisation' and assumes a pre-existing landscape of autonomous nation states, ignoring the long history of economic, social and cultural interpenetration of states under various forms of imperialism and colonialism and the extreme inequalities of power between states that resulted from this.

Such a pragmatic definition has enabled some 'globalisation sceptics' (e.g. Hirst & Thompson, 1996; Zysman, 1996) to argue that the extent of economic globalisation has been greatly exaggerated. Others (e.g. Cox, 1987; Hutton & Giddens, 2000; Grieder, 1997) support the more mainstream view that a fundamental change took place in the world economy during the 1970s after the breakdown of the Bretton Woods Agreement (and with it the gold standard) which ushered in a new era characterised as 'globalisation', or 'neo-liberal globalisation' or 'accelerated globalisation' (Mittelman, 2000: 19) in which capital developed an unprecedented ability to flow freely from country to country.

Duménil and Lévy (2004) posit a two-stage process: the collapse of the gold standard in 1971, followed by a '1979 coup' which marked the end of Keynesian economics (though not of Keynesian institutions)² and the launch of a period of neo-liberal global hegemony (Duménil & Lévy, 2004: 245).

Some commentators have gone so far as to argue that to all intents and purposes the world now forms a single global market. Ohmae, for instance, said in 1990 that 'On a political map, the boundaries between countries are as clear as ever. But on a competitive map, a map showing the real flows of financial and industrial activity, those borders have largely disappeared' (Ohmae, 1990: 18).

² Duménil and Lévy (2004: 261) argue that under neo-liberalism, Keynesian state institutions remain intact, but have redirected their efforts towards maintaining price stability instead of full employment.

2.2 The role of the state

Crucial to the question of whether the 'competitive' map should take precedence over the 'political' one is how the relationship of the national state to the global economy is conceptualised. Are nation states still the most powerful entities in the world? Or is their ability to control the activities of their citizens being dissolved in a global tsunami of economic forces which sweep all before them, vesting the power instead in the hands of transnational corporations, international bodies like the World Trade Organisation, the World Bank or the International Monetary Fund, the financial institutions of Wall Street, or supranational regional groupings like NAFTA and the EU?

Hirst and Thompson's (1996) 'globalisation sceptic' thesis used data on trade flows and their relationship to national GDP to demonstrate that the world in the 1990s was little more global than it had been at the beginning of the 20th Century, during the heyday of the British Empire, and pointed out that most international trade took place within the 'triad' of the US, the EU and Japan and, furthermore, that most multinational corporations had a clear 'home base' in one (or at the most two) of these three locations where most of its market was to be found. Linked to such views are a number of variants of the 'varieties of capital' school (e.g. Hall & Soskice, 2001; Coates, 2000; Gray, 1999) which claim that the universalising tendencies of globalisation are limited and 'path dependent', shaped by national histories, and the specific nature of the national 'deals' struck between the state, national capital and labour.

Panitch (2004) argues that to view the problem as a dichotomous contest between state power and the power of international capital is to miss the point. Rather, what has happened has been a change in the role of the state vis-à-vis its citizens on the one hand and international capital on the other. Rejecting Cox's notion of the state as a mere 'transmission belt'³ from the global to the national economy' (Cox, 1992: 27) he substitutes a state role of 'mediation' suggesting that in the process of adaptation, changes take place within national institutional structures, whereby those state institutions 'which directly facilitate capital accumulation and articulate a competitiveness ideology are the ones which gain status, while those which fostered social welfare and articulated a class harmony ideology are those which lose status ... Ministries of labour, health and welfare are perhaps not so much being subordinated as themselves being restructured' (Panitch, 2004: 21). This position can be seen as lying mid-way on a spectrum between Cox and Coates (2000: 225) who, in describing the options open to a state in relation to the market says that 'It can act to orchestrate the relationship between different sections of the capitalist class. It can act to orchestrate relationships between capital and labour. And it can act to orchestrate the reproduction power of labour itself.'

Where exactly on this spectrum any individual state lies (and it seems likely that they occupy different positions) and whether the role is defined as one of 'transmission', 'mediation' or 'orchestration' it is clear that national states continue to play a role in determining a number of specific features of markets, including labour markets *employment*

³ The term 'transmission belt' is also used by Cowan (2004: 300) to describe the role of national states, but in his case what he regards as being transmitted is US global hegemony rather than international capitalism. Furthermore, he argues that, at least in the case of Western European states, this role applied only up to the early 1990s when the collapse of the cold war brought an end to these states' roles as parts of a US protectorate; now, through the EU, he argues, they are more actively confronting this external dominance.

(Faust, Voskamp & Wittke, 2004). We can therefore hypothesise that, although a particular organisation's reasons for locating its activities in any given country may be complex and multifaceted, *the specific local institutional regime plays a role in making particular locations more or less attractive as sites for employment.*

2.3 A new global division of labour

2.3.1 The empirical evidence

The development of a global division of labour is not new. Regions have traded their goods with each other for as long as recorded history and raiding other parts of the world for raw materials or slave labour is at least as old as colonialism. At the end of the 19th Century the British Empire exhibited a remarkably developed pattern of regional industrial specialisation knitted together into a global trade network (Arrighi, Barr & Hisaeda, 1999). The 20th Century saw a growth in multinational corporations operating increasingly independently of the interests of the nation states in which they were based. For instance, after US firms had extensively experimented with relocation of plants within the national territory - in the US from the heavily unionised North East to the non-unionised South West of the country - they left national boundaries and reached out for new and foreign countries. By the 1970s, it was clear that a 'new global division of labour' was coming into being in manufacturing industry with companies breaking down their production processes into separate subprocesses and redistributing these activities around the globe to wherever the conditions were most favourable (Froebel, Heinrichs & Krey, 1977).

The 1980s saw a continuing growth in this development, with industries as diverse as clothing, electronics and auto manufacture dispersing their production facilities away from developed economies with high labour costs and strong environmental controls to developing countries, often in 'free trade zones' where various tax incentives were offered and labour and environmental protection regulations suspended in an effort to attract as much foreign direct investment as possible. Workers in these zones were disproportionately young and female and the wages below subsistence level (Grossman, 1979; Fernandez-Kelly, 1983). Nevertheless, they were by no means passive and many actively organised to improve their lot (Safa, 1986; Women Working Worldwide, 1991). The gender dimension of this global restructuring was analysed during the 1980s by Momsen and Townsend (1987) and Massey (1994) and there was during the 1980s an active discussion of the gender dimension of the restructuring of global supply chains in manufacturing industries (*e.g.* Elson & Pearson, 1981; Huws, 1982; Mitter, 1986; Rowbotham & Tate, 1994). More recently, a number of feminist scholars have turned their attention to gendered patterns of migration, especially to the global movements of poor women from the South to become domestic servants or sex workers in developed countries (Parreñas, 2001; Hondagneu-Sotelo, 2001; Ehrenreich & Hochschild, 2002; Bales, 1999; Anderson, 2000). However, it is beyond the scope of this report to examine the relationship between such migration (which could be characterised as the movement of people to jobs) and the

movement of jobs to people taking place in association with the restructuring of work in the knowledge society (Huws, 2006b).⁴

Less well studied - at least until very recently - has been the new global division of labour in white-collar work. Nevertheless, this too has been progressing since the 1970s when low-skilled work such as data entry or typesetting began to be exported in bulk from North America and Europe to low-cost economies in the Caribbean, South and South East Asia (Soares, 1991; Pearson, 1991; Huws, 1984), whilst higher-skilled services, such as computer programming started to be exported to the developed world from developing economies such as India, the Philippines and Brazil (Huws, 1985 & 1996). In 2000, the first research project aiming to map and measure the development of an international division of labour in telemediated information processing work, the EMERGENCE project, was launched. A survey was carried out of 7,268 establishments with fifty or more employees in eighteen European countries and a comparable survey of 1,031 establishments of all sizes in Australia. The survey looked systematically at the locations where seven different generic business services were carried out. These business services were: creative and content-generating activities, including research and development; software development; data entry and typing; management functions (including human resource management and training as well as logistics management); financial functions; sales activities; and customer service (including the provision of advice and information to the public as well as after-sales support). For each function, the survey looked at the extent to which it was carried out remotely using a telecommunications link ('eWork'), whether it was carried out in-house or outsourced and the reasons for the choice of any particular location or outsourcer. The results gave a comprehensive picture of the extent to which these business services were already delocalised in the year 2000. In Europe, nearly half of all establishments were already carrying out at least one function remotely using a telecommunications link to deliver the work, whilst around a quarter were doing so in Australia (Huws *et al.*, 2003).

Even more striking than the overall extent of eWork, is the form it takes. Most literature on 'remote work', 'telecommuting', 'teleworking' or any of the other pseudonyms for eWork presupposes that the dominant form is home-based working. Yet these results show that the stereotypical employee eWorker based solely at home is in fact one of the least popular forms. Moreover, in-house eWorking is heavily outweighed by eOutsourcing as a mechanism for carrying work out remotely, with some 43 *per cent* of European employers and 26 *per cent* of their Australian counterparts making use of this practice. Much eOutsourcing is carried out within the region where the employer is based (34.5 *per cent*) but substantial numbers (18.3 *per cent*) outsource to other regions within the same country, and 5.3 *per cent* outsource outside their national borders. These interregional and international (sometimes intercontinental) relocations of work provide clues to the geography of the emerging international division of labour in eServices. What are the main factors propelling this move to outsource beyond national borders? Top of the list of responses to this question in the EMERGENCE survey was the right technical expertise. Only when this is available do secondary factors come into play, such as reliability, reputation and low cost (Huws & O'Regan, 2001). In-depth case studies of relocations revealed a complex pattern whereby different corporate restructuring strategies

⁴ We are grateful to Maria Stratigaki (UPSPS) and Rumiana Jeleva (IS) for drawing our attention to the relevance of this literature in this context.

were associated with different motivations for relocation which, moreover, varied by business function (Flecker & Kirschenhofer, 2002).

A second series of case studies, carried out by the Asian EMERGENCE project in 2002 and 2003 found that there had been significant developments in the early years of the 21st Century. What was still a risky experiment at the turn of the millenium had become normal, not to say routine, business practice three years later. Value chains were getting longer and more complex, with more and more intermediaries involved, and the world was witnessing the emergence of huge new companies involved in the supply of business services, often many times bigger than their clients, with their own internal global division of labour. When a large organisation in the private or public sector decides to out-source a major contract to supply business services, it is increasingly not so much a case of choosing between India or Russia, Canada or China, but more a question of deciding on a particular company (for instance Accenture, EDS or Siemens Business Services). Once that company has the contract it may decide to divide up the work between teams in many parts of the world, depending on the particular balance of skills, languages, cost and quality criteria involved (Huws & Flecker, 2004) in a phenomenon known as 'global sourcing' (EMCC, 2005).

An analysis of data from the European Labour Force Survey in 2004 demonstrated that, although employment in the computer related services and other business services sectors is growing across all Member States, its growth is much more rapid in the New Member States in Central and Eastern Europe, and lowest in the most developed economies of Northern and Western Europe, suggesting that these New Member States are increasingly becoming suppliers of back-office services to the rest of the EU (Huws, Flecker & Dahlmann, 2004).

There is, then, a growing volume of empirical evidence of a developing international division of labour in information-processing work as well in production work. But how is it to be explained?

2.4 Corporate restructuring

One starting point for understanding the new global division of labour is to investigate the ways in which companies are restructuring, since it is, after all, companies that are the key actors in deciding which work is located where.

There is now a large literature on the globalisation of business. In a field first comprehensively mapped out by Dunning (1993) theoretical analyses have been carried out of the factors driving globalisation at an organisational level (*e.g.* Narula, 2001 & 2003) supplemented at a more practical level by empirical research at the level of particular sectors or regions (*e.g.* Boone, 2002; Sahay, 2000; Mirchandani, 1999; Kiser, 2003). There is a general agreement about the growing dominance of transnational corporations (Hirsch-Kreinsen, 1998; Meil, Heidling & Schmierl, 2003), which not only play a critical role in determining what employment gets located where, but also play an increasingly important part in shaping work culture, regardless of where it is located (Kotthoff, 1997 & 2001; Dörrenbächer, 2003).

However, the precise forms that this restructuring takes are difficult to analyse and quantify. This is partly because of the very rapid speed of change, including a change in ownership structure and/or control of many organisations. Lazonick identifies six forms

that restructuring can take: buyout, outsourcing, relocation, downsizing and bankruptcy (Lazonick, 2004: 579). Takeovers, mergers and demergers are announced continually. Firms enter into temporary alliances to carve up particular markets or to collaborate on the development of new products. Sometimes they buy stakes in competitors who are too large to be gobbled up. To make matters even more complicated, in addition to these external realignments, most companies are also involved in a continuous process of internal reorganisation, whereby individual functions are transformed into separate cost or profit centres, or floated off as separate companies. Add to this the impact of outsourcing to external companies and we arrive at a situation where corporations can no longer be regarded as stable and homogenous. Rather, they appear as mutually interpenetrating entities in constant flux, held together by elaborate webs of contracts that are in a continuous process of renegotiation. Restructuring initiatives such as 'Business Process Re-engineering' (Coulson-Thomas, 1997) rarely take place in a vacuum. They may take place in the context of a takeover or merger, a decision to outsource (or, conversely, to bring back into the company a previously outsourced function), a major technological change, a strong upturn or downturn in the market or some other variable which makes it difficult to isolate the dynamic features (motivation or impacts) of any specific restructuring measure.

Processes of internal and external restructuring have led to decentralisation, outsourcing and networking. However, they have also led to processes of concentration, consolidation and centralisation (Flecker & Kirschenhofer, 2002). As will be argued later, the underlying logic of each of these processes is, however, the same: an increasing standardisation and fragmentation of processes which allows them to be configured and re-configured in a variety of different ways to suit the needs of a given corporation at any particular time.

The increasing fluidity of corporate structures that has resulted from these continuous and rapid change processes has led some commentators to question whether the individual enterprise or corporation or 'firm' (located, conventionally, in the economic statistics, within a 'sector') is the best unit of analysis for understanding these restructuring processes. An exclusive focus on the company runs the risk of missing the most important changes which take place, so to speak, at the periphery of one's field of vision, in the spaces between companies. We next turn our attention to the concept of the value chain.

2.5 The value chain

The value chain is a phrase used to describe each step in the process required to produce a final product or service. The word 'value' in the phrase 'value chain' refers to added value. Each step in the value chain involves receiving inputs, processing them, and then passing them on to the next unit in the chain, with value being added in the process. Separate units of the value chain may be within the same company (in-house) or in different ones (outsourced). Similarly they may be on the same site, or in another location. The term 'value chain', sometimes used synonymously with the overlapping concept of the 'supply chain', was originally coined to describe the growing spatial and contractual complexity of the division of labour in the manufacture of goods but it is now increasingly applicable to services, both public and private. The standardisation of many business processes combined with the digitisation of information and the development of high-

capacity telecommunications networks has made it possible for telemediated work to be outsourced and/or relocated, leading to the introduction of an international division of labour in information-processing work. Key to this development is the disaggregation of organisations into smaller functional units which may then be relocated spatially or outsourced. Spatial relocation may take the form of concentration of functions in large centres, often organised on Taylorist principles, or of decentralisation to smaller units, which may exhibit more flexible forms of organisation (Flecker & Kirschenhofer, 2002). Outsourcing, too, may be to large multinational companies specialising in the provision of a range of back-office functions, or to micro-businesses supplying a single business service (Huws, 2003). A space is created for small start-up companies at the innovatory end of the new processes (Dejonckheere, Ramioul & Van Houtegem, 2003). There is also a role for small firms at the other extreme: supplying goods or services at rock-bottom prices in the areas where competition is fiercest and survival most precarious, often on a 'just-in-time' basis - in the most extreme cases these 'small firms' may in fact be individual homeworkers or day-labourers whose self-employed status is simply an expression of their powerlessness on the labour market. However, there is also a countervailing tendency.

The spread of information and communications technologies, together with a global convergence in standards which has eased interoperability, combined with the near-monopoly use of a relatively small number of software products and the growing dominance of English as the world business language, have created a situation where the standardisation of a very large range of business processes has become possible, and huge economies of scale can be achieved by companies which specialise in supplying them. In the global market for business services a space has opened up in which the terms of trade can increasingly be set by the supply side, as opposed to the demand side.

It is often assumed that outsourcing takes place from a large and powerful organisation to a smaller and less powerful one. In fact, this is not always the case: recent years have witnessed the growth of very large companies offering a range of back-office functions to clients in both the private and public sectors, for instance in payroll administration, human resource management, recruitment, software development, database management, logistics management, design, publishing, customer services and marketing. A feature of these companies is that they operate a highly variable internal division of labour known as 'global sourcing' (EMCC, 2005) whereby teams are put together for the purposes of specific projects based in disparate locations according to the particular requirements of the project (for instance the relative importance of low cost, high quality, proximity to the customer or particular language or software skills). The underlying geographical division of labour may not be visible to the customer who may be dealing with a locally-based front office and have little knowledge of where the work is actually carried out (Huws & Flecker, 2004). A dispersed global base of front offices may conceal high degrees of concentration of certain activities in particular spots. The disaggregation and geographical decentralisation of some organisations is therefore accompanied by aggregation and spatial concentration in others.

2.5.1 The transaction cost approach

An important theoretical approach explaining outsourcing of non-core activities is that of transaction cost economy. This theory has provoked a lot of internal debate within the discipline of economics, but the notion of 'transaction costs' itself has diffused far beyond and is also used in organisation theories.

The central premise of this theory is that managers take organisational decisions related to 'make or buy' (or 'market' *versus* 'bureaucracy') with the view of minimising transaction costs. These costs are dependent upon, firstly, the nature of the asset that is subjected to the transaction ('asset specificity'). When an asset is characterised by a high degree of transaction specificity, this requires a high level of investment for the transaction to succeed and for reducing 'opportunistic' behaviour by the economic agents involved. The value of these investments is determined by the nature and the stability of the relationships between the partners in the transaction. Secondly, transaction costs are determined by the frequency in which the same transaction can be repeated. Generally, transactions characterised by a lesser degree of frequency are more often arranged on the market. This has to do with specialisation. Finally, the transaction costs are also dependent upon the degree of uncertainty involved in the completion of the transaction: transaction costs can vary according to the extent to which they are liable to disruptions (Williamson, 1981: 548-577). It is now argued that the expanded use of ICT is responsible for a reduction of transaction costs (Grimshaw *et al.*, 2002; Dejonckheere *et al.*, 2003). This is because codification of information is a precondition for the usage of ICT and communication and transfer of this codified information is eased by ICT. As a consequence of codification and of standardisation, the availability of information for the transaction partners increases. Codification also facilitates commodification. In terms of transaction cost reasoning, 'asset specificity' can be significantly reduced as well, because the process of commodification implies that the asset is more universally available, and the specificity of the transactions is reducing.

In relation to these processes of codification, commodification, standardisation and fragmentation, and the related decrease of transaction costs, the 'primacy of the core business' in managerial decision-making can be explained. Diversification of products and services induces the multiplication of tasks and skills and results in an organisational complexity that can no longer be combined efficiently with mass production. Outsourcing is therefore a managerial solution that accommodates increased organisational complexity while maintaining cost effectiveness (World Trade Organisation, 2005). In the constant dynamics of capitalist restructuring, specialisation and standardisation, companies identify the strategically important tasks and competences and focus in-house production on these. Non-core tasks are purchased from outside suppliers. The observable historical trend is that an increasing number of business functions are considered non-core. The current trend of outsourcing of services can also be put in the historical perspective of growing specialisation and diversification of products and services, and thus on the shift of activities from the core to the periphery in the organisation (*idem.*). The implication is a growing importance of the market as the co-ordination mechanism for transactions to the detriment of bureaucratic organisations, or in other words, the disintegration of the vertically integrated firm or sector. It should be noted however, that what is non-core for one company may become a core activity for the company to which it is outsourced. The concept of a 'core activity' is therefore always a relative one. In other words activities cannot

be seen as generically 'core' or 'non-core' but must always be described as such in relation to a particular business.

2.5.2 Governance, power and control in global value chains

The role of transaction costs has been acknowledged as a major factor in the theoretical framework to explain different types of governance in global value chains as developed by Gereffi, Humphrey and Sturgeon (2005). They distinguish five types of global value chain governance, based on the combination of three important variables: the complexity of transactions (related to asset specificity, to requirements of complex co-ordination and opportunistic behaviour control mechanisms), the ability to codify transactions and the capabilities in the supply-base (the latter concept, firm capabilities, mainly refers to the importance of generation and retention of competences that distinguish firms from their competitors). This means that governance models are not only 'market' or 'hierarchy' but that different forms of co-ordination can be observed: 'hierarchy', 'captive', 'relational', 'modular' and 'market'. Moreover, the authors observe the dynamics and overlaps of these governance types within one specific industry.

This has relevance for a better understanding of different mechanisms of power and control at the level of a global value chain. In an economic context with a growing capital concentration and mobility at a global scale, a more fine-tuned typology of (transaction) co-ordination mechanisms is useful to investigate the implications of power and control for work and employment.

In particular, it is important to acknowledge a divergence between financial/economic, legal and functional power. At the top of the value chain financial/economic power is determined by a growing complexity of cross-ownerships, acquisitions and both short-term and long-term alliances, in other words a growing capital concentration that is location-independent because of the worldwide mobility of capital. Legal power within a firm, on the contrary, is essentially still heavily connected to the national boundaries and regulations, both sectoral and company level (and to an increasing extent also to European regulation) and thus location dependent. 'Functional' power finally, especially within supplier firms in the global value chain, tends to be more and more concentrated in the hands of the customer, through the establishment of a wide and increasing variety of specific contract regulations such as vendor contracts, service-level agreements, quality control certification, competence certifications, *etc.* This growing complexity of governance of power and control results in an increased instability, unpredictability and insecurity of power relationships at the level of the organisation, the workplace and for the individual.

New forms of work organisation in many industries are strongly marked by these new developments in corporate governance and interrelations between companies. This is reflected in different bodies of research ranging from analyses of globalisation and multinational companies (*e.g.* Hirsch-Kreinsen, 1998; Bartlett & Goshal, 1998; Narula & Dunning, 2000), the work on increasingly global commodity or value-added chains (Gereffi & Korzeniewicz, 1994; Altvater & Mahnkopf, 2002; UNCTAD, 2002) and in debates on decen-

tralisation of companies and changing managerial strategies (Kotthoff, 1997; Sauer & Döhl, 1997).⁵

2.5.3 The role of the institutional environment

An important critique on the transaction costs research, and relevant as well in the frame of WORKS, is the lack of institutional-comparative analysis. This problem is recognised by Williamson himself: 'The correct argument is that institutional environment matters and that transaction cost economics, in its preoccupation with governance, has been neglectful of that' (Williamson, 1996: 230). The black box and underdeveloped conceptualisation of the approach in this respect is primarily related to the 'uncertainty'-aspect of economic transactions, which can be connected with the local and institutional environment of firms. The role of the regional-institutional context, dynamic and thus 'uncertain', becomes more explicit in a globalised economic environment. However, the precise role and impact of 'uncertainty' in transaction relationships connected to regional institutional context and dynamics is hardly acknowledged in the analysis. In WORKS we assume that organisational development is highly mediated and determined by the regional institutional environment to which organisations are exposed. Organisation theories and institutional theory approaches can therefore offer additional explanatory power to the mechanisms of transaction cost relationships between economic actors and establish a clearer link between organisations and their institutional environment.

2.5.4 The importance of intermediaries

As already noted, different units in a value chain may be separated from each other contractually or geographically or both or neither. Whilst the aim of companies is to achieve as seamless a connection as possible in terms of workflow and communication, no separation - even when it remains within the same company and located on the same site - is entirely self-managing or free of transaction costs (Williamson, 1985).

As value chains become more complex there is therefore an increasing requirement for an array of different intermediaries to play a variety of different roles including supply-chain co-ordination (or logistics management), recruitment, identification of subcontractors, negotiating and drawing up legal contracts, site-finding, training, negotiating with a variety of local institutional stakeholders and a range of different types of consultancy.

Even when no geographical relocation is involved, the role of these intermediaries is extensive. However, the costs of using these intermediaries, and the value which is added by them, is not always well understood and is changing rapidly with the extended use of information and communications technologies (Rose, 1999). Benner (2002) used the concept of the 'labour market intermediary' for his study of employment flexibility in Silicon Valley and identified a large and diverse range of these intermediaries, some of which are membership based (such as guilds, trade unions and various self-help organisations and networks) and some of which can more properly be regarded as arms of the private sector (such as temporary employment agencies, consultant brokerage firms or professional employment firms which act as the 'employer of record' for their clients) or of the public

⁵ Thanks to Christoph Hermann (FORBA) for this insight.

sector (such as training providers or job search agencies). This approach recognises the complexity of the relationship between supply and demand and makes it possible to conceptualise value chains both as entities which may contain intermediary links and as embodying relationships which may be structured by forces coming from either direction (demand or supply). The addition of a remote geographical dimension to value chain separation of course greatly multiplies the number of intermediaries and the range of activities with which they are involved, whether these are carried out in-house or provided by external suppliers.

Whilst the concept of the global value chain is useful in helping to understand the changes taking place in the organisation of work, it is important to avoid an overly deterministic approach.⁶ The restructuring of value chains is, of course, itself shaped by the social relations of the actors involved in the chain and there is nothing inevitable about the formation that emerge from this process.

We may conclude that *in order to gain an insight into the dynamics of the restructuring of global value chains it is essential to take account of the roles of intermediaries as important actors.*

2.6 The role played by knowledge

We have already noted the apparent paradox that the restructuring of value chains may involve both centralising and decentralising tendencies, involving both spatial concentration and spatial dispersion and creating both new market niches for small firms and opportunities for the development of extremely large global conglomerates. On closer investigation, however, this apparent paradox disappears. The underlying logic of each of these apparently contradictory developments is the same: an increasing standardisation and fragmentation of processes ('modularisation') which allows them to be configured and reconfigured in a variety of different ways to suit the needs of a given corporation or group of corporations at any particular time. This standardisation and fragmentation cannot take place without changes in the use of human knowledge and skill in a process of commodification (Huws, 2003).

At the level of the division of labour, two interconnected underlying processes are involved here: the development of entirely new products and processes, forming the basis of new commodities (embodied in new firms or sectors or new subdivisions of old ones); and the application of new processes to the production of existing goods or services, involving an elaboration of the division of labour within their production which may sometimes involve the generation of new activities (perhaps separated geographically or legally from the old ones) or sometimes the recombination and concentration of previously diverse activities into a single process (again, perhaps involving geographical shifts or a change in legal ownership). Both fragmentation and consolidation processes may be at work simultaneously.

In the former case (the development of new products or processes) the process may begin with a few creative workers with a high level of tacit knowledge with complex and ill-defined job descriptions. As the development continues, these work processes will become systematised and standardised and, typically, a more defined division of labour will

⁶ Thanks to Pamela Meil (ISF) and Willem Trommel (University of Twente) for drawing attention to this point.

emerge, with new, demarcated occupational identities, the raw material for new process innovations in the second wave. In the latter case (the application of new processes to the development of existing products or services) a division of labour can be presumed to exist already, probably reflected in an occupational structure in which different tasks are recognised as requiring specific skills and knowledge and are, quite possibly, filled by workers with different gender, age and ethnic attributes, who have different degrees of leverage on the local labour market and are differently rewarded. Here, when the change comes, it generally takes the form of systematisation and routinisation, often accompanied by the development or application of quality standards; tacit knowledge is made explicit and extracted from the individual worker to become the collective property of the team or the private property of the employer or customer; and 'skills' are disembodied from the workers who have traditionally exercised them and analysed to see whether some new configuration might be more productive (Braverman, 1974; Freyssenet, 1974; Coriat, 1975).⁷

Here, depending on the specific circumstances, four different options are possible: first, to subdivide tasks to the smallest separately definable component and spread them across a larger number of workers in the classic Taylorisation model, thus creating a production line of single-skilled workers; second, to subdivide the tasks into separate components but instead of assigning them to different workers to adopt a 'flexible' model in which traditional demarcations are abolished and a pool of multiskilled workers is created who can be substituted for each other at short notice; third, to devise training methods to transfer the skills to another, cheaper, group of workers, perhaps in another country; or fourth, to incorporate the skills into some 'intelligent' software (a new commodity) which can be operated either by lower skilled workers or by users who are not on the company payroll at all (Huws, 2006).

The point here is that once tasks have been systematised and codified, their results become quantifiable. And, once the results are quantifiable, they need no longer be carried out under the direct eye of a manager: all that is required is for the requisite quantity of output to be produced to agreed quality standards. The activities can then be carried out on a remote site or by another company under a contract for the supply of services, with payment withheld if the quality or quantity of the output is below specification. The cost of this process, and the value which is added by it, are no longer subsumed into an amorphous general overhead but are separately visible. It has become the basis for a separate profit-making enterprise: a new link in the value chain. With each elaboration of the division of labour we have therefore, in effect, the potential for the lengthening of the chain.

The logic of this restructuring, and the chain metaphor, suggest a skein of endlessly lengthening lines; the notion that the global corporation sits at the top end of this line suggests that as the chain continues, the units get smaller, like fish tugged by the giant who constitutes the ultimate customer at the end of the line. In reality, as we have already noted, the emerging corporate landscape is more complex and contradictory than this. There are of course many small companies occupying positions at various intermediate

⁷ However, as Pamela Meil (ISF) points out, although companies definitely try to do this, in practice it rarely works, even for tasks that are supposedly completely mediated by standardised tools. Thus they really do not have as much control as they think. New trends in increased autonomy to achieve set goals or targets are thus an effective way to regain control in cases where the quantifiability is not going as far as desired.

points in the new value chains as well as at their termini. However, there has also been an enormous and rapid growth in very large companies, often many times larger than their clients, occupying strategic places as suppliers of a large number of generic business services to a diverse and geographically diffused group of customers in both the private and public sectors. Such developments raise important questions about where the power lies in differing forms of value chain. Is it possible that, alongside supplier-driven chains and purchaser-driven chains (Gereffi *et al.*, 2005; Sauer & Döhl, 1994), we may also have to posit a form in which the greatest power to determine the conditions of work lie, not at either extreme, but at the centre of the chain?

Part of the explanation of this phenomenon is the contradictory nature of the changing division of labour. The commodification process drives a continuous process of restructuring which always has a double edge. Each innovation simultaneously requires a new cohort of creative 'knowledge workers' who, in the very process of developing new innovations, bring about, albeit indirectly, the routinisation of the work of others. 'Upskilling' therefore goes hand in hand with 'downskilling' and new forms of specialisation accompany the development of increasingly generic activities.

Skill does not just have a double-edged character for labour; it has an equally ambiguous meaning for employers. The innovation process which forms the necessary motor of change for capitalist development is deeply contradictory in its need for skill. Before a task can be automated, it is necessary to draw on the expertise and experience of someone who knows exactly how to do it, to anatomise every step in the process and work out how it can be standardised and how a machine can be programmed to repeat these steps. Once expropriated, the knowledge and experience (or 'craft') of these workers can be dispensed with, and cheaper, less skilled workers substituted to operate the new machines. But this is only half the story. Human knowledge, ingenuity and creativity are also absolutely essential in order to invent and design new products or processes, to customise them for new purposes, to communicate and provide content for a wide range of products and services, and to care for, educate, inform, distract and entertain the population. Some of these functions are themselves subjected to processes whereby the knowledge of the workers is expropriated and incorporated into computer programs or databases so that the tasks can be carried out by fewer, or less skilled workers. Here, for instance, we could include the knowledge of specialists working on technical support help desks who are encouraged to put the answers to frequently asked questions onto databases that can be accessed by more junior front-line staff, or the knowledge of university professors who are asked to convert their lectures into content for standardised eLearning courses. But as one task becomes routinised and deskilled, a new cohort of 'knowledge workers' is required to devise the next stage in the commodification process. Arguments about whether the development of an ever more technologically complex capitalism results in deskilling or reskilling are therefore beside the point. The nature of innovation is such that both processes happen simultaneously: each new development in the technical division of labour entails a new split between 'head' and 'hands'. In order to routinise the jobs of one group of workers, another, generally smaller, group with some sort of overview of the process is necessary.

As workers resist or adapt to change and organise to protect their interests, new occupations are continuously being formed and older ones re-formed. Just as occupational identities can be said to be both exclusionary and inclusive, they can also be said to be in a continuous process of construction and deconstruction. Employers have to balance their

interest in cheapening the value of labour with their need to ensure that there is a renewable supply of well-educated and creative workers with fresh new ideas. In some situations, they also want to retain a proprietary control over skills and knowledge that give them a competitive edge over rival companies. This may imply a willingness to pay above-market rates or offer other privileges in order to keep key workers (Doeringer & Piore, 1971). It must be noted, however that, the polarisation implied in this analysis is by no means inevitable. Work organisation is shaped in different ways depending on the specific local context and the balance of power between the actors involved. Commodification, standardisation and deskilling may be counterbalanced by a move from productive tasks to relational, communication or commercial tasks, in manufacturing industry as well as in services (Perret, 1995). Case studies often reveal a wide variability of skills configurations depending on managerial options and social relations (Vendramin *et al.*, 2000).⁸

Knowledge also plays a key role in the governance of value chains, which has a large potential impact on the knowledge and skills of workers. but also the role of knowledge in the governance of value chains. Companies such as Microsoft or Cisco with a large number of clients as well as subcontractors dominate the value chains through exclusive knowledge which allows them to impose certain product standards which, in turn, dictate certain labour processes. These may be imposed directly (for instance when workers are transferred from a client organisation to a business services supplier as part of an outsourcing deal, or indirectly, for instance through certification of IT workers who are actually employed by client or supplier organisations). This may be regarded as an aspect of 'Wintelism' (a term coined from an amalgamation of 'Windows' and 'Intel' to refer to the dominance of global electronics markets by certain *de facto* product standards) and 'CPNs' (cross-national production networks) or 'IPNs' (international production networks) in the shaping of international standards (Borras & Zysman, 1997; Jürgens & Sablowski, 2004; Lüthje, Schumm & Sproll, 2002).⁹

In addition to the fundamental role played by knowledge in the commodification process and the spatial and contractual elaboration of value chains, the concept of a 'knowledge society' is relevant to the study of value chains in other ways. The information and communications technologies which underlie most current conceptions of a 'knowledge society' also facilitate the global redistribution of work by increasing the speed and reducing the cost of communications, by spreading the use of increasingly generic software platforms (and hence of the skills to use them) to increasing numbers of workers, by providing tools for monitoring and knowledge sharing and by reducing transaction costs.

We may conclude that *in order to understand the restructuring of value chains a focus on workers' skills and knowledge is essential; this includes both an analysis of the role of 'creative' and managerial occupations in bringing about innovation and change and an analysis of the routinisation and deskilling of the work of those in older occupational groupings.*

⁸ Thanks to Patricia Vendramin and Gérard Valenduc (FTU) for drawing our attention to this point.

⁹ Thanks to Christoph Hermann (FORBA) for drawing out attention to this literature.

2.7 Conclusions

This chapter has focused on three dimensions of the development of global value chains: the global economic context, the corporate context, and the contribution of knowledge to the restructuring processes.

Four conclusions can be drawn that are of direct relevance for empirical research on the restructuring of value chains:

- the importance of the specific local institutional regime in making particular locations more or less attractive as sites for employment;
- the importance of intermediaries as important actors in the extension of value chains;
- the importance of workers' skills and knowledge; this includes both an analysis of the role of 'creative' and managerial occupations in bringing about innovation and change and an analysis of the routinisation and deskilling of the work of those in older occupational groupings;
- the importance of the business unit in the value chain and the type of value chain.

Designing research that takes account of all four of these dimensions in a manner which is rigorous, focused and enables international comparability is a major challenge. It implies an extremely careful choice of case studies that (a) are comparable internationally in order to explore hypotheses about the specific impact of the local institutional regime; (b) bridge at least one link in a value chain in order to expose the roles of intermediaries and the changes taking place at either side of the contractual/spatial divide; and (c) make it possible to observe changes in the use of workers' skills and knowledge, encompassing both knowledge-intensive 'creative' work and work which is in the process of become deskilled and routinised.

3 Policy, social dialogue and institutional structures

PAMELA MEIL (ISF) / PER TENGBLAD (ATK)

3.1 Introduction

A number of assumptions form the starting point for observing the role of institutions, social dialogue and policy in the WORKS project. As outlined in the Lisbon Strategy (2000), a central goal is to achieve changes in work which increase competitiveness and improve employment. Also, at the heart of the European social model is the idea of quality of work and social cohesion. Although exactly which developmental models and conceptual models are needed given the shifts toward knowledge-based economies and international company networks is still unclear, a significant element is the acceptance that social partners have a leading role to play. A continuing difficulty is the variety of levels characterising industrial relations and thus social dialogue, and determining which role the various levels should have. The EU expressly distributes responsibility for implementing employment policies to the national level where quite different interpretations of mission, strategic orientation, and institutional context exist.

In WORKS, central tasks for the policy, social dialogue and institutional frameworks area are to:

- elaborate the effects that policy, social dialogue and institutional frameworks are having on work restructuring under conditions of globalisation and changes in the value chain by observing and conceptualising the effects of regulations, social dialogue practices and new institutional arrangements at the level of work;
- address the issue of how changing work conditions, including new spatial and temporal aspects of work, affect regulatory and institutional contexts and the abilities of actors in these contexts to respond to new challenges;
- link the various levels of analysis that are associated with this issue.

This chapter is organised around the following issues:

- the different levels of policy;
- the different areas of policy relevant for WORKS;
- the role and types of social dialogue;
- institutional frameworks: different models and systems;
- changes in work and challenges for forms of regulation;
- institutions at 'work': considerations on the effects of policy and social dialogue at the workplace.

3.2 Policy and regulation: diverse levels and multilevels of governance

Policies are determined at different levels with interactions between dominant actors at these levels. Traditional labour policy studies have tended to focus on the firm/company and the state/nation and the relationship between them. When we look at changes in work from a European perspective and consider the relevance of globalisation and the value chain, other institutional levels come into play. For WORKS, a variety of organisational as well as geographical levels of analysis are important. A challenge is understanding their relationship to one another:

- the *workplace* level is normally geographically (*i.e.* nationally or regionally) defined. This is the level at which the effects of policy are seen for the quality of work life. It is also the level at which the contents of the social dialogue taking place between management/employees/shop stewards/works councils) gets defined;
- the *company/organisational* level is the legal entity, traditionally nationally defined, but now also at a European level and also differentiated in terms of multinational company level (headquarters *versus* subsidiaries);
- the (intra) *regional level* encompasses areas defined by joint labour market and public and private institutions interacting for social cohesion and/or production development/economic growth for the region. Sometimes these regions are constituted as self-sufficient parts of a nation (for instance in the case of German states). Increasingly, these are levels at which new developments in industrial relations policy are taking place;
- the *national level* is the most important level for public regulatory systems and institutions. Here social security and labour market systems are defined as well as educational and training systems and institutions, taxation, *etc.*;
- the *European level* is where policy and social dialogue as it is are shaped in the EU system (by means of general policies and strategies, directives, *etc.*);
- the *international level* is where policies are developed in the shape of treaties and agreements, first and foremost in the UN system (ILO, WTO, *etc.*), but also in such transnational institutions as OECD, international unions, *etc.*

In this section, we discuss briefly the European and national levels. The workplace and company level are examined in the last two sections: changes in work and challenges and institutions at 'work'.

3.2.1 The European level

The European Employment Strategy and the employment policies of most individual EU Member States have stressed issues relating to work organisation since the early 1990s, when a political consensus developed around the structural nature of Europe's employment problem and the need to increase the employment intensity of growth (Delors' White Paper on Growth, 1993). While confirming national responsibility for employment policy, employment was declared (Art. 126) a matter of common concern and Member States were called on to develop a co-ordinated employment strategy on the basis of shared European priorities and interests, linking the intensity of growth in employment to a more flexible form of work organisation satisfying both the wishes of employees and the requirements of competition.

In the Lisbon Strategy (2000), the European Council called for changes in work which improve employment and competitiveness through a better organisation of work based on high skill, high trust and high quality (EC, 1997: 5; Gill & Krieger, 2000; Sisson, 1999). Quality is at the heart of the European social model and covers a number of dimensions, as established by the European Council in Laeken at the end of 2001.

In 2003, the EU updated its Employment Strategy with new guidelines. There was a clear shift in the orientation of the employment strategy away from new forms of work organisation and work quality toward creating employment, promoting gender equality and equality for elderly workers and improving the quality and attractiveness of work, for instance through lifelong learning or incentives (Watt, 2004). Another new development in EU employment strategy is to set quantified targets for 'management by objective' as one aspect of its 'open method of co-ordination', designed to achieve more concrete results (see Table 3.1).

Table 3.1 The ten commandments of 2003

1	Active and preventive measures for the unemployed and inactive
2	Job creation and entrepreneurship
3	Address change and promote adaptability and mobility in the labour market
4	Promote development of human capital and lifelong learning
5	Increase labour supply and promote active ageing
6	Gender equality
7	Promote the integration of and combat discrimination against people at a disadvantage in the labour market
8	Make work pay through incentives to enhance work attractiveness
9	Transform undeclared work into regular employment
10	Address regional employment disparities

Source: European Journal of Industrial Relations (2004), Vol. 10, p. 126

In fact there are a number of measures and targets initiated by the EU to reach particular employment or work effects. Directives are the most binding, but leave the choice of form and method to the national authorities (Malmberg, 2003). Thus, there are great differences among Member States regarding the means to achieve particular goals ranging from more market mediated and flexibility measures in the British national action plan to more social policy oriented instruments in Scandinavian countries. Another problem is a lack of procedures when targets are not achieved or rules are not followed. There is evidence that directives have obtained some results regarding treatment of the disabled, banning discrimination, improving rights for part-time workers, women and the elderly. Nonetheless, it is also the case that most of the targets have not been reached up to now. The discrepancies between norms (directives) and practices also have to be taken account, especially for the New Member States. For example, the Hungarian researcher L. Neumann argues that 'While the New Member States in Central Eastern Europe pursue legislative efforts and institutional developments, there remains the question of whether they are able to implement European policies in the field of employment and social affairs, and to what extent the newly transposed legislation affects everyday workplace practices' (Neumann, 2004).

There has been much hope for obtaining better management/union relations on cross-nation issues through the introduction of the concept of European works councils. The EU directive on European works councils aimed to achieve the goal of regulating information and consultation when change concerns more than one country. The directive can be seen as a breakthrough for cross-nation union participation (Szell, 2001).

In reality the possibility for influence is limited due to the unwillingness on the part of management to let the European works council take part in a real consultation which takes into account the views of the employee representatives. Another major difficulty for employee representatives from different countries has been to form a common standpoint when jobs and sites are in competition with one another. What can be and has been done is to influence the terms around changes, such as resources available for redeployment. Information exchange has also improved, but the fact that there are no negotiation rights is perceived by many union representatives as an obstacle to real influence (Weiler, 2004; Hammarström, Huzzard & Tengblad, 2003; Guarriello & Leopardi, 2003).

3.2.2 The role of nations

Despite the efforts to regulate at international (ILO standards) or EU levels (EU employment strategies, specific directives, the European works councils), public policy and especially social dialogue is still strongly linked to the national level. From the background of globalisation and informatisation, public policy and social dialogue moves between the ambitions of national competitiveness, which aims to secure capital, investments, attract labour, *etc.* and welfare considerations, which seek social cohesion and justice/equality for citizens. Under the pressure of international competition, improving national competitiveness has often become the leading motive for policy development, seemingly at odds with policies aimed at achieving equal income distributions, combating discrimination or reaching high employment levels.

It is possible to identify similarities between countries in the EU in their policy outcomes and issues being negotiated with regard to changes in work. Nevertheless, there are still marked differences in the institutional configuration and types of response that different countries display to the challenges arising as a result of changes in work. One approach to the analysis of policy responses and social dialogue is to identify regional types (Eastern Europe, Southern Europe, Anglo-Saxon, Eastern Europe, Scandinavia, *etc.*) to grasp the different approaches characterising different institutional contexts. However, there is still quite a bit of divergence within regions (for instance, between the countries of Eastern Europe which have quite different levels of economic development, as well as between the countries of central Europe), partly related to the differing trajectories of their institutional development). Another approach is to identify regime types in order to understand different orientations for policy paradigms at a general level (for instance, liberal *versus* corporatist *versus* social-democratic approaches). This is further developed below.

3.3 Policy and regulation: diverse areas

3.3.1 Which areas of regulation or topics of negotiation for social actors are the most relevant for an analysis at the workplace level?

Areas of policy and regulation that can be seen as having a more or less direct influence on the quality of work and work-life balance are the most relevant for WORKS.

The areas are in lesser or larger degrees defined in public, democratically based processes, enforced by law and/or institutions (such as industrial relations systems and collective bargaining practices), but they can also be defined inside the organisation/company (either by management unilaterally or in a social dialogue). This may be defined explicitly or by what is known in the UK as 'custom and practice'; in less regulated systems (for instance in parts of Southern Europe and Eastern Europe where large parts of the economy are informalised) and in some SMEs, social regulation which is not formalised and not based on institutionalised forms of social dialogue can still exist. The following areas of policy and regulation can be seen as having a clear influence on work and as being influenced by changes in work:

1. *working conditions* encompass all aspects of work and the contractual relationship between employer and employees, forms of employment, the way in which wages are determined and distributed, working time arrangements (both in terms of duration of work and timing of work, e.g. parental leave; individual time arrangements; telework), occupational health and safety, rules and regulations on entry, career development and exit/redeployment;
2. *education and training* are institutional solutions developing and adapting the work force (insiders as well as outsiders). It includes systematic arrangements such as basic school systems, vocational training, and academic education, and on-the-job training, skill development and redeployment activities;
3. *social security* systems are those 'safety nets' set up foremost at a societal level, but also by unions or employers in the workplace. They include pension systems, unemployment benefits, parental leave, sick-benefits and rehabilitation;
4. *growth and innovation* systems relate to how market and production conditions are regulated and/or supported (laws on competition, degree of public/private ownership, reregulation/privatisation, innovation/RTD systems); they also include taxation systems, aiming to influence the supply and demand of labour as well as influencing company development and profits;
5. *management strategies* refer to the settings in which negotiation on various issues takes place. Such strategies can span a variety of orientations reflecting institutional context, sector, labour market, etc., for example from highly market-based strategies to more long-term investment orientations, or from lifelong employment to highly flexible labour use;¹⁰
6. another important issue, especially in the former socialist countries, is the dialogue and policies surrounding privatisation and post-privatisation restructuring.

¹⁰ The idea of Corporate Social Responsibility (CSR) through, for instance, Company Codes of Conduct is a management strategy concerning work and working conditions gaining ground mainly as a response to consumer awareness on social issues.

3.3.2 The labour market perspective

The labour market is a central concern of policy and social dialogue because it is often the locus of regulation. Also, both restructuring of the value chain as well as changes in job orientations in the knowledge society have large effects on the labour market due to outsourcing and offshoring and the differential impacts on workers' opportunities depending on their skill or educational level. In the transitional labour market perspective, it is argued that there is a new labour market in which, 'individuals are more and more confronted with so-called transitions-shifts from work to care, to other work, to education, that might occur sequentially, but also simultaneously' (Schmid, 2000; see also Bannick, Trommel & Hoogenboom, 2005). The question then arises: what kinds of policies will be used to deal with these shifts which have a major influence on the career trajectory and employment future of labour? Can different positions be distinguished according to different welfare state regime types? For instance, a liberal path of radical flexibility in which individuals are responsible for their own labour market chances; a corporatist path in which internal labour markets and an attempt to retain traditional lifetime employment is pursued; or a social democratic approach in which lifelong employability through social investments in training, job creation, *etc.* is emphasised?¹¹

3.4 The role and types of social dialogue

Industrial relations are based on the conflict between capital and labour. The resolution of this conflict has traditionally been carried out by engaging in negotiations. Policies are defined by and in dialogue with actors or stakeholders at the different levels. Social dialogue in its broadest sense is the exchange of views to reach a common position between actors with differing interests. In a more narrow sense, it is linked to a specific decision-making process. In an even more limited sense, it describes the communication process between the social partners, *i.e.* employers and union/employee representatives. The predominant actors in this process are:

- employers/managers - in their own right; as agents for owners, and in co-operation between companies (as with employer federations);
- employee representatives/unions (at workplace, company, sector, regional or national, and, at least in theory, transnational or international levels);
- public agencies in the labour market;
- democratically elected representatives in politically and geographically defined spheres.

3.4.1 Negotiation or co-operation - boxing and dancing

Social dialogue can also revolve around issues of joint interest between the parties, for instance regarding topics such as the survival of the company, health and safety, *etc.* Negotiations take their starting point from what the parties disagree upon and then work their way towards an agreement. Taking a co-operative approach, on the other hand, begins

¹¹ See Bannick, Trommel and Hoogenboom's (2005) paper prepared for the policy pillar's Lisbon workshop for more on these 'three worlds of transitional labour markets'.

with the issues upon which there is agreement, and after they have been regulated, addresses the 'disagreeable issues'. From the point of view of both actors (capital and labour) this means that new roles and new ways of interacting become necessary (Huzzard, Gregor & Scott, 2004).

The concept of a dialogue implies an exchange of views, perspectives and interests in a decision-making process, for instance, between management and employee representatives. Gustavsen (1987) has, based on Habermas (1985), defined the concept of a democratic dialogue, which constitutes an ideal picture of a democratic process in which every participant has equal status primarily based on his/her working role and experience. This picture, however, does not take into account the differences in power and knowledge between the different actors. It also does not consider the roles of actors outside the company (for instance, the unemployed or public institutions).

Important research issues concerning social dialogue in the workplace include how changes in work are being dealt with whether through negotiation or through co-operation or some combination of the two. When examining this issue, different national and sectoral traditions should also be taken into account.

3.4.2 Workplace relations: industrial relations *versus* human resource management

As mentioned previously, traditional labour studies were based on an industrial relations (IR) model, *i.e.* that working conditions are determined through interrelations and negotiations between management and employee representatives (be it unions or works councils). During the 1990s, the concept of human resource management (HRM) has gained ground as either an additional or alternative approach to determining working conditions within the company. According to Ryan, in Szell (2001) HRM builds on the assumptions that:

1. the personnel (employees) are the most important resource in the company (and can be bought and sold and/or need to be developed);
2. personnel policies (*i.e.* working conditions, quality of work, wage formation, *etc.*) are developed in response to the company's needs (business vision and idea);
3. decisions are made and conflicts resolved in the operational managerial structure (in the archetypical HRM company there is no HRM department).

The origins of HRM are Anglo-Saxon and therefore were developed in a weaker industrial relation system than exists in most European countries. It has its focus on personnel management inside the company and development of the individual worker in the company context. When diffusing the strategy to highly unionised or IR-dominated countries a conflict sometimes arises. The difference between the two has been identified, for instance in the so-called Cranfield Studies, which explain that the industrial relations system is built on collective action between organised labour and employers, sometimes supported by legislation, all being carried out on national and/or sectoral levels while the HRM system builds on individual solutions based on a company's operations, business strategy and size. Labour issues such as wages, working hours, *etc.* are set between three parties (unions, employers' organisations and the state) at a central level in the industrial relations system while they are set between two parties (management and the employee) at the local level in the HRM system.

There is evidence that HRM is gaining ground due to the following:

- the rising importance of individual competences in knowledge based organisations;
- individualisation as a combination of a rising number of self-sufficient and sometimes self-employed workers, and the neo-liberal values that tend to be associated with them;
- management employment strategies on core and random competences.

The use of HRM models in companies raises the question of what role traditional models of industrial relations should and can play in regulating changes in work, or if hybrid models in which both orientations play a role will emerge. Will neo-liberal models of human resource development become ever more dominant? A most important question is whether rising individual interests in working configurations and self-actualisation can be realised in collectively based models. Another question to consider is: will there be new combinations of HRM and industrial relations systems in the knowledge society? Additionally, the problems associated with the model tend to multiply given the recent trend toward outsourcing of HRM (see Benner, 2002).

3.5 Institutional frameworks: different models and systems

3.5.1 The effects of different models and systems

Industrial relations develop in close relationship with the national level structures in which they are embedded and which shape them as a result of the particular constituents, regulatory supports and historical context in which they were formed. As a central instrument in the regulation of work, industrial relations systems are tied to other regulation systems which are, in turn, supported by national labour and welfare laws, education and training systems, and state instruments for labour market policy. The relative immobility of labour, and the industrial relations system which represents it, has reinforced the national specificity of the systems. However, the specific form that an industrial relations system may take does not only derive from the state regulatory systems in which it is embedded, but is also shaped by the historical form that conflicts between capital and labour have taken and the political ideology that has inspired them.

In France, Italy and Spain, for example, the labour movement was tied to syndicalist, anarchist political movements which led to a splintering of their labour movements into unions tied to particular political parties. In Great Britain, the shop steward system was based on structures of representation defined along occupational lines of demarcation and tactics of negotiation tailored to the work process. Germany is typified by a configuration dominated by the link between negotiation and norm building (*normiertes Verhandlungssystem*). Open forms of conflict are rare and are strongly regulated, and this is balanced against the union's right to 'co-determination' (Düll & Bechtle, 1988). These nationally specific forms of industrial relations determine what the arenas of negotiation between capital and labour will be, the form that conflicts take and the levels and styles of negotiation between collective actors (Dore, 1996).

In the classic view of industrial relations research, the goal of the regulation of work relations is to achieve a balance between the conflicting interests of an autonomous utilisation of capital on the one side, and the protection or improvement of labour's means to reproduce itself on the other. The research carried out from the postwar era to the present

shows that a characteristic of industrial relations in Western industrialised economies is the strong link between the orientations of the system of interest representation and the Taylorist/Fordist production model that dominated in the period of economic growth following World War II. The arenas of conflict and negotiation that emerged in the Taylorist/Fordist production system centre around issues deriving from the work relationship that crystallised in this era, such as wages, working conditions, working time, employment security, *etc.*

This suggests that the WORKS research should address the question: *'Can we expect divergences in the ability to regulate changes in work according to different types of production regimes, different types of industrial relations models, different levels of coherence between institutional frameworks in a given national context?'*

3.5.2 Divergences in industrial relations types

The industrial relations systems of the EU differ substantially in their main characteristics such as legal frameworks, centralisation and co-ordination methods, state intervention to balance conflicts, policy-concertation in the socio-economic field, organisational structures of the social partners, *etc.* (Sisson, 1999; Aust, Leitner & Lessenich, 2000).

A number of classification schemes exist to differentiate industrial relations types, using such dimensions as centralisation of wage bargaining, the role of the state, the level of concertation between employers, unions and the state (Jacoby, 1995; Crouch, 1993; Albert, 1993; Ebbinghaus & Manow, 2001). Based on these dimensions, ideal types such as voluntaristic (found in liberal economies), corporatist (both micro and macro) and regionalist, among others, have been created. Union articulation (Crouch, 1993) refers to the relations between different levels of union organisation, such as the national, sectoral and company levels. In theory, the more co-ordinated this is, the better the system can respond collectively to challenges, and potentially can provide adaptive solutions to new problems. Germany's 'Rhine' or 'corporatist' model of regulation is characterised by highly sophisticated levels of interest intermediation between the state, employers, and unions which 'emphasises long-term calculations regarding issues such as investment, jobs and economic growth' (Waddington, 1999). There has been some indication of some neo-corporatist revivals in countries that were not traditionally corporatist (Ireland, Italy, Portugal, *etc.*) through the conclusion of social pacts and tripartite agreements that occurred in the course of the 1990s. The neo-American or 'voluntaristic' model of industrial relations, by contrast, 'relies on short-term market transactions between employers and unions', decentralised company-level bargaining, with the state distanced from both parties. This type of model is most like a neo-liberalist style of employment relationship which is characterised by high demands in flexibility and low levels of unionisation (or no unionisation). Crouch (1993) identifies French industrial relations as 'bargaining/contestation with incipient regional neo-corporatism in limited areas'. France's industrial relations system is portrayed as concentrating more and more at the company level through *comités d'entreprise* and having less and less connection with national union activity (Lallement, 2000). Interestingly, however, the state plays an important role in passing legislation such as on training expenditure or working time which the companies and local levels of interest representation then have to negotiate and implement. Thus the

'neo-corporatist' element in French industrial relations involves a strong, although non-continuous, role of the state with a simultaneous trend toward decentralisation.

Italy has the largest number of union members in absolute terms in Europe (13 million) among active and retired workers. This has been achieved without the aid of the Ghent systems or closed shop as in the US (and the UK in the pre-Thatcher period). In the 1990s, Italy has displayed tripartite bargaining and a high level of coverage by collective agreements, although these agreements lack legal enforceability. Italy's industrial relations system has a massive capacity for mobilisation in terms of industrial actions and strikes. The system reveals a combination of participation and conflict, rather than a polarisation in one or the other direction. The Italian bargaining structure is a type of 'centralised decentralisation' in which sectoral or national levels are combined with decentralised negotiation at the company level, in which there is a unique single channel of bargaining prerogatives.¹²

Most classification schemes make a distinction between levels of interest representation, for instance national *versus* local dimensions, the level of institutionalisation, the level at which bargaining takes place and the extent of its coverage. The general line of argumentation in these frameworks is the greater the level of institutionalisation, the more potential for reaction on the part of industrial relations actors. Given that increasing economic globalisation is usually linked with an accompanying weakening of national level forms of regulation, the logical consequence is that industrial relations can also no longer effectively respond or act as a form of governance (Ferner & Hyman, 1998).

3.5.3 Different types of policy orientation and links to specific forms of social dialogue or institutional context

In their varieties of capitalism perspective, Hall and Soskice (2001) identify two broad types of economy: the liberal market and the co-ordinated market. They examine means of co-ordination under differing institutional structures in five spheres: industrial relations, vocational training and education, corporate governance, inter-firm relationships and employees, postulating that institutional complementarity in different economy types will lead to different strategies and outcomes. 'Each economy displays capacities for co-ordination that will condition what its firms and government do' (p. 35). Using a variety of labour market indicators, Esping-Andersen (1990 & 1996) identifies three different types of welfare state: liberal, corporatist, and social democratic. In the differing institutional relationships characterising these welfare state types, different strategies and outcomes for labour market policy emerge.

3.5.4 The problems for regulating changes in work resulting from the globalisation of value chains

Many analyses on the consequences of globalisation look at how existing formal systems of industrial relations influence, shape, or respond to challenges that derive from globalisation (Marginson *et al.*, 1995) since these institutionalised forms of labour representation are seen to have the most potential to counter globalisation effects. Differences in the abil-

¹² This information on Italy was kindly supplied by F. Guarriello and S. Leonardi of IRES.

ity to respond to various challenges of globalisation are often seen to be influenced by the nature of the regulatory regime and the institutional framework in which the relationship between employment and the economy occurs (Hollingsworth, 1998; Schmierl, 1998; Crouch, 2001). However, globalisation is often credited with the weakening of national societal institutions (Beck, 1998; Streeck, 1998) and this has a particularly intense effect on national systems of industrial relations given the specific national boundedness of the systems and the actors represented by them.

3.6 Changes in work and challenges for models of regulation

Some researchers point to the problem that national systems of employment regulation are not equipped to deal with the increasing globalisation of the economy. The position is that globalisation strategies destroy the foundation upon which national regulations are based, and in this way make historically formed national standards superfluous (Beck, 1999; Streeck, 1998). Altvater and Mahnkopf (1999) also demonstrated that the primacy of the financial market, even over the labour market, tends to impose a strict top-down hierarchy, in which the autonomy of national actors such as governments or trade unions is severely limited and compromised.

While contemporary studies that connect the production regime to the interaction of the social welfare and employment regimes are now tending to emphasise a *mix of continuities with discontinuities* (Boyer, 1998; Heidling *et al.*, 2003), it is generally recognised that the combined impact of two decades of high unemployment and capital consolidation has had a marked effect on the processes of social dialogue (Carpenter & Jefferys, 2000).

In the area of collective bargaining, there are a number of factors that arise in conjunction with work restructuring in the knowledge society that make regulation difficult. The difficulties have a variety of causes:

1. a noticeable increase in shareholder value driven orientations in company business and management strategies, even in national contexts with strong regulatory traditions (O'Sullivan, 2000; Useem, 1996). These operating principles driven by the market weaken the governance potential of existing systems of employment regulation whose catalogue of topics for negotiation was determined in the Fordist/Taylorist production era (Meil *et al.*, 2003; Bergmann, 2001). Thus the *content* of negotiation falls completely outside the range of issues regulated in these systems (Rorive, 2003; Khaufclair, 2003). The traditional range of negotiated topics that is addressed or covered by social actors (unions, works councils) is bypassed by company market driven strategies. New company strategies and financial priorities disempower trade unions and works councils from acting with the set of issues at their disposal. The issues raised here indicate that the implications of the growth in 'non-occupied' areas of negotiation require a better understanding of the ways in which global trends in shareholder value orientations impact on the power resources previously developed by unions in the pursuit of their objectives (Levesque, 2002);
2. threats of exit to cheaper production or development sites, also called 'regime shopping' (Streeck, 1998 & 2001), is a political issue outside the range of traditional areas of collective bargaining aiming to regulate workplace conditions. In co-ordinated institutional contexts, there are often attempts by social actors to negotiate trade-offs to retain

jobs; with the workers accepting pay cuts or reductions in working time in exchange for job security guarantees at least within a specific time frame. Institutional frameworks that achieve such agreements are often credited with being flexible or adaptable, demonstrating some institutional strength by winning security concessions from employers (Seifert & Freyssinet, 2002);

3. competition is not only global, between developing and developed nations. Regions within Europe are also in competition with one another for attracting investment and, of course, different standards in labour protection exist within Europe. Furthermore, the mobility of labour, especially in the service sector, challenges the way in which labour is competing which can be seen in the intensive discussions on the service directive *versus* the stationary directive;
4. new types of workers in the knowledge society and new types of workplaces are often not the original target of negotiation topics or collective bargaining orientations that were developed in the postwar Taylorist/Fordist era. The traditional areas of negotiation were usually geared toward mass production workers often working in large, hierarchical organisational contexts. In the case of Germany, the collective bargaining focus was generally on skilled (male) industrial workers. In a more equal labour market with a stronger representation of women and the professionalisation of services such as child care and elderly care, other issues become more important to negotiate - such as working hours, the right to full-time or part-time work, *etc.*

3.7 Institutions at 'work'

A crucial question for the WORKS project is: '*How effective are policies at the workplace level in achieving the goals for quality of work life and worker protection for which they were designed?*'.

It is a central task of the project to examine what effect policy initiatives at different levels actually have on work life and work experience. Especially relevant in this regard is the role of institutions in their determination, implementation and enforcement of policy. The way institutions have developed and the 'societal effect' they display (see Maurice, 2000), the context in which they operate¹³ (Pot, 2000), and the forces and influences which shape them (DiMaggio, 2001) will all have an effect on the outcomes at the level of work. Differences between nations are to be expected given the differences in institutional settings. However, the ability of institutions to respond and their strategic orientations are also expected to have shifted in the context of globalisation. Moreover, differences within nations, for instance between sectors, are also expected to vary given differences in work requirements, worker types and positions in the economy.

There are a number of topics which could be addressed which are relevant to WORKS and in which policy and institutional shifts play an important role. These include the demand for skills and qualifications, work equality and gender, and flexible forms of work organisation. We now go on to discuss research findings at the level of work in three such topic areas which are relevant to WORKS: company restructuring, collective *versus* individual strategies of interest representation, and quality of work life.

¹³ Pot identifies the following factors as influencing the employment relationship: competitive conditions, technological conditions, state regulation, power balance between capital and labour, professional beliefs of managers, patterns of value and norms.

3.7.1 Company restructuring

The European Industrial Relations Observatory compiled a report (2000) on the role of worker representatives in company restructuring strategies in which a distinction was made between 'crisis situations' (*i.e.* major collective redundancies, plant closures) and 'day to day' restructuring (*i.e.* changes in the organisation of production or service provision, employment levels, employment types, work organisation, skill requirements). The summary on participation in such processes concludes that there are major variations between countries but that usually participation in some form occurs in the sixteen EU countries studied. However, the overall conclusion is that company restructuring decisions are taken essentially by management and 'the real influence of employees and their organisations in relation to continuous company restructuring is very limited'. Clearly, the ability of institutions to respond to new challenges that arise due to restructuring is a central aspect of the quality of work to be found in modern organisations.¹⁴

3.7.2 Individual *versus* collective strategies

Generally, regulation surrounding issues of work and employment has traditionally been formed around a model of the employment relationship based on normal, standard, permanent work, which is changing in many sectors (Dickens, 2003). This has led a number of researchers to signal an erosion in the system of industrial relations whose institutional frameworks developed out of conditions set in the postwar period, and which have difficulty responding to the new demands of international capital and organisational shifts (Schmierl *et al.*, 2001).

In protecting workers employed in large Taylorist/Fordist organisations, the emphasis of social dialogue was on reaching broad-based collective agreements, thus assuring a certain working and living standard for a large number of workers throughout a particular industrial sector. The more co-ordinated the bargaining process, as in corporatist regimes, the broader the level of coverage and the greater the effects of solidarity across companies in a given sector or branch. In this way, collective strategies were used to achieve the best possible working conditions for the individual worker. The definition of quality of life was, however, based on a particular worker type and a particular type of job. Women, for instance, had little recognition in these constellations, and their specific needs to balance family and work demands were seldom considered. Thus the targets to achieve a better work-life balance revolved around general reductions in working time, goals to protect health also involved time reductions in both weekly hours and the work life span given the physical burden of much industrial work. Labour's ability to reproduce itself was covered in measures on pay as well as agreements on job security. Having areas of negotiation which could be covered in blanket agreements and which were either quantifiable or objectively measured, made it easier for unions to develop the competence to counter the employers' demands, and have a stronger power base.

These topics are still relevant today. However, a number of developments are taking place which have resulted in a shift in the relationship between levels of interest repre-

¹⁴ There are also specific features which are related to the restructuring process in former socialist countries where the economy was dominated over a long period by large state-owned enterprises (see for example Kirov, 2004).

sentation, a rising complexity in the worker and contract types which characterise the employment relationship and a need to rethink the topics of negotiation needed to best meet the interests of workers. For one, there has been a noticeable decrease in union participation rates and union density in a number of countries in Europe over the last decade with the notable exception of the Scandinavian countries (see Table 3.2). Rising unemployment and demographic shifts have played a role in this trend (Waddington & Hoffman, 2001). Literature in a number of countries also suggests that traditional unions and their structures are not successfully mobilising workers in new economic sectors, and those who have atypical employment relationships (European Industrial Relations Observatory, 2001; Boeri, Brugiavini & Calmfors, 2002; Ebbinghaus & Visser, 1999 & 2000; Blaschke, 2000; International Labour Organisation, 1998; Western, 1997).

Another issue is the role of migration and precarious work relationships of non-citizens and marginalised ethnic groups. Although their interests may be considered in workplace level work councils or social regulation, institutionalised union bargaining rarely takes their special needs into consideration. The demands for integration of both women and ethnic groups in traditional union considerations is underemphasised although work that involves these groups in the service and high-technology sectors is growing.

Table 3.2 Active members of union as percentage of employees

Country	Active members of union as percentage of employees	Country	Active members of union as percentage of employees
Sweden	77 per cent (2003)	Great Britain	29 per cent (2004)
Denmark	75 per cent (2003)	Czech Republic	25 per cent (2002)
Finland	72 per cent (2003)	The Netherlands	24 per cent (2003)
Belgium	65 per cent (2003)	Germany	20 per cent (2004)
Norway	54 per cent (2003)	Switzerland	20 per cent (2003)
Slovenia	41 per cent (2002)	Hungary	20 per cent (2002)
Austria	36 per cent (2003)	Poland	15 per cent (2002)
Slovakia	35 per cent (2002)	France	9 per cent (2002)
Italy	35 per cent (2003)		

Source: Institut der deutschen Wirtschaft, 2003

A further trend is the decentralisation of bargaining down to sectoral levels or in many cases the company level. The growth in the range of topics being negotiated, the pressure on workers to make concessions and the growing trend of flexibility in the content of agreements has supported this development toward decentralised bargaining. This stands in direct conflict with the new demands arising from global value chains and project-based work organisations. Another issue is the role of multinational corporations' business strategies on a variety of issues such as workplace organisation and relations, levels of participation, empowerment, work intensification, job loss, *etc.* (Frenkel & Royal, 1999; Appelbaum & Batt, 1994; Caligiuri & Stroh, 1995). Do the countries in which they operate affect companies' approaches to these issues? How well can the institutions in which the multinationals operate govern their strategies on issues which affect quality of work (Meil *et al.*, 2003)?

European works councils or other transnational forms of representation and social dialogue could address the problems of decentralisation and multinational corporations' business strategies. There have been some indications of successful transnational actions across company networks (Kädtler & Sperling, 1999), but they seem to be more the exception than the rule.

Example: working time

There appears to be a process of rethinking the relationship between collectivity and individualism in industrial relations. Thus, in situations in which employees have a strong collective voice, they may use this voice to obtain high levels of individual control over issues such as working time rather than emphasising collectively set standard agreements (Golden & Figart, 2000). In the Netherlands, for example, the Dutch social partners reached an agreement in 1999 establishing a framework for further individualisation of the terms of employment. The agreement allows unions and employers to designate a series of benefits that can be exchanged for each other (Berg *et al.*, 2004). The unexpected effects of standardised working time regulation were examined by Dupre and Lallement (Lallement, 2003). They focused on the negotiations on working time in SMEs in the IT sector in France which were trying to implement the reductions in working time set by the Aubrey laws. The workers found the type of regulation, concentrating on a weekly reduction in working time, too rigid for their needs.

3.7.3 Quality of work - quality of life

Another important question for WORKS is: *'What effect do policy orientations have on the quality of work life, also for different groups of workers?'*

In addition to the relationship between collectivity and individualism, another question for social policy and social dialogue today is defining what is meant by 'quality of working life' and determining whether this definition has changed from the past. There are both risks and opportunities associated with the changes in work in most of the relevant areas of policy in WORKS. New job characteristics linked to project-based work, for instance, demand high levels of responsibility and work intensity without corresponding levels of compensation or authority (Edwards & Wajcman, 2005). On the other hand, they also contain high levels of autonomy and interesting job content (Meil & Heidling, 2005). Meeting increasing demands for qualification, lifelong learning, and rising competency requirements on the job can be seen as a purely individual responsibility or one shared with companies or the societal institutions of training and education, *etc.* The question for policy is: *'How well can institutions maximise opportunities and minimise risk in these circumstances?'*

It is at the level of work that the effects of policy initiatives at various levels - international, European, national, regional, sectoral and company - will become visible. Here we can examine if European guidelines and directives are being enforced and how their implementation is carried out in diverse settings and across diverse institutional contexts. Certainly studies have showed that there are major challenges for existing institutions and forms of social dialogue to deal with current trends in restructuring and changes at work. There has been some evidence for strategies of renewal in which institu-

tions are finding new ways to achieve collective responses to ever more flexible workplaces. There is also evidence that policy paths vary by nation, regime type and sector. Yet, an increase in market driven orientations across European economies is also apparent and this creates obstacles for the governance potential of traditional institutions of social dialogue, and thus for the attainment of high levels of quality of work.

4 New forms of work organisation and flexibility in the knowledge-based society

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4.1 Introduction

Work organisation is a complex concept used in a variety of ways in different disciplines, research traditions and language contexts. It encompasses the technical, functional and social structures of work within the workplace and beyond. Usually the term refers to the *ensemble* of task structures, divisions of labour, forms of control and co-ordination, and forms of co-operation. Often the concept also includes the deployment of personnel in functional, temporal and social dimensions and the use of skills.

One of the most important changes in work organisation in the last two decades has been the increased flexibility in the assignment of tasks or deployment of personnel usually referred to as 'functional flexibility'. A wide range of measures has been implemented to achieve this, ranging from job enlargement and multitasking to team working. There are, however, widely differing estimates of the extent of diffusion of new principles of division of labour such as team working, depending on the precise definition of the practices under investigation. Additionally, recent evidence has questioned the positive picture of new forms of work organisation. There seems to be a trend towards polarisation between a rise in broadly defined and autonomous forms of work and of work with low levels of autonomy, co-operation and participation.

There are thus contradictory tendencies at play. On the one hand, a rise in the demand for 'soft skills', such as language, communication skills and self-management has encouraged a blurring of the boundaries between occupations and the emergence of new work roles. The dispersal of employees to clients' premises, as teleworkers or in projects, has also encouraged multitasking and self-servicing by workers. This has been accompanied by the flattening of decision-making structures, a fusion of conceptual and operative roles (e.g. production and quality control, or assembly and maintenance), and the broadening of roles and requisite skills of the individual worker (e.g. multitasking, team working). This latter form of work organisation is associated with the high-trust, high performance firm.

In contrast to trends in high performance work, the increasing formalisation and codification of skills and a new emphasis on standardisation have encouraged new forms of control, for instance in call centres. Numerical or external flexibility in work organisation represents a further 'distancing' of workers from the final product and their contractual relationship to their employers is also divided into progressively shorter periods (fixed-term, temporary, on-call, subcontracting).

Given the highly diverse findings in different sectors or occupations there is a need for an adaptation of research tools and analytical instruments. The purpose of this chapter is to describe the main concepts used today for the description of changes in work organisa-

tion. A special focus is on the way these concepts are used and to what extent they are embedded in a theoretical framework. This relates mainly to the question as to how current changes are being theorised and what links are made between work organisation and flexibility. In addition, this chapter aims to cover different national research traditions dealing with these topics. What are the theoretical traditions and what concepts are used? Is the focus on task structures and systems rather than on motivation, involvement and skills? Is management control and exploitation of primary concern or is it possible to achieve a win-win situation of high performance work? How can the discussion on work organisation and flexibility be linked to the global theme of the WORKS project, namely global value chain restructuring and its relationship with quality of work and quality of life?

The concepts described in this chapter should make it easier to operationalise and to answer in particular the following overarching research questions of WORKS: *'What are the directions of a changing division of labour and forms of co-operation for different occupational groups?'* and *'How are the simultaneous trends of flexibilisation and standardisation played out?'*

4.2 Trends in the development of work organisation

For many years, in academic research on work organisation a relatively narrow concept was usually used. It referred mainly to the task structures within workplaces (*i.e.* the establishments or work organisations) and focused in particular on the degree of division of labour and on the form of management control (degree of centralisation). The dominant theoretical perspective in much of this literature takes Taylorism as a starting point: 'detailed division of the production process into distinct, minute and standardised tasks; the complete separation between intellectual and manual work; and the pyramidal centralisation of the production process. (...) It seeks productivity improvements by designing work in a way that renders it impervious to the variability (and thus fallibility) of labour inputs, by applying the 'one best way' of performing each task in the line of production.' (WORKS glossary). In recent decades, changes in work organisation have often been conceptualised as a move from Taylorism to post-Taylorist forms of work. The main dimensions of work organisation that reflect such a development are:

- from narrowly defined, routinised tasks to re-integration of tasks and multitasking;
- from direct control to relative autonomy and devolution of management functions to workers;
- from deskilling to multiskilling and upskilling;
- a shift in the unit of production from the individual to the group; and
- a shift from (technical and bureaucratic) system integration to social integration through communicative action and co-operation in self-directed teams.

However, contrary to the assumptions of a general move towards a post-Taylorist form of work organisation, there is evidence that new forms of bureaucratic control and repetitive tasks have been extended to the information sector (Lutz, 1992; Altieri, 2002). Current research into the distribution of new forms of work organisation has established a diversity, if not polarisation, of working arrangements (Appelbaum & Batt, 1994; Boyer & Freysenet, 2000; Freysenet, 1995). Bosch (2000) distinguishes three patterns: 'Taylorist' (individual and group work determined by others), 'participative' (average characteristics of

autonomy and participation) and 'post-Taylorist' work organisation (autonomous individual work and semi-autonomous group work). Data show that in the 1990s in Germany there was an increase not only in post-Taylorist but also in Taylorist forms of work organisation (to the detriment of the middle category of participative organisation of work). This is the more surprising as Germany's diversified quality production system is supposed to be particularly conducive to work organisation favouring high skill and high commitment (Streeck, 1991 & 1995; Flecker & Schulten, 1999). At the European level, drawing on the results of the third European Survey on Working Conditions undertaken in the EU-15 in 2000, Lorenz and Valeyre (2005) distinguished four forms of work organisation labelled the 'learning' (learning dynamics with high autonomy in decision-making), 'lean production' (learning dynamics with average and controlled autonomy), 'Taylorist' and 'simple structure' forms. Such a diversity, or polarisation, can not only be observed across the whole economy but also within particular sectors or business functions. In their analysis of the call centre industry, for example, Batt and Moynihan (2002) identify three different models: the Taylorised mass production, professional services and hybrid mass-customisation models.

Brödner and Latniak (2002) evaluate these different innovation strategies as a dichotomy between 'high road' and 'low road' variants, a dichotomy that is popular also in normative approaches and in policy debates. The high road variant can also be associated with the high-trust, high performance firm. Its main features are: decentralisation, creation of comprehensive tasks, establishment of work groups, promotion of competence development and sharing of knowledge as well as interdepartmental co-operation and integrated product development. In contrast, companies that follow the low road type strive to achieve competitiveness through cost-cutting, which among other things expresses itself in staff reduction or outsourcing. For the internal organisation of work this mode means: organisation of work processes according to value creation aspects, acceleration of the processes through the grouping of individual work tasks and activities into business processes, intensification of work, and a tendency to divide staff into a highly qualified core and a low-qualified periphery that are employed to balance out capacity fluctuations. Brödner and Latniak conclude that the overwhelming majority of companies prefer the low road, *i.e.* utilise more or less classical cost-cutting strategies, while a minority of companies, although often highly successful ones, take the high road of innovation (Brödner & Latniak, 2002: 133).

A major concern in the academic debates is about the question whether new forms of work organisation constitute a break with the past or whether continuity prevails (Edward, Geary & Sisson, 2004; Linhart, 1994; Veltz & Zarifian, 1993). While the literature on 'high performance work systems' stresses novelty and focuses on the performance effects, researchers in the tradition of Labour Process Theory stress continuity showing that 'neo-Fordist' work organisation improves performance through work intensification 'combined with strategies to mine workers' tacit knowledge in pursuit of continuous improvement' (Batt & Doellgast, 2005).

In recent political debates a wider concept of work organisation has been used. When the European Commission in its Green Book 'Partnership for a new organisation of work' (1997) suggested the implementation of new forms of work organisation to enhance competitiveness and to make increased use of human potentials while at the same time improving working conditions, working time arrangements and the employment relationship, the inclusion of terms and conditions of the labour contract played a prominent role.

In this normative perspective, new forms of work organisation were often referred to as the 'high road' to innovation and competitiveness. The cornerstones of such a strategy are 'partnership' and participation, team working and flexible forms of organisation, as well as utilisation of knowledge for continuous improvement (Totterdill, 2002).

In academic debates too the concept of work organisation has been widened; working time arrangements or temporal flexibility have become major concerns of the research as have the contractual dimensions of the employment relation. Research on work organisation can no longer take for granted the standard employment relationship as the contractual framework. The employment contract (fixed-term or permanent, own employee or temporary agency worker, employment or contract work, *etc.*) has often become a variable of organisational design closely linked with questions of task structures and flexibility. This may result in a 'fragmentation of work' (Marchington *et al.*, 2005; Gollac & Volkoff, 2003). This term describes forms of work organisation resulting from a blurring of organisational boundaries. Agency work, outsourcing, franchising, *etc.* create a variety of situations in which the assumption of a single employer and a unified organisation is no longer valid; rather, employment is managed across organisational boundaries.

Thus research on work organisation can no longer be limited to task structures and social relations within establishments or workplaces. The establishment itself as an organisational, economic and social unit is being questioned through new forms of work, network structures and, more globally, the restructuring of value chains.

The dissemination of new information and communication technologies together with the scale crisis of highly standardised mass products has led to a far-reaching reorganisation of traditional Fordist corporations. Vertically integrated firms have been increasingly transformed into horizontally co-ordinated networks of 'self-programmed, self-directed units' (Castells, 1996: 152-153). The need for flexibility and innovation, in Castell's view, makes hierarchical-bureaucratic control obsolete and favours the network as an alternative structure 'based on decentralisation, participation and co-ordination' (*ibid.*). Perhaps Castell's concept was primarily normative and only captured one part of the changes that were implemented on the firm level. Power, control and dependency did not disappear in the network structure, yet they were reconfigured in new ways (Hermann, 2006). The notion of global value chains already points to the mutual dependence of technically independent business units. As Flecker, Kirschenhofer and Riesenecker-Caba (2002: 44) note, 'The more decentralisation and outsourcing is pushed forward, the more important it is to control far-flung business activities. In the use of information and communication technology ... the possibility of decentralisation, horizontal co-operation and self organisation is thus only one side of the coin. Without the possibilities of steering and monitoring inherent in information and communication technologies, outsourcing and decentralisation would arguably not be realised to the same extent.'

Instead of promoting a more participative and democratic society as hoped for by Castells and others, vertical disintegration and decentralisation allow for what is discussed under the broad term of marketisation. 'By bringing the competition in product and labour markets to bear on their own internal processes, ... [firms] are turning the market into an instrument of control' (Lehndorff & Voss-Dahm, 2005: 298). Sauer (2005) therefore sees a 'market-led decentralisation'. The individual unit although technically more independent is subjected to new and worse constraints through management by objectives including internal and external bidding as well as the application of benchmarks or the

imposition of profit targets. Hierarchical control is replaced by sanctions by the 'market' and markets are increasingly internalised into business units (Moldaschl & Sauer, 2000).

In services the 'opening to the market' can also take the form of elimination of managerial mediation between workers and customers and the increasingly direct exposure of workers to the changing wishes and requirements of customers. In management literature this is greatly welcomed as 'advanced customer-orientation'. For workers, advanced customer-orientation can mean even more stress, especially if management at the same time cuts resources in order to save costs. In any case customers need to be taken into account as additional actors in the analysis of work organisation (Jacobsen & Voswinkel, 2005).

Marketisation has gone hand in hand with changes in corporate governance and the rise of shareholder-value orientation (Hirsch-Kreinsen, 1998; Lazonick & O'Sullivan, 2000; Sablowski & Rupp, 2001). The demand for high rates of return on capital forces management to save costs by cutting resources which in turn can undermine the new autonomy workers enjoy in decentralised workplaces. Not surprisingly, assessments of new forms of work organisation show that decentralisation is a major feature of organisational change but that organisational change does not necessarily improve the situation of workers (European Foundation, 2001). The demand for increasing profits, moreover, has also caused horizontal reintegration as outsourced business units or new suppliers attempt to exploit economies of scale to save costs.

However, organisational decentralisation has not only changed the structure of firms, it has also altered the spatial organisation of work. With the spread of new information and communication technology work has become more distributed. According to Meil (2004) distributed work involves 'co-operation or interaction of delivery of a product or service that entails a non-proximate or non-physical dimension'. Workers can work from home or in remote back-offices - what in general is usually referred to as eWork (Huws & O'Regan, 2001) - but they can also work at the customer's premises (Eichmann *et al.*, 2004). Distributed work has, of course, become more widespread with the emergence of global value chains in the information economy (Gereffi *et al.*, 2003).

Often, distributed work is equated with 'virtual teams', *i.e.* teams of people 'who work together without necessarily being in the same location, using information and communications technologies for communication' (WORKS glossary). Findings from the EMERGENCE project however show that these are just one of several types of distributed work (Flecker, 2005b). In software development, for example, the work process is not only split up to separate complex from simple tasks, *i.e.* applying the 'Babbage principle', to reduce overall costs, the different stages are also geographically separated in order to benefit from low labour costs in central and eastern Europe, in India or in South East Asia. In addition to 'virtual teams' we thus find in the IT or in the customer service function 'extended workbenches' providing low costs and high levels of flexibility.

4.3 Work organisation in 'knowledge work'

The topic 'knowledge society' has led authors to focus on the changing significance of work in society, on 'knowledge' as a production factor, and on analyses of employment trends (Stehr, 2001). Others argue that in the knowledge-based society place has become irrelevant (Willke, 2001). One of the key questions in our context is the question of what exactly is understood as 'knowledge work'. The key distinction within the debate about

knowledge obviously is that between tacit and codified knowledge. Bearing both forms of knowledge in mind it becomes clear that all work is and has been knowledge work. 'All work requires the mobilisation of tacit and embodied knowledge to be viable and to open up unmanaged social spaces. Tacit knowledge exists not just at the margins of routine procedures but it is the necessary precondition of the functioning of formal systems' (McKinlay, 2005: 234). But this implies that the existence of tacit knowledge cannot be used as the sole criterion in defining knowledge work.

We face the same problem when we talk about the 'knowledge worker'. Lists of so-called knowledge workers often include a broad range of occupations: librarians, musicians, bankers and insurance workers and call centre agents (Handy, 1995). But what do these jobs have in common? Using the definition in the WORKS glossary, a knowledge worker is someone 'who has access to, learns and is qualified to practice, a body of knowledge that is formal, complex or abstract' (Thompson, 2004: 21), and who manipulate symbols and ideas. This definition raises a question about the degree of manipulation and creation of new knowledge in a lot of the jobs of the above-mentioned job list. In call centres, for example, customer service representatives often work within context specific and procedure-driven knowledge (Callaghan & Thompson, 2002).

The terms 'information work' and 'knowledge work' are often used interchangeably at least within the work organisation debate. Knowledge in this sense seems to be located in organisation specific IT systems that create procedures and routines for employees to operate within. Furthermore the impression is that the analytical value of the terms 'knowledge work' and 'knowledge worker' is rather low due to imprecision and overgeneralisation. Because of this problem it is necessary to distinguish between the increased significance of 'knowledgeability' at work and a more restricted category of knowledge workers - defined as those who manipulate symbols and ideas requiring substantial thinking skills. This includes the traditional expert or professional labour in addition of those in professional services (such as consultancy) or the creative industries (advertising executives, graphic designers, and new media producers) and technical occupations (Warhurst & Thompson, 1998).

4.3.1 'Knowledge work' - new forms of work organisation?

The work of professionals and highly-skilled workers is characterised by complex tasks and a high level of uncertainty. The result is not always clear beforehand and the search for new solutions to particular problems makes it difficult to directly control the labour process. Creativity and co-operation are crucial virtues when it comes to finding innovative solutions or 'translating' unclear customer requirements into clear product specifications. This makes creativity and co-operation particularly important qualities of knowledge work (Kotthoff, 1997; Konrad & Paul, 1999; Baethge, 2004). The complexity of tasks and the importance of creativity are also the reason why knowledge work is often associated with 'high road' work organisation and the high-trust, high performance firm.

The high-trust character of knowledge work can also be seen in flat hierarchies and decentralisation, leaving room for relative autonomy for individual workers (Boes & Baukowitz, 2002). It is important to note however, that this tendency has not necessarily resulted in an overall transformation of the hierarchical structures of firms. The three European Surveys on Working Conditions (1991, 1996, 2000) show that everyday work is

becoming more composite and more co-operative but with hierarchical co-ordination and without decision-making participation. In the same direction we can see some evidence from EPOC surveys (the period from 1993 to 1998) that 80 *per cent* of European workplaces use some kind of participation but only 8 *per cent* use self-managed teams on extensively. Only 2 *per cent* of workplaces have teams with democratic structures (Scandinavian type) and the others have teams which are very close to the Japanese type of team (hierarchical co-ordination, no empowerment, no collective bargaining). Other quantitative research from France and the US shows that in fact the number of hierarchical layers has changed only marginally or even increased (SESSI, 1998; Black & Lynch, 2001).

At the level of work organisation, decentralisation and the need for flexibility and innovative solutions have led to the spread of the project-based organisation. In certain industries (*e.g.* software consultancy and supply) the project has become the dominant form of work organisation (Kalkowski & Mickler, 2002; Pekruhl, 2001). A major characteristic of project work which is greatly appreciated by workers is the performance of multiple and changing tasks. But here too relative autonomy can increase pressure when project resources are cut down and workers are exposed to increasingly tight financial controls (Kratzer, 2003). According to Gerlmaier (2005: 93), stress levels tend to increase precisely because project teams enjoy a high degree of autonomy and of self-regulation, but the necessary resources are cut as a result of rationalisation processes and of pressures to reduce costs. 'It is largely left to the team members how they deal with the disparity between tasks and resources: increasing productivity by working together more effectively, working harder individually, or putting in unpaid overtime (the very definition of which tends to vanish in systems of trust-based working time)' (Haipeter *et al.*, 2002). In this situation forms of self-organisation like trust-based working hours can easily lead to what Voss-Dahm (2005: 136) calls 'self-organised extension of working time'. Decentralisation and autonomy, hence, can also be seen as preconditions for the intensification of work in the knowledge economy (Sauer, 2005).

At an individual level this can lead to a new social character that Voß and Pongratz described as *Arbeitskraftunternehmer* - 'entreplooyee' or entrepreneur of his/her own labour power (Voß, 1998; Pongratz & Voß, 2002 & 2003). According to these authors, this ideal type concept includes three main characteristics:

- *self-control*: intensified independent planning, control and monitoring of work by the person responsible;
- *self-commercialisation*: intensified active and practical 'production' and 'commercialisation' of one's own capacities and potential on the labour market as well as within companies;
- *self-rationalisation*: self-determined organisation of one's daily life and long-term plans, and the tendency to accept willingly the importance of the company (employer) as an integral part of life.

'Entreplooyees' are supposed to be particularly frequently found in knowledge-intensive sectors such as IT and multimedia. In their empirical research, the authors however found it difficult to find these types of workers outside such industries and occupations (Pongratz & Voß, 2004). While the authors themselves stress the positive role of increased autonomy and scope for subjectivity, critics have emphasised the risks which can be summarised in the slogan 'more pressure through more freedom' (Kratzer, 2003).

In Germany, several of the trends noted above are discussed under the umbrella term '*Entgrenzung von Arbeit*' which means 'delimitation' of work. In a nutshell, this means that growing flexibility and the subsequent erosion of traditional standards of work and employment result in a blurring of the boundaries between work and private life, which, at least for the male dominated industrial work force of the Fordist period, had seemed to be clear-cut. The delimitation process has several dimensions. Among them are company organisation, division of labour, work spaces, working time, employment contract and the relationship between individuals and their labour power (Eichmann *et al.*, 2005; Wolf & Mayer-Ahuja, 2002). The delimitation process is closely connected to the overall aim of improving organisational and individual flexibility. As such it is expected to place new demands on workers which contain opportunities as well as risks. In particular, the changing nature of the relationship between individuals and their labour power, which in the Taylorist version of work organisation resulted in a strict separation between intellectual and mental work and a suppression of the subjectivity of non-managerial labour, can imply meaningful improvements but also real dangers. While improvements are also discussed under the broader notion of 'subjectivisation of work' (Baethge, 1991), dangers are summarised in the rather new debates on the commercial utilisation of the 'whole person' including workers' physical, cognitive, psychic and emotional potentials, which for those affected make it difficult to draw a line between work and personal life (Kratzer & Sauer, 2003; Voß, 1998). Marshal and Torny (2003) confirm these trends by analysing the evolution of the contents of job postings that had been published in French newspapers between 1960 and 2000.

The tendencies of 'delimitation' and 'subjectification' imply a clear prevalence of indirect forms of management control. Research has shown however that in contrast to the notion of decentralisation and participatory management, top-down management decisions still dominate even in knowledge-intensive work settings (Abel & Ittermann, 2001). At the same time control is increased through the application of computer-supported project planning tools and monitoring instruments and the centralisation of project management functions (Kalkowski & Mickler, 2002; Mayer-Ahuja & Wolf, 2004; Wolff, 2005). This is complemented by efforts to formalise and codify skills and by a new emphasis on standardisation. Recent research in the new media sector has shown a growing division of labour, the introduction of new hierarchies and increasing bureaucratic control (Mayer-Ahuja & Wolf, 2005). Some authors therefore see the changes more critically as a move towards 'controlled autonomy' (Appay, 1993).

4.3.2 Knowledge management

The current emphasis in management strategies on codification of skills as well as formalisation and standardisation of procedures becomes visible in 'knowledge management'. In recent years a growing body of research has emerged from studies in computer science and organisational studies focusing on knowledge management systems within organisations and beyond. Some approaches to knowledge management prioritise structural models and IT systems whereas others focus on processes, communities of practice and dialogue (Heisig, 2001; Willke, 1998). The main problems knowledge management aims to solve, *i.e.* the generation, representation, storage, distribution and application of

knowledge, are of particular importance in network organisations and with distributed work. In particular, advanced databases are used to support co-operation over distance.

Research on a variety of forms of work indicates that neither higher levels of codification of knowledge and increased planning nor a more intensive use of technology can replace tacit forms of knowledge in the light of increasing complexity and critical work situations (Böhle & Meil, 2003; Meil & Heidling, 2003). Likewise, the more information is codified and stored in ICT, and retrievable from it, the more important tacit knowledge becomes in selecting, combining and applying knowledge. One major issue in this regard is the transfer of implicit knowledge, the question of its reliability or the establishment of favourable learning conditions (Büssing & Herbig, 2003). While the distinction between explicit and implicit forms of knowledge has been well established in research for many years, more recent work on the subject emphasises the social and relational dimension of knowledge and the role of communities of practice within organisations and beyond (Barley & Orr, 1997; Fuchs-Kittowski & Reuter, 2002; Katenkamp, 2003).

Aside from the move from explicit to tacit knowledge there is also a substantial shift 'from the technical to the social' (Thompson, 2004: 32). This is in line with the view of McKinlay (2005: 255), who argues that knowledge work requires the capacity to 'broker information by mobilising work and social networks'. This can be compared with the concept of social capital developed by Burt (1992). Therefore the interpersonal skills necessary to evaluate and regulate relationships with clients and colleagues are as important as - for instance for software developers - the possession of technical competences (Marschall, 2002). Several empirical papers underline the importance of communication skills in manufacturing companies that modernise. For example, in France, Greenan and Walkowiak (2006) show that workers using a computer communicate more intensively with their colleagues, their hierarchical superior, the outside and more frequently participate in meetings. Similar results are observed by Gant, Ichniowski and Shaw (2002) in the US. Moreover, Greenan and Walkowiak also observed that the transformation in the modes of communication are more pronounced for less skilled workers. It means that in companies that modernise the managers are no longer the node of communication; rather, non-hierarchical and decentralised networks of communication are developing. These empirical results confirm the intuition developed in theoretical models formalising the information system of the firm. These models show that information used by the firm becomes more decentralised, linked to partially tacit local knowledge (Carter, 1995), and that its processing takes place on a network basis relying on horizontal communication (Aoki, 1990; Bolton & Dewatripont, 1994). Certain theoretical models distinguish themselves however in describing an accentuation of hierarchical logic rather than 'decentralisation' (Otani, 1996), which may be corroborated by certain empirical observations.

This implies that the primary means of managerial control of knowledge work is the regulation of the employee's self rather than workflows or tasks. The socialisation of novice consultants - for example - 'is as much about assimilating and embodying the cultural norms of a firm as mastering techniques' (Grey, 1994). Normative controls involve the demonstration of commitment through long hours or a readiness to understand - or at least represent - work as a play (Grugulis, Dundon & Wilkinson, 2000). However, 'soft control', as McKinlay calls it, can be compromised and constrained by a variety of factors, such as shifts in management strategy or of organisational structure, particularly by the trading of expertise between different divisions that results in the marketisation of social relationships (Robertson & Swan, 1998).

4.4 Flexibility and the organisation of work

Flexibility is sometimes defined as the capacity of an organisation to adjust supply to varying demand. This can be achieved in various ways. However, two basic dimensions of adjustment processes can be identified:

- the *numerical-functional dimension*: adjustment processes are either numerical (quantitative) or functional (qualitative). In the first case the objective of adjustment is the size of labour input, that is the number of workers or working hours, whereas in the second case the adjustment process focuses on the skills and tasks of a constant labour force;
- the *external-internal dimension*: here the difference is whether adjustment is achieved by using external sources of labour power or by relying on existing permanent staff.

In Atkinson's and Meager's (1986) ideal type model of the flexible firm the authors assumed that there is a trade-off between functional and numerical flexibility. Functional flexibility in their view requires the development of a stable and highly-skilled core work force willing to persistently adapt and renew their qualifications, while the peripheral work force is made up of low-skilled workers with a low degree of employment security. While Atkinson and Meager argued that flexible firms pursue both numerical and functional flexibility and the existence of a relatively insecure peripheral work force to a certain degree is a precondition for the granting of relative employment stability to the core, the ensuing debates assumed that there are two basic ways to attain a higher degree of organisational flexibility: a low road based on numerical or quantitative flexibility and a high road aiming for functional or qualitative flexibility. High road strategies in this perspective are based on high commitment by management and workers, high investments in vocational education and further training and a long-term business perspective. Low road and high road strategies were subsequently condensed on a macro level and used to characterise different ways that countries cope with the alleged need for more flexibility in post-Fordist production systems. In this rather crude differentiation the US and to a lesser degree France usually figure as examples of the dominance of low road strategies, while Germany and Sweden are presented as models of high road flexibility (Streeck, 1987; Lipietz, 1997). While there were always strong doubts about the accuracy of this distinction the European Commission (1997) has also advocated high road 'win-win' solutions in their Green Paper on 'partnership for a new organisation of work'.

However, the emergence of IT-supported outsourcing and offshoring have raised new questions with respect to the internal high road equation. With growing possibilities to subcontract work, firms can not only apply numerical (quantitative) strategies to core workers, but use external workers for the adjustment of functional (qualitative) tasks. In other words, firms can not only use flexible working hour arrangements to adjust a permanent work force to varying demand, but can also use external experts to adjust skills and competences to changing needs.

Table 4.1 Types of flexibility

	Numerical	Functional
Internal	Part-time work, flexitime arrangements, annualised working hours, working time accounts	Multitasking, job enrichment, multitasking, team working, project organisation
External	Fixed-term contracts, freelance work, temporary agency work, temporary layoffs/seasonal work, irregular work	Subcontracting, outsourcing, freelance work

Source: Atkinson & Meager, 1986; Wickham, 2005; Monastiriotes, 2003; Goudswaard & de Nanteuil, 2000

Experience shows that companies use flexibility not only to adjust skills and labour input to changing demand. In addition, firms also apply these very forms of flexibility to cut labour costs. Savings stem from lower training costs and lower wages due to weaker union representation of external workers and, in the case of offshore outsourcing, weaker labour market regulations. Yet they also stem from savings on overtime supplements of core workers who work flexible working hours (Flecker, 2005c). Hence instead of protecting permanent staff the periphery can be seen as invading the core. What we have seen in the last two decades is a growth in flexible working hours, fixed-term contracts and temporary work, but also, a rise in the number of freelancers (at least in some countries) and of outsourced labour, whereas data on the diffusion of internal functional flexibility gives a mixed picture (*ibid.*).

External flexibility in particular threatens to undermine the 'bargain' inherent in the internal-functional flexibility of post-Fordist, high road or high performance work systems: commitment and functional flexibility in exchange for job security and upskilling. Indeed, it has been argued, that the companies' willingness to provide workers with employment security and to invest in continuous training depends on the existence of barriers to external flexibility. If they cannot resort to external flexibility, companies have no alternative than to improve flexibility by eliciting workers' trust and commitment. Despite higher investments in training, these firms are still believed to be competitive due to savings from lower turnover and from the exploitation of tacit skills (Streeck, 1991; Huselid, 1995; Regini, 2000; Appelbaum *et al.*, 2000; Michie & Sheehan, 2001; Kleinknecht, 1998). Yet this assumption may only hold for a minority of innovative firms investing in technologically advanced production. Empirical research indicates that those firms that invest in new technologies tend to keep their employees, whereas firms which introduce organisational innovations have higher staff turnover rates than those which stick to the existing organisation (Walkowiak, 2006). On the other hand Bauer and Bender (2004) have found that technical and organisational innovations primarily affect the number of unskilled and medium-skilled workers, while the number of highly-skilled workers has changed only marginally. Moreover, the possibility of offshore outsourcing tends to undermine existing barriers to external flexibility as these are primarily the result of national labour market regulations.

Fixed-term contracts are the most common form of external-numerical flexibility after temporary work. Employers' main motives for using temporary agency work include savings on future dismissal costs (Bergstrom, 2002), allowing for peak staffing, replacing

temporarily absent regular workers (vacation, maternity leave), inherent seasonality or the limited extent of the task (Houseman, 1997).

Employment protection legislation has a significant impact on the diffusion and character of external-numerical flexibility, as these rules determine the cost of hire and fire practices and the ability of companies to externalise the cost of flexibility to society (Lindbeck & Snower, 1998). In the last two decades there has been a tendency in most countries to ease employment protection legislation. It is noteworthy that the lowering of employment protection legislation that has been recorded does not concern the security of open-ended contracts in a direct way; rather, it reflects the easing of limitations on fixed-term and temporary agency work (OECD, 2004).

A special form of external-numerical flexibility is 'irregular flexibility' stemming from the employment of undeclared workers. This is particularly important in Southern Europe and in the New Member States, where the 'shadow labour force' accounts for between 12 and 32 *per cent* of the work force (CSD, 2003). An inflow of a wave of illegal immigrants in the beginning of the 1990s exacerbated a tendency already apparent in many Greek companies to adapt to competitive pressures by following the 'lowest-road' to restructuring: keeping Taylorist work organisation essentially intact while pursuing adaptability through an illegal form of external flexibility, undeclared labour (Vaiou & Chatzimichalis, 1997). While there is relatively little *de jure* flexibility in work organisation in Greece (Lymperaki & Mouriki, 1996), the ineffectiveness of labour law enforcement authorities, the state of the labour market, and the short-term orientation of business strategies have resulted in the development of *de facto* flexibility in staffing levels (external-numerical), in subcontracting (external-functional) as well as in working time (internal-numerical) (Linnardos-Rulmond, 2003; Lymperaki & Mouriki, 1996; Karantinos, Ketsetzoglou & Mouriki, 1997; Petraki, 1997; Kouzis, 2001).

It is generally believed that subcontracted work is performed mostly under degraded working conditions of insecurity and deskilling (be it in the form of call centres, of a network of supplier firms or pseudo-independent homeworkers); however, there are indications that this is an overgeneralisation. Subcontracted work may be performed by Taylorist sweatshops or, alternatively, by a network of internally flexible firms displaying increased capacity for innovation and job enrichment - according to national, sectoral, regional and even local social conditions (Piore & Sabel, 1982).

These opposing tendencies are borne out most poignantly in research on call centres. A modern form of outsourcing, they have provided companies with external-functional flexibility while their own work organisation operates as a hotbed of external-numerical flexibility (extremely irregular hours, temporary jobs, deskilled and dead-end work) within a Taylorist work organisation, carrying out closely monitored, routinised and scripted tasks (Wickham & Collins, 2004). Recent evidence suggests that call centres, which typically provide companies with external(-functional) flexibility, do not themselves rely exclusively on external flexibility and a Taylorist organisation of work after the early stages of their development (Kerst & Holtgrewe, 2001), but rather begin to seek internal flexibility for themselves. The same variability of types of work organisation is found with respect to teleworking (Bacon & Blyton, 2000; Holman *et al.*, 2003; Purcell, 2000; Huws, 2003).

All the decentralisation associated with subcontracting and networking notwithstanding, there is evidence that there are also counter-tendencies at play against an organisational convergence towards networking, leading to the consolidation and concentration of

activities in particular locations and metropolitan areas (Flecker, 2005a; Ramioul, Huws & Kirschenhofer, 2005; Thompson, 2003).

External flexibility both in its numerical and functional form received new importance and a new meaning with the development of global value chains (see Chapter 2). As already noted, offshoring undermines the effectiveness of national barriers to external flexibility. Companies can relocate production to countries with, from their perspective, favourable labour market conditions. Yet they may not only look for 'cheap' labour in foreign countries but also for specific knowledge and skills (Flecker & Kirschenhofer, 2002). In fact the rationale behind the establishment of a global value chain suggests that the different units of the same chain simultaneously exploit different and at first sight maybe even contradictory strategies to enhance overall flexibility. Consequently the existence of value chains puts into question the traditional distinction between core and periphery or between internal and external, which was developed for a single firm or independent business unit.

As Chris Benner (2002: 23) notes '[t]he [traditional core-periphery model] does not address the issue that much of the employment that is external to a firm may in fact be quite central or core to an industrial complex ... On the other side of the coin, many workers are full-time permanent 'core' employees of certain firms whose activities could be described as 'peripheral' to an industrial complex'. Benner's (*ibid.*: 24-36) suggests replacing the internal-external dimension and instead distinguishing between 'flexible work' and 'flexible employment'. Flexible work refers to changes in work content and flexible employment to changes in employment contracts. Benner assumes that flexible work arises as a result of the innovative character of work in the information economy, while flexible employment stems from increased competition and the pursuit of short-term profits. In this regard the emergence of global value chains can also have a notable impact as they may very well change the terms and the intensity of global competition. Another interesting point which Benner raises is his emphasis on intermediaries (*ibid.*: 83ff). Yet while Benner has focused on labour market intermediaries, the emergence of global value chains has created the need for a range of different categories of intermediaries only one of which organises the supply of skills and workers (see Chapter 2).

The relation between external flexibility and the organisation of work in subcontracted production thus needs to be assessed in the light of global value chains, *i.e.* taking the entire value chain rather than its individual parts (companies) as the 'competitive unit'; restructuring in any segment of the chain must be analysed within such a broader perspective (Sauer & Altmann, 1988; Porter, 1990; Gereffi & Korzeniewicz, 1994). The dynamics of the governance of global value chains, in particular of the emergent ones in the information economy (Kaplinski & Morris, 2001; Gereffi, Humphrey & Sturgeon, 2003), is of particular importance for work organisation and working conditions; however, given the co-existence of different logics of restructuring, one should guard against generalising and heralding one particular development, *e.g.* the network and the 'virtual team', as the main pattern of work and organisation in the knowledge society (Flecker, 2005a).

The growth of external flexibility (temporary work, outsourcing) has put pressure on a company's functionally flexible core workers to accept high degrees of numerical flexibility as well, especially on issues of working time (Cappelli & Neumark, 2001). In addition, companies seem to be able to access skills more effectively through external flexibility than through creating a permanent job (Wickham, 2005). This can be seen as a tendency

towards the 'marketisation' of the internal labour market and of the labour process (Ackroyd & Procter, 1998; Burchell, Lapido & Wilkinson, 2001).

4.5 Work organisation and the gender division of labour

There is a vast body of literature, both theoretical and empirical, stretching back over more than two decades, on gender and work and the ways in which patterns of segregation are reinforced or challenged. This includes studies which focus specifically on labour market restructuring (e.g. Rubery & Fagan, 1994; Crompton & Sanderson, 1990). Here, comparative research has analysed segregation of the labour markets, working time segregation and its relation to inequality across a range of EU and Accession States (e.g. Rubery, Smith & Fagan, 1999; Anxo & O'Reilly, 2000). A special focus has been on non-standard forms of employment supporting in many countries the integration of women in the labour market while failing to challenge segregation and limitations to economic independence (Instituto de la Mujer, 1998) and the gender impacts of flexibilisation strategies (e.g. Gunnarsson, 1994 & 2003; Huws, 1996). Other studies have focused on gender and technological change in the workplace (e.g. Vendramin & Valenduc, 2003; Cockburn, 1988; Webster, 1996; Game & Pringle, 1983) including gender and teleworking (Gunnarsson & Huws, 1997). There have also been comparative studies illustrating the different ways in which gender patterns are institutionally shaped across Europe (e.g. Gottschall & Bird, 2003; Lewis, 2002; Sainsbury, 1996; Lessenich & Ostner, 1998).

New forms of work organisation - according to one main thesis of gender research - potentially offer opportunities to challenge the gender relations embedded in traditional forms of work organisation, in particular in bureaucracies. The backdrop for this optimism is the assumption that the structures and values underlying bureaucratic work organisations negatively affect women's employment. Whereas early feminist organisational studies mostly focused on individual characteristics of women and/or organisational structures contributing to gender specific opportunity structures (cf. Kanter, 1977), the focus of more recent research has been on 'how gender is done' (e.g. Acker, 1993)¹⁵ and on gender-critical analyses of fundamental theoretical assumptions in organisational theory, such as power relations (e.g. Ragins & Sundstrom, 1989), hierarchy and bureaucracy (e.g. Savage & Witz, 1992), and organisational culture (e.g. Alvesson & Due Billing, 1992).

The new forms of work organisation may mark a departure from rigid hierarchies in the optimistic view because they value flexibility and at the same time no longer demand a lifelong commitment. Women can shape their working time and their careers to suit their own individual needs, including the demands of child care. The individualisation of

¹⁵ The influential concept of Joan Acker (1990, 1992, 1994) identifies four ways by which persistent structuring along gender lines is reproduced within organisations. These four ways are 'components of the same reality, although, for purposes of description, they can be seen as analytically distinct' (Acker, 1992: 252). They serve as different points of entry to the identification of gendered practices and processes, into the ongoing flow of actions and interactions. Acker's inventory of gendered processes distinguishes between (a) the production of gender divisions through 'ordinary' procedures and decisions; (b) the creation of symbols, images, and forms of consciousness that portray and give legitimacy to the divisions; (c) the multitude of interactions that occur between individuals, enacting dominance and subordination; and (d) the gendered social constructions of reality that form in the minds of individuals, for example, in terms of adequate performing in the organisation.

career paths is presented as a 'win-win' change. It provides employers with flexibility, while giving (female) employees a better chance to shape their own careers in their own interests (Alvesson, 1992; Walby, 1990; Witz, 1992). Furthermore, the critique of bureaucratic organisations assumes that in contemporary 'flexible' organisations the less strictly defined work roles favour more porous gender roles. Therefore individuals are not so tied to their expected positions and women can redefine themselves as equal to men in the world of work. In addition, the new forms of work organisations are associated 'with the feminisation of management qualities and a growth of managerialist occupations in which women are better represented' (Hebson & Grugulis, 2005: 218).

Yet empirical studies of organisational restructuring show that these potential opportunities have not come to fruition. 'Instead restructuring has contradictory implications for gender inequality in employment, often increasing the quantity of opportunities, rather than qualities' (Hebson & Grugulis, 2005: 218). The reduced hierarchies in new organisational forms, for example, may aid women's progression into managerial positions. Women's inroads into management and professional positions continue to improve the position of some women. But as Bradley's (1999) shows in her study of women and men in the North East of England women's transitions into management roles often coincide with a downgrading of these areas. Furthermore, Liff and Ward (2001) find that organisational restructuring may create greater uncertainty in the promotion prospects of women managers. An increased reliance on being part of the right networks in order to get promoted can further reduce opportunities, especially for members of social and ethnic groups which are underrepresented in the existing work force.

Greenan and Walkowiak (2006) show that in French manufacturing industry, women are excluded from work stations with innovative organisational characteristics. Indeed, they observe that women are less autonomous, have fewer management responsibilities, train new employees less often, work to quality standards less often, work less often in teams, have a less intensive job, communicate less frequently with close or distant colleagues whether inside or outside the firm, participate less often in meetings, and receive less information in writing than men. Liff and Ward's studies in retail banks showed that despite formal equality statements there continued to be a wide range of informal processes acting against women gaining access to senior management positions.

Hebson and Grugulis (2005) show that the increasing importance of 'soft skills' - usually defined as 'women's work' - does not lead to a re-evaluation of these skills. Similarly Belt (2002) argues that call centre employers are capitalising on women's 'feminine' social skills in interactive telephone service work. In this study, case studies of call centres in three countries found that these social skills were deemed as important in call centre work and women were therefore seen as suitable recruits. However, there was no evidence of these skills being highly valued. The female dominated area of customer service was lower paid than the more male dominated technical roles.

Concerning the opportunities and risks of flexible working time a lot of studies emphasise the importance of making the distinction between flexibility meaning individual freedom and flexibility meaning availability in relation to the employer (see for example, Gunnarsson & Huws, 1997). A comparison of workers in mobile care and freelance workers in the media and culture professions, for instance, shows that it is not flexible working hours *per se* that are problematic, but their combination with the lack of influence on the place and the length of working hours: one central problem for care workers is their lack of disposal over their working hours, although self-employed workers in the culture and

media professions have some more room for manoeuvre on this point (Henninger & Pa-pouschek, 2005). Other recent studies carried out in the areas of cultural and multimedia jobs (Betzelt & Gottschall, 2004; Krings, 2003) underline, however, that the job specifications of professional profiles demand - to an especially great extent - adaptation to the historical 'masculine model of gainful employment', *i.e.* the career is constructed on the basis of the individual life plan. The new ideal type worker thus seems to increasingly be the individualised subject without any care duties who lives to work and is available to the company around the clock.

Hebson and Grugulis (2005) summarise the following opportunities and risks of new organisational forms:

- new opportunities: influx of women managers, performance-related pay, flexible working time, customer service skills/cultures and men entering female dominated sectors;
- new risks: invisibility of male power, opening for discrimination, long hours culture, danger of stereotyping and downgrading of men's work rather than upgrading of women's.

It has become evident that these developments are far from unified and not without contradiction: Differences among women are mounting, risks are concentrated on low paid female segments of work and older women whereas for women in positions higher up in the hierarchy the picture is more contradictory. At the same time, however, the gender structure and bias of work, and with it gender inequality, has not eroded. Taking into consideration that 'unpaid labour' - or women's greater share of the domestic division of labour and the resulting 'double burden' - is a central factor in explaining the position of women in the labour market, it becomes clear that the analysis of the gender relations in new forms of work organisation needs a multiple tool analysis model. This model should allow on the one hand for a traditional structural analysis, making vertical, horizontal and time sex segregation visible both inside and outside the organisation, and on the other hand for other forms of analysis to capture the processes by which masculinities and femininities are adapted and reproduced.

4.6 Conclusions

The popular assumption of a transition from Taylorist to post-Taylorist work organisation has turned out to be only of limited value as a general research hypothesis. In view of the complex developments in today's workplaces such generalisations are not valid. Not only are clear counter-tendencies visible; it is also clear that change processes are much more complex. Furthermore, the majority of jobs today are in the service sector for which the terms and concepts that were developed for manufacturing work are often not directly applicable. In these sectors a number of jobs have never been organised in a 'Taylorist' way and, consequently, it is misleading to denote distance from this 'model' as a change. Finally, such an approach leads observers to overestimate the gains for workers because often any deviation from the Taylorist model is, at least implicitly, assumed to constitute and improvement in working conditions.

Recent debates clearly show that in order to be able to investigate current changes a comprehensive concept of work organisation is required. Such a concept should make it possible to analytically span the work-life boundary taking into account the erosion of boundaries between work and private life and the domestic division of labour. The concept should also include more actors than just management and labour, in particular in contexts of 'multiple employers' and in view of the often decisive role of customers. The research needs adequately to address the complexity and ambiguity of increased 'autonomy' in work which cannot simply be used as an indicator for improved working conditions. In this context, the impacts of corporate governance and market relations are crucial for understanding new forms of control and their outcomes. By the same token, the blurring of organisational boundaries through outsourcing and subcontracting makes it necessary to widen the analysis of work organisation by taking into account the relations between units and companies along the value chain.

The review of the literature showed us that the relative autonomy of workers, which is necessary in knowledge work because the result cannot be determined beforehand, should not lead us to assume that direct control by superiors and bureaucratic forms of control do not play a role. Rather, the question is how these are combined with indirect forms of control through target setting, with 'marketisation' and the influence of customers. It should also be considered how all this relates to workers' occupational aspirations and orientation towards professional standards. While control is certainly at the core of any research on work organisation it is too complex an issue to be explored comprehensively in the WORKS project. The main concern therefore should be with workloads and deadlines by asking how they are determined and what influence workers have.

In addition, the focus should be on changes brought about by the restructuring of value chains. One important research question following from the above then is whether increasing standardisation of tasks and workflows and strengthening of bureaucratic control can be seen as a result of outsourcing and the lengthening of value chains. This also relates to strategies of knowledge management that rely heavily on IT databases. The consequences for skill needs, skill formation and occupational identities need to be explored in relation to their meaning both for organisations and individuals. To adequately address the consequences for gender relations not only should the shift in skill needs be considered but also how different skills are valued and how horizontal and vertical sex segregation is being reproduced.

To include the employment relationship into the analysis of work organisation is crucial for investigating changing strategies for reaching flexibility. Questions about autonomy and control as well as skill formation need to be linked with the analysis of labour contracts as organisational variables. In this context, the analysis should not only describe changes in employment relationships but also shed light on the effects of outsourcing and other forms of external flexibility on the working conditions of the core work force, *e.g.* by increasing pressures for temporal flexibility and for reducing labour costs. Referring to the various institutional contexts we need to investigate the constraints companies face in their strategies to reach flexibility.

Finally, the empirical research needs to address the spatial and temporal dimensions of work organisation as well as how they change in the process of restructuring. Management control, forms of co-operation, acquisition of skills, sharing of knowledge, *etc.* do have obvious spatial aspects. The main question is how in the process of a lengthening of value chains the spatial dimension impacts on organisational choices and on their out-

comes in terms of performance and working conditions. Working hours and time use are at the core of quality of work issues. Thus it is necessary to explore how they are affected by value chain restructuring, *e.g.* through changing the temporal aspect of workflows and redistributing the burdens of flexibility. This not only relates to the different positions of units or companies in the value chain, but also to relations between occupational groups and between men and women.

5 Employment change, labour market restructuring and the supply of skills¹⁶

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5.1 Introduction

As discussed in Chapter 7 below, from the demand side perspective, the demand for skills on the labour market and its relationship with employment change can be studied from a range of different perspectives and with different objectives. It therefore lends itself as a topic to a wide variety of different approaches and coverage. This chapter reflects on some of these with respect to WORKS research issues.

The impact of ICTs on organisations with regard to skills is not a 'uniform' process. Rather, it varies depending on a range of factors such as the level of national economic development, the specific characteristics of national ICT sectors, the traditions of national technological development, the governance of the sector, *etc.* No less important is the structure of the national labour market and the ability of the national vocational education and training (VET) systems as well as continuing vocational training (CVT) practices to adapt to the changes in demand.¹⁷ Furthermore, the influence of institutions and the outcomes of collective bargaining arrangements at national, sectoral and company levels on the supply of skills are by no means uniform. In order to build up a comprehensive framework for research on this topic it is necessary to take this variety of influences into consideration.

5.2 The supply of labour is still embedded in national frameworks, but the effects of globalisation are increasing

The process of globalisation has an increasingly important impact on national institutions, through a range of different mechanisms, and this pressure will most probably increase in the future (WCSCG, ILO, 2004). The mechanisms by which the individual segments of the labour force are connected with developments outside national borders are:

1. global employment in multinational corporations and the cross-border networks linked to them;

¹⁶ This text was reworked, taking into account some deficits, outlined by our reviewers whom we would like to thank.

¹⁷ ICT could be examined also as powerful instrument for adapting national educational systems to changes in demand. Long-distance learning systems (such as open universities, *etc.*) could not operate without massive use of ICTs. Thus, it is clear that ICTs play an important role while opening new opportunities for learning within as well as outside the organisation. However this question will not be further developed in this text as it is not directly related to the questions addressed in the WORKS research.

2. the influence of international trade on employment and labour conditions in the North as well as in the South;
3. the impact of global competition, in addition to the new model of flexible management of labour in each individual country. This is extremely relevant in the context of the recomposition of global value chains, where there are strong arguments that work 'still is and will continue to be, in the foreseeable future, highly restricted by the institutions, cultures, borders, police and xenophobia' - especially in the countries where the organisations operate, despite the ability of capital to move freely within global financial networks (Castells, 1996 & 2000).

The public debate on the institutions of working life is often confined to simplistic arguments focusing on regulation *versus* deregulation. The emerging knowledge-based society requires a more sophisticated and fundamental debate on the institutional framework, which can shape this changing world of labour. Questions of 'regulation' represent a narrow subset of a broader set of issues and institutions, related to the efficiency of labour markets beyond (asymmetric) information, demand and discrimination in the labour market. According to Boyer (1990) and other representatives of the regulation theory, 'regulation' denotes a 'group of institutionalised rules', *i.e.* rules embedded in a structured institutional framework, whether at a local or national level, that determine the employment relationships prevailing in a given territory. In the absence of a system of regulation in this sense, the labour market and employment relations become or appear fragmented, arbitrarily linked to state institutions, and thus unresponsive or unpredictably responsive to local or state policies.

Various 'regulatory regimes' (Boyer, 1990) or 'modes of regulation' contribute to the shaping of a range of implementation models of flexible work arrangements in different countries. The options that are available depend on the country specific (labour) legislation, social security and tax systems. When examining the impact of national institutional frameworks on labour markets, we have to consider that the more deregulated the institutions are in a given national labour market, the more redundant are the non-standardised forms of employment.¹⁸

This debate could be complemented with the arguments raised by Bannink *et al.* (2005) about labour market policies from the perspective of Esping-Andersen's regime-concept: the pressures of the shift to a knowledge society affect these regimes differentially and regimes react differently to these pressures (*ibid.*). This debate directly affects the question of the relationship between institutions, organisations and skills. The text develops a series of valuable hypotheses concerning how central pressures of the knowledge-based society on the different regimes contribute to changing policy objectives and labour market policies. It addresses the question how institutions (within the different types of welfare regimes) favour employability and participation in various training practices, but it would be rather ambitious and complicated to try to translate these variables into fieldwork

¹⁸ According to Stavros Gavroglou (UPSPS) the flexibility debate in Greece echoes to a large extent the above hypothesis. Many believe that, despite the existence of many formal regulations, the latter are very inadequately enforced and illegal flexibility is extensive. This amounts to a situation where labour market institutions are *de facto* deregulated, which explains, along with the low wage costs, why the diffusion of *de jure* flexible forms of work in Greece is limited *qua* redundant (Kouzis, 2005).

questions. Nevertheless, this discussion should be considered while building the methodology and interpreting the WORKS fieldwork results.

Probably it could be fruitful to add to the debate about formal welfare regimes the problematic of informality and how it can impact the supply and demand for skills.¹⁹ The practices of the informal economy (in the European context, more typical for Central and Eastern Europe and for Southern Europe) create a series of challenges for labour market regulation in large regions of Europe.²⁰

Generally, informal employment is understood around the world as an activity involving skills at the lower end of the skills spectrum, but many professionals and workers with formal labour market jobs in post-socialist countries are also working informally, moonlighting in their own professions or working as street vendors, *etc.*

Thus, there is a need to reflect on informal employment practices, regarding both low-skilled and high-skilled occupations. This problematic is extremely large,²¹ but with regard to skills and qualifications it raises the question of how the upgrading of 'skills and qualifications' may be undermined by informal practices in the sectors and occupational groups under study?²²

Examining the questions of formal and informal regulation, we can also argue that labour supply is still mainly embedded in the national context, and hence that problems concerning the supply of skills must also be put in the context of national institutions and arrangements.

¹⁹ Most workers across the world are informally employed and their households generate low income, which keeps most of them below the poverty line. Their numbers are growing under the influence of globalisation: the mobility of capital, the restructuring of production of goods and services and the deregulation of labour markets is pushing an increasing number of workers into informal employment (WIEGO, 2001, www.wiego.org).

²⁰ According to Giovanna Altieri, Cristina Oteri and Marcello Pedaci (IRES) 'in order to examine the phenomenon, it is important to highlight the conditions behind its diffusion. Firstly, in terms of labour demand: the quest for greater labour force flexibility, the attempt to cut labour costs, corporate decentralisation and relocation policies, market fragmentation and fluctuation. On the labour supply side, employment difficulties and the reduction in forms of social protection (namely reduced public welfare coverage) discourage workers from wanting to regulate their position. However, these general conditions do not automatically lead to the diffusion of the underground economy. A crucial role is played by the institutional context which can impede or aggravate the problem, for example public control structures must guarantee compliance with statutory laws but if they do not function properly the informal labour supply is higher. According to some authors, the regulation level of businesses (in terms of taxation, administrative regulation, *etc.*) is also important. Lastly, studies on the matter all agree on the importance of fiduciary relations. Without a high level of trust, transactions in the underground would be impossible as there are no legal contracts whereby public institutions can be summoned in case of violation.' A large literature on this phenomenon has also been developed in the other South European countries.

²¹ WIEGO has studied the amount and contribution of informal employment to the economy, the informal employment of women, the legal and regulatory frameworks affecting the informally employed; access to productive resources (technology, inputs, credit) and markets; sources of skills, training; working conditions; social protection coverage and organising efforts among the informally employed (WIEGO, 2001, www.wiego.org).

²² For example we may discuss whether the phenomenon of informal employment practices, in particular in subcontracting in ICT, is a temporary one in Central and Eastern Europe. Or may we expect that some developments in the region could be a 'test' for further use in the 'old EU countries'?

5.3 National educational systems and the supply of skills on the labour market

5.3.1 Introduction

The transition to knowledge societies confronts countries with the challenge of raising their educational standards and adapting them to the demands of ICT development and of deepening the interdependence between economies. The importance of knowledge as a serious precondition of economic progress has led governments to take a greater interest in the formation of a highly-skilled work force. From a demand side perspective (discussed in greater depth in Chapter 7) there is a variety of evidence that labour markets in the context of the knowledge-based economy show increasing demands for computing, communication, problem-solving and entrepreneurial skills. Technology is spurring the emergence of more flexible forms of work organisation, and calling for continuous upgrading of skills to keep pace with the speed of the transformation to a knowledge society. These economic and social changes have wide-ranging consequences, which draw attention to the necessity of rethinking national educational systems. In particular, the equilibrium between educational supply and labour market demand is increasingly difficult to achieve, especially in a situation of skill-biased technological change and the impact of ICT on skill formation.

International organisations, such as the UN, ILO, UNESCO,²³ the World Bank (World Bank, 2003), *etc.*, have produced a large number of analyses, examining the development, adaptation and upgrading of national institutions in order to meet these challenges. The analyses of these organisations are often used as a basis for the elaboration of platforms, programs, *etc.* which primarily discuss the advantages of the knowledge economy. But, as discussed in Chapter 7, ICTs have differentiated impact on skills in organisations. So we need to be very careful when commenting on the rhetoric of international organisations.²⁴

In the context of the spread of this new economy, the WORKS project needs to reflect on the changing role of education and the knowledge, skills and values that are required not only on the labour market, but also on the concrete level of the workplace within the organisation. In other words, this implies a need to find out from the actors within the enterprise (and its associated networks) their views on how institutions could meet the challenges of supplying the skills that are relevant to their workplaces.

5.3.2 National specifics of the relationship between educational systems and labour markets

On the supply side of the labour market, the increase of educational attainment strongly influences labour market participation in the developed countries.²⁵ Actually, the level of

²³ This vision of 'education for all', developed by UNESCO (2003) anchors education into a local, national and global context. Even more, it recognises that one learning model does not fit all, and underscores the importance of alternative paths to schooling.

²⁴ For this point we thank Georgia Petraki (UPSPS) for her comments.

²⁵ Employment rates rise with educational attainment in most OECD countries. With very few exceptions, the employment rate for graduates of tertiary education is markedly higher than the rate for upper secondary graduates (OECD, 2005).

educational attainment is in direct relation with the formation of educational and occupational expectations. However the latter could be strongly impacted by national educational systems (Buchmann, 2005).²⁶ Thus, while examining the relations between education and labour markets, it is also worth taking into consideration the national (or regional) differences concerning the significance of the socio-economic statuses, social capital, networking, *etc.* Furthermore, this consideration might suggest that the national institutional arrangements could be impacting individuals' choices (individual educational expectations) at different periods of life with regard to the different levels of schooling (educational participation) and further training. The importance of national institutional arrangements should not be neglected in spite of the conclusion that in every OECD country 'educational expectancy measured in these terms has risen since 1995, as participation has risen in pre-primary, upper secondary and tertiary education' (OECD, 2005).

Yet, with respect to the WORKS project, it could be relevant to consider how these national institutional arrangements provide the skills and qualification profiles (level of diplomas for given job positions, certification, provided by initial or further training institutions, *etc.*), demanded by the companies.

5.3.3 Education and skill formation: how to reach labour market equilibrium?

If we follow the assumption, that education and training policies are not fully in compliance with labour market needs (Matsumoto, 2004), we can draw some theoretical conjectures to be considered by WORKS.²⁷

The movement of labour into new jobs depends to a great extent on the quality of the skills of those who are moving²⁸ or who are entering the labour market for the first time. A considerable number of empirical studies analyse mismatches between workers education and educational requirements for jobs. In many of these papers (*e.g.* Alba-Ramírez, 1993; Battu *et al.*, 1999) overeducation is understood as a form of job/qualification mismatch, and sometimes the terms 'overeducation' and 'overqualification' are used interchangeably. The main focus of this literature is on the effect of overeducation on the returns for schooling (*e.g.* Duncan & Hoffman, 1981; Rumberger, 1987; Verdugo & Verdugo, 1989; Groot, 1996; Sloane *et al.*, 1999; Bauer, 2002). One common finding of these studies is that overeducated workers face a wage penalty compared with equally educated individuals because they cannot productively use all of their educational qualifications. This common 'standard deviation' definition of overeducation implies that an overeducated worker can only escape overeducation by either changing occupation or leaving employment altogether. With regard to job match, however, it is perfectly conceivable that an individual match can improve (or worsen) the situation when the worker moves to another job within the same group of occupations or by an adjustment of the requirements for the present job (Dorn & Sousa-Poza, 2005). According to job search and job matching theories,

²⁶ (Even more, there could be found a tendency, where 'in countries with less-stratified educational systems, the great majority of students expect to achieve white-collar high-status occupations. But in countries with highly-stratified educational systems, students' occupational expectations are distributed more evenly throughout the occupational hierarchy and fewer students expect to attain white-collar, high-status occupations'.)

²⁷ An example is the serious shortage of IT skills, discussed in the previous chapter.

²⁸ For example as a result of downsizing of traditional industries, transfer of activities, *etc.*

overqualification is a transitory problem for the individual worker that results from informational deficits. This problem ceases to exist once access to better information about the labour market allows the worker to move to a job with a better match (*ibid.*). Other theories, however, argue that 'even if overqualification exists, this is a result of a new emphasis on flexible employment and therefore increased labour market uncertainty: people start careers at a level below the traditional start, and so are initially overqualified. In this case overqualification is only a temporary, life-course phenomenon' (Brynin, 2002). The phenomena of overqualification and overeducation raise the questions, important from the point of view of organisational policies and changes at the workplace: how much skill is required to do a given job? What 'degree of fit' (between individual skills and job description) is necessary before someone with a particular educational credential is considered as part of the labour supply for a given occupation?

Another question is to what extent growing flexibility and insecurity affect the choices of individuals with respect to their labour market trajectories, their qualification process, their 'employability moves', *etc.* It might be possible that growing insecurity reinforces overqualification because the insecurity limits labour market moves by individuals. It might also be, on the other hand, that growing flexibility affects learning opportunities on the job and in the company (see Chapter 7) and reinforces a quicker outflow of overqualified employees.²⁹

It can be concluded that the national education and training policies in the context of technological change and recomposition of global value chains could impact positively or negatively the equilibrium on the labour market. In the context of less developed societies, these policies are considered by international organisations as a powerful set of tools' that could prevent further polarisation and exclusion. However, such rhetoric should not be taken for granted and needs further clarification and verification, for instance in the field research in New Member States and Accession Countries. Another question is, how these national educational policies objectives are addressed by educational systems (general, VET, *etc.*) in practice.

Apprenticeship training - the linkage between education and work

CVT practices do not only vary between countries, but can also be very different from the traditional school and apprenticeship training systems within a given country. Apprenticeship training traditions also differ not only with respect to national specificities but also across different industries and services. However, what is common for all apprenticeship schemes is that they might provide a link between skills acquired during the initial education and skills and qualifications required for a particular workplace. More precisely, through apprenticeship practices the mismatches between the education supply and employers' demands for certain skills can be removed or at least diminished (Steedman, Wagner & Foreman, 2003).

The importance of training through apprenticeship practices can be clearly seen within the ICT sectors, where continuous training and lifelong learning seem to be absolutely crucial. For skilled ICT employees, further training is an important and often contested issue. Those, who have not acquired up to date skills with respect to the newest software,

²⁹ Thanks to Monique Ramioul (HIVA-K.U.Leuven) for this point.

for example, might risk losing their jobs. Thus, on the one hand, the issue of continuous training and involvement in apprenticeship practices seems to be a subject of individual choice and motivation. However, on the other hand, the provision of such training also depends on the companies' willingness to allocate more expenditure for financing CVT. For example, the new possibilities to externalise training costs by using the skills of workers in other locations and parts of the world (the process of outsourcing), can make firms less willing to cover the costs of continuous training at the workplace.³⁰

Thus, in the context of the WORKS project, it could be useful to inquire into the spread of apprenticeship practices within the investigated cases. Important questions here might be:

- What is the duration of the apprenticeship?
- What kinds of apprenticeship practices (paid, non-paid, *etc.*) are used?
- Is the apprenticeship sufficient for overcoming the (eventual) mismatch between the educational qualification and the job description at the particular workplace?
- What is the potential chance of the apprentice, after completing the training, receiving a contract and 'regular' job within the company?

5.3.4 Removing the distinction between knowledge and skills?

Apprenticeship practices have a strong impact on companies' recruitment practices as well as on their methods for evaluating and examining workplace performance. This tendency is highly visible within the ICT sectors, where the assessment methods have been updated along with the introduction of the demand for skills and the apprenticeship schemes. Whereas the 'old' examination regulations made a distinction between knowledge (certified by vocational colleges) and skills (subjected to the practical skills required by a company), the demands for a 'new' assessment system are quite different. The new system includes:

1. the development of practical examinations with a strong relevance to real-life practices;
2. the measurement of proficiency in action in written as well as oral examinations;
3. the removal of the distinction between knowledge and skills by means of integrated examinations (Steedman, Wagner & Foreman, 2003).

This rapid development of new tasks and functions within organisations, as well as the consequent urgent requirement for employees with the necessary skills causes problems for recruitment and training within companies. Steedman, Wagner and Foreman (2003) suggest that in order to overcome that distinction, the so-called skill deployment strategy, the employment of high levels of non-graduates might appear. However, this trend is not typical across all economic sectors. Even if it has traditionally been typical for the manufacturing or retail sectors it is not so widespread within the ICT sector.

³⁰ For this paragraph we wish to express our gratitude to Christoph Hermann (FORBA) for suggesting this important idea and thus contributing substantially to the final revision of this chapter.

This research assumption should therefore not be taken for granted but subjected to further verification in the context of the WORKS projects. A possible approach to this task might be to pose the questions:

- To what extent could companies be adopting flexible practices in order to meet the challenges of the changing technological and competitive environment?
- To what extent do flexible recruitment strategies of non-graduates demand more or less on-the-job training?³¹
- What is the balance between on-the-job and off-the-job training within a particular company?

5.3.5 Further training

As already noted, with the increasing spread of ICTs and along with the growing demand for skilled labour, a constant need for updating of skills appears. VET³² systems (especially the initial vocational education) in the European countries generally depend mainly on public authorities (although the role of the social partners, private institutions and other actors could be important in many cases). While VET cannot respond to the continuing and changing demand for skills upgrading, part of the response could be sought in further training. In achieving the targets of the Lisbon Declaration of the EU, the advancement and effectiveness of CVT provided by enterprises is regarded as the main means to ensure continuous development and adaptation of skills and competences to the requirements of a competitive knowledge-based economy. However, this consideration needs a certain operational focus in order to avoid useless rhetoric and theoretical generalisation.

Thus, from the WORKS perspective, it might be profitable to inquire into the rate of 'participating enterprises' - that is those which offer CVT to their employees. The participation rate might be differentiated according to the impact of the size of the enterprises, the international dimension of the activities involved (whether or not they are included in global value chains), the economic sector, the existence or not of an operational CVT provision plan, *etc.* In addition what might be also considered as highly important is the rate of employees' access to CVT taking into account the differentiating effects of age, gender, the level of initial qualifications, *etc.* Eurostat data (Surveys of CVT in Europe, 1999 & 2002) draw attention to major national differences related to CVT practices. A more thorough examination reveals that 'looking beyond this European average, there are huge differences between countries, with a greater emphasis on training in northern Europe (and in the Scandinavian countries in particular) and wide discrepancies between the different forms of employment' (European Foundation, 2005: 25). Differences include the amount of expenditure,³³ the duration of training, the content of training, *etc.* Thus, it seems that

³¹ Following the example in the research paper of Steedman, Wagner and Foreman (2003).

³² See the WORKS glossary for an explanation of the concepts of VET, IVT and CVT.

³³ European enterprises invested between 0.5 *per cent* and 3.0 *per cent* of labour costs in CVT courses, as the higher are the investments of the large enterprises (Nestler & Kailis, 2002). Differences concern also size of companies even if everywhere in Europe large companies spend more on training. In addition, while examining the composition of global value chains, it will be important to consider the different training cost levels for the employees in smaller companies - on the lower end of the value chain - who probably struggle more to cover these costs in comparison to those from the 'upper' end of the value chain. Thanks to Christoph Hermann (FORBA) for this point.

different European countries' institutions manage in a different way the challenges of the new economy with respect to skills formation and supply.³⁴ In this perspective it will be interesting to inquire how companies cope within the above-mentioned institutional arrangements with respect to various socio-professional groups and employment statuses (but also gender, age, *etc.*).

5.3.6 Who takes responsibility?

There is a major debate about CVT with regard to the question of responsibility. In other words, the question of who is responsible for this training - the employer, the employee or the state. This question calls for new interpretations in the context of the world of ICT.

For skilled ICT workers, further training is an important and often contested issue. Employees who are not up to date with respect to the latest software (from Microsoft, Cisco and other market leaders) risk losing their jobs. On the other hand, the new possibilities to externalise training costs by using the skills of workers in other locations and parts of the world, can make firms less willing to cover the costs of continuous education. As these costs are significant, the question of who pays for further training is becoming more and more important. In some cases the entitlement to continuous training has become a collective bargaining issue. For ICT workers it can be more important that their employer provides them with the possibilities and funds to update their skills than to have a higher pay cheque. But especially freelancers and ICT workers in smaller companies at the lower end of the value chain struggle to cover the necessary costs. In sum, the question of how the fragmentation and recomposition of value chains impacts on the financing and provision of vocational education is not only important with respect to initial training but also to continuing and lifelong training. In France, for example, there is a national fund for the financing of further education. In addition, it could be interesting to see to what degree the provision of continuing training itself becomes part of international value chains (*e.g.* training certificates provided by Microsoft or Cisco).³⁵

5.3.7 The impact of lifelong learning on the CVT: how to reach employability?

The debate about the responsibility for CVT is related to a broader debate concerning the responsibility of the individual for his own 'employability'. In this perspective, learning and adaptation to the changes in skill demand is an ongoing lifelong process. Even if the individual incentives for lifelong learning can be promoted in various ways - by the employers, through the institutional arrangement and even by collective bargaining (Abrahamsson, 2001), the idea is related to the responsibility of the individual.

Lifelong learning is not only a matter of choice, but a matter of flexibility as well. Thus, what gains importance in the age of rapid demand for skills is the provision of flexible life patterns both by the institutions in general and by the organisations, in particular. The latter are of even higher importance to the extent that they ensure the transition from

³⁴ These differences are also impacted by different legal regulations, concerning spending on CVT (obligations in some countries), clauses for some groups - for example measures to give also the fixed-term workers or temporary agency contract holders' access to training and of course collective bargaining outcomes, *etc.*

³⁵ We thank Christoph Hermann (FORBA) for this paragraph.

school to work and remove the distinction between knowledge and skills through various CVT practices: apprenticeships, on-the-job training, off-the-job training, *etc.*

However, the growing necessity for lifelong learning can be attributed largely to the way that it increases the employability of the employee and supports security at the workplace and beyond. This security ensures career possibilities within and beyond the borders of organisations.

Thus, from the perspective of the workplace, a question that might be worth asking is: 'To what extent are employees willing to take responsibility for their own careers and occupational training and to what extent do they rely primarily on the employer's ability or willingness to provide them?'

The concept of employability is interpreted in a number of different ways and no clear conceptual model can be identified. As Forrier and Sels (2003) point out, there seem to be as many measurements as there are researchers into the topic. Nevertheless, these authors have made valuable attempts to clarify the debate about employability, while proposing an interesting framework for empirical research on employability. Their conceptual model could be useful for the WORKS project research agenda, because the concept of employability is regarded in close relation to the changes at the workplace during a period of rapid change in skill demand.

As the authors claim, lifetime employment within one and the same organisation is no longer a driving prerogative. Thus, the problem of job security has to be safeguarded differently. To be clearer, the concept of 'lifetime employability' is now put forward instead of 'lifetime employment' as the new mechanism for protection in the labour market (Forrier & Sels, 2003: 2).

With respect to this, the consideration that employability is becoming an alternative to job security raises an important question - namely, what skills (or abilities) are required for keeping the job? Here, what should be taken into account is that employability is not a static characteristic of a person (or of an employee) but has a specific time-related and place-related dimension (within the internal or external labour market). Thus, when trying to measure the quality of skills for achieving employability, the whole transition from school to work should be taken into account.

One conclusion that could be drawn here is that insofar as far as employability is a combination of various components and is constantly subject to change, it is difficult to measure and research. However, it will be useful to investigate the hypothesis that CVT has a high potential to the extent that it provides opportunities for constant updating of the workers' skills.

What is also important to consider in this context is the possibility that those employees who are carrying out the same job for years may lessen their chances of improving their labour market status, especially when have had no (or only limited) chances for participation in CVT courses.

With respect to the WORKS project, and within the debate on changes at the workplace, some important questions arise:

- Do different occupational groups have different capacities for employability - depending on the duration of unemployment period (where relevant), the duration of the employment period, the type of contract (*e.g.* temporary *versus* permanent), the wage, the hierarchical position, *etc.*?

- What ‘movement capital’ (Forrier & Sels, 2003) (knowledge, skills and expertise) is most important in order to reach a high level of employability?
- What is the ‘training history’ (activities that persons have undertaken, the length of the training and the content of the training, *etc.*) of the employee?
- What is the contribution of the firm to the employability (and training history more precisely) of the employees in the frame of restructured global value chains.³⁶

5.4 Social dialogue on training and institutional impact

Social dialogue is one of the distinctive features of the European Social Model. From this perspective it is interesting to investigate whether the social dialogue, and more precisely, collective bargaining,³⁷ has an impact on the policies aimed at skill development and if so what this impact is. The development of skills and competences is examined as a distinctive feature of the European Union idea about the quality of work and employment (European Foundation, 2002) and one of the important objectives in the context of recent political documents (Lisbon Strategy). But does it mean that existing legislative regulations and collective bargaining outcomes, where existing, could really impact the training policies of companies? How could this impact be differentiated according to different work forces (*e.g.* permanent workers *versus* non-permanent workers,³⁸ high-skilled *versus* low-skilled)?

The focus here should be on investigating the impact of the new institutional measures adopted at the initiative of the social partners and implemented in the practices of companies operating in global value chains.

If during the 1980s the question of skills and qualification was not a central one in the European social dialogue, since the end of that decade its importance has increased.³⁹ In the early 1990s, public employment policies also began to give increasing importance to lifelong learning as a key factor in maintaining the employability of workers and promoting company competitiveness and this with the participation of social partners. In the late 1990s, lifelong learning increasingly became a priority area in policymaking due to its importance for social and economic development as well as for social cohesion and active citizenship in the knowledge economy.

³⁶ We thank Monique Ramioul (HIVA-K.U.Leuven) for this question.

³⁷ The collective bargaining structures and processes in the EU countries differ greatly. Collective bargaining takes place at different levels: at national, intersectoral, sectoral, regional or company levels. The collective bargaining directly in the areas of: modernising work organisation; lifelong learning in the context of competence and skill development in enterprises; ‘active aging’; strengthening equal opportunities for men and women (*e.g.* tackling the gender pay gap, desegregating the labour market, reconciling work and family/private life, *etc.*); social integration by means of better access to the labour market for groups and individuals at risk or at a disadvantage, such as: people from ethnic minorities, migrant workers, long-term unemployed people, and those with disabilities (The 2002 Employment Guidelines, Official Journal of the European Communities, 1.03.2002).

³⁸ Even if the move towards more fixed-term contracts in Europe is general (from 8.9 *per cent* to 15.1 *per cent* between 1994 and 2000) the variations per country give different importance to the question of training of those populations.

³⁹ ‘Continuing vocational training, until the late 1980s, was a relatively minor issue in collective bargaining in most EU countries. In the late 1980s, it began to take an increasing importance in the strategies of the social partners and in collective bargaining, due primarily to the transformation in management approaches’ (European Industrial Relations Observatory, 2002).

Within the intersectoral European level social dialogue, training has been a major issue for discussion between the social partners. The Union of Industrial and Employers' Confederations of Europe (UNICE), the European Centre of Enterprises with Public Participation and of Enterprises of General Economic Interest (CEEP) and the European Trade Union Confederation (ETUC) have reached a number of joint opinions promoting the role of the social partners in the development of continuing training in the Member States (see Industrial Relations in Europe annual reports).

Learning and training have also become key issues in the sectoral social dialogue at European and at national level (numerous examples could be given from developments in recent years).⁴⁰

In the frame of restructuring of global value chains the training issue is a crucial aspect of collective bargaining. The way governments, economies and firms can cope with the impact of globalisation and relocation on regional labour markets depend strongly on how the issues of re-training, qualification and reorientation are dealt with in the existing industrial relations systems, and this at all levels, national, sectoral, firm.⁴¹ This means that it is crucial to investigate changes of dialogue practices at the company level in the context of recomposition of global value chains. We consider that even if a number of agreements at European level exist, and the questions of CVT are the subject of negotiation in many sectors at national level, the impact of the outcomes of the bargaining are still limited in many countries. But it is interesting to see how the bargaining could stimulate training practices aimed at different occupational and socio-professional groups (vulnerable groups, ageing workers, women, youth, minorities, *etc.*), especially in the context of restructuring. Even if the principle of non-discrimination of employees under fixed-term contracts, and the rule that employers should facilitate access to appropriate training opportunities, are laid down in the different types of social partners' framework agreements,⁴² recent evidence at the company level (ULB, Esteban) suggests that the actual impact is insignificant. But perhaps where high-skilled workers are involved the situation may be different.

5.5 Research questions for WORKS

Based on this literature review, we can now formulate some possible research hypotheses and questions for the next steps of the WORKS project:

1. national institutions still play a decisive role in the process of skill supply, even if different globalisation mechanisms place increasing pressure on them. In this context the

⁴⁰ See examples of the work of the European social partners from the chemical industry, ECEG and EMCEF, which in their bi-annual program 2005-2006 set questions related to education/training/lifelong learning as their primary objective. They intended to draft an analysis of the status quo regarding skills, qualifications, vocational (further) training and lifelong learning within the industry and to facilitate an exchange of information and good practice of the different national systems of education, vocational (further) training and lifelong learning in order to support the further development in these areas. This orientation gave impulse to different initiatives at national level - for example social partners in France adopted an agreement related to CVT. In different sectors the question of further training seems to become one of the priorities for social partners, even if the outcomes of this dialogue largely differ.

⁴¹ We thank Monique Ramioul (HIVA-K.U.Leuven) for this remark.

⁴² For a more detailed presentation on the 'modes' of legal regulations regarding training for non-permanent workers in several EU member states, see European Foundation (2005).

understanding of the development of formal welfare regimes is not sufficient to explain workplace practices. Informality creates a series of challenges for labour market regulation in large regions of Europe which has to be taken into account in the envisaged research on work restructuring;

2. the changing role of education and the knowledge, skills and values that are required on the labour market should be examined at the level of actual practice in the workplace in the organisation. In any case, education and training policies could rarely be fully in compliance with labour market needs. In the context of the labour market equilibrium debate we may ask about the phenomena of 'overeducation'/'overqualification' from the point of view of the 'degree of fit' between individual skills and job descriptions as well as to what extent growing flexibility and insecurity affect the choices of individuals with respect to their labour market trajectories, their qualification processes, their 'employability moves', *etc.*;
3. in the context of training and skill formation, apprenticeship schemes might serve as a form of linkage between skills acquired during the initial education and skills and qualification required for a particular workplace. More precisely, through apprenticeship practices the mismatches between the education supply and employers' demands for certain skills can be removed or at least diminished. From this perspective it is interesting to ask what is the duration of the apprenticeship, what kinds (paid, non-paid, *etc.*) of apprenticeship practices are used, whether the apprenticeship is sufficient for overcoming the (eventual) mismatch between the educational qualification and the job description at the particular workplace and what is the potential for the apprentice, after completing the training, to receive a contract and 'regular' work within the company;
4. the debate on how to remove the distinction between knowledge and skills is important with respect to the rapid development of new tasks and functions within organisations, as well as the consequent urgent requirement for employees with the necessary skills which causes problems for recruitment and training within companies. From this perspective we may ask to what extent companies could be flexible in order to meet the challenges of the changing technological and competitive environment, to what extent flexible recruitment strategies of non-graduates provide more or less on-the-job training, and what is the balance between on-the-job and off-the-job training within a particular company;
5. examining the further training problematics, it is interesting to investigate to what extent employees are willing to take responsibility for their own careers and occupational training and to what extent they rely primarily on the employer's ability or willingness to provide them. In this respect several questions could be raised. Do the different occupational groups have different capacities for employability - depending on the duration of unemployment periods (where relevant), the duration of the employment period, the type of contract (*e.g.* temporary *versus* permanent), the wage, the hierarchical position, *etc.*? What 'movement capital' (knowledge, skills and expertise) is most important in order to reach a high level of employability? What is the 'training history' (activities that persons have undertaken, the length of the training and the content of the training, *etc.*) of the employee? What has been the contribution of the firm to the employability (and training history more precisely) of the employees in the frame of restructured global value chains?;

6. in Europe, some further aspects of training are gradually becoming an important subject in the social dialogue. From the perspective of social dialogue development it is interesting to investigate whether the collective bargaining, has a given impact on the policies aimed at skill development. Furthermore, it is important to investigate the impact of the new institutional measures adopted at the initiative of the social partners and implemented in the practices of companies operating in global value chains. In the frame of restructuring of global value chains, the training issue is a crucial aspect of collective bargaining. So it is vital to investigate changes of dialogue practices at the company level in the context of recomposition of global value chains. The question here is how the bargaining could stimulate training initiatives aimed at different occupational and socio-professional groups.

6 The use of knowledge and communication

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6.1 Introduction

There already exists a long debate about the transformation of knowledge into technical and standardised working procedures. From the 1960s on, this debate was focused on the production sector, where integrated manufactured systems brought major changes to social, organisational and professional routines (Corbett, Rasmussen & Rauner, 1991; Emery & Trist, 1960; Kern & Schumann, 1984). During the 1990s this discussion was revitalised and has generated new approaches to the study of the development of work organisation.⁴³

The technical performance of modern information and communication technologies (ICTs) has significantly changed not only the organisational structure of work but also individual work profiles. In this transformation process, the use of knowledge and communication has acquired great significance especially in relation to the acquisition and mobilisation of knowledge.

The intention of this chapter is to show that the influence of knowledge on new forms of work organisation can be described as a mutual relationship. It is not only the case that the content and structure of knowledge change the organisational patterns of working activities; conversely, different changes in work organisation also have a strong influence on the increasing importance of knowledge within the production processes as well as on the social and cultural expectations of different individual and collective actors in working situations. The mutual dependencies of knowledge and work organisation can be examined from several different points of view, *e.g.* 'What role does knowledge play in an economy characterised by ever-accelerating change? How do organisational structures make use of knowledge and how can they integrate new knowledge? Which organisational structures are conducive to innovation? What are the consequences for the use of skills and communication within these different processes?'

Coming from the concept of the information society (Mattelart, 2001; Webster, 1995) the rise of 'intellectual technology' (Bell, 1973) as the main feature of new developments becomes the analytical starting point. Of course the technical dimension represents only one element in the whole process of creating social 'expert systems' (Giddens, 1990). But the combination of new forms of communication networks, distributed artificial intelligence and agent-oriented systems (Latour, 1996; Malsch, 1998) points towards new perspectives. In the literature these perspectives are described as 'network organisations' (Castells, 1996; Powell, 1996), which are oriented both towards a 'connected' dimension and an in-

⁴³ Bettina-Johanna Krings (ITAS-FZK) would like to acknowledge Martin Bechmann (ITAS-FZK) and also António Moniz (FFCT-UNL). Both offered me an important support in discussing and rethinking the influence of knowledge within new forms of work organisations.

creasing 'global' dimension. Castells, as the most prominent representative of the network society approach, focuses on the following features that constitute the heart of the information technology paradigm:

'The first characteristic is that information is its raw material: these are technologies to act on information, not just information to act on technology, as was the case in previous technological revolutions. The second feature refers to the pervasiveness of effects of new technologies. Because information is an integral part of all human activities, all processes of our individual and collective existence are directly shaped by the new technological medium. The third characteristic refers to the networking logic of any system or set of relationship using these new information technologies. The morphology of the network seems to be well adapted to increasing complexity of interaction and to unpredictable patterns of development arising from the creative power of such interaction. [...] Fourthly, related to networking but a clearly distinct feature, the information technology paradigm is based on flexibility. Not only are processes reversible, but organisations and institutions can be modified and even fundamentally altered, by rearranging their components. [...] A fifth characteristic of this technological revolution is the growing convergence of specific technologies into a highly integrated system, within which old, separate technological trajectories became literally indistinguishable. [...] But even this differentiation is blurred by the growing integration of business firms in strategic alliances and co-operative projects, as well as by the inscription of software programs into chip hardware.' (Castells, 1996: 61ff).

Castells's description of the technological paradigm makes a significant contribution to the characterisation of the new organisational pattern of modern organisations. In this view, the social hierarchies and the limitations of markets are decreasing whereas at the same time decentralisation, integrated systems, flexible social structures and knowledge-based work gain in importance. The transformation of implicit to explicit knowledge becomes a visible aspect, which takes place between occupational groups within companies. The strong market orientation in the production sector as well as in the service sector stimulates the development learning and innovative organisations in order to meet the new challenges (Nonaka & Takeuchi, 1995; Rammert, 1999). By describing the institutional systematisation of these transformation processes, some authors extend this approach towards a theory of intelligent organisations (Willke, 1998 & 2001).

In order to look at the impact on the opportunities for the acquisition, mobilisation and utilisation of knowledge, we make a distinction in this chapter between the organisational level and the individual level. As the literature shows, the semantic use of the term 'knowledge' is widespread but without a common agreement on its implications, interfaces and empirical issues. The weak and open distinction between the two levels in this chapter therefore reflects the methodological problems within the literature (as well as the need to distinguish between different disciplinary approaches). In the remainder of this chapter, the use of knowledge at the organisational level is discussed with reference to the concept of 'knowledge management', whereas the use of knowledge at the individual level is described by the term 'social capital', which is strongly linked to individual learning processes and the co-ordination of communication structures. Both knowledge management and social capital are terms with long traditions in the different scientific debates. Because of the questions it addresses, this chapter focuses on the thematic aspects of the new quality of knowledge in the working processes as well as on new communication structures.

6.2 Knowledge management

6.2.1 Knowledge management in organisations

'To make your organisation perform, you'll have to build systems that support knowledge - not data' (Manville & Foote, 1996: 1). Although within the management literature the difference between 'information' and 'knowledge' very often seems obvious and clear, there is still a lack a clear epistemological distinction between 'information', 'data' and 'knowledge'.

One of the classical distinctions, which became central for the debate on knowledge management, is the differentiation between implicit and explicit knowledge made by Michael Polanyi (1958). According to Polanyi, implicit knowledge refers to the knowledge a person has which has to do with his or her personal experiences, his or her biography and other learning processes in the sense of individual 'know-how'. Typically the person does not reflect on this specific knowledge. A child cannot explain how to ride a bike; 'we know more than we know how to say' (Polanyi, 1958: 12).

By contrast, explicit knowledge is formal and documented knowledge, an individual knowledge, which is markedly conscious and functional. The transformation from implicit to explicit knowledge can be extremely cumbersome for many people. Many are incapable of making their implicit knowledge explicit and this is described as a specific problem for knowledge management in modern organisations.⁴⁴ In particular, Nonaka has dedicated his concerns to the development of a model of 'organisational knowledge creation' (Nonaka, 1994). His central idea is that knowledge-based organisations have to support the transformation of individual implicit knowledge to explicit knowledge. These learning methods should be intensive communication processes like 'rounds of meaningful dialogues' or the use of metaphors, which may give individuals an insight into their implicit knowledge (Nonaka, 1994).

On the basis of a broad classification of knowledge types, Nonaka (Nonaka & Takeuchi, 1995) created a model of knowledge conversion. This type of knowledge generation and conversion is made up of the following stages:

1. socialisation covers the process through which the individual tacit or implicit knowledge is transferred into collective tacit knowledge (or, using the terminology of Collins, from embodied knowledge to embedded knowledge). This involves less expressed or coded forms of knowledge sharing, rather practical examples, common experiences and physical proximity;
2. externalisation refers to the process whereby this collective tacit or implicit knowledge is transformed into collective explicit knowledge (from embedded to encoded knowledge). This phase is essential to make the tacit knowledge owned by a community accessible to everybody. However, this process always results in a loss;
3. combination: this stage of knowledge conversion generates individual explicit knowledge from collective explicit knowledge (from encoded to embrained knowledge).

⁴⁴ According to Huws (2003) this issue is sometimes linked with the concept of 'intellectual property' in the context of precarious employment. Workers may be quite capable of making their implicit or tacit knowledge explicit but may choose not to do so in order to avoid passing their intellectual property to the employer and thus making themselves dispensable.

During this phase the already explicitly expressed components of (collective) knowledge are systematically transformed into a new combination, thus producing a new form of knowledge;

4. internalisation is the final stage of knowledge creation, when individual explicit knowledge is transformed into individual tacit knowledge. This needs personal interaction, practice-oriented situations (where the new knowledge is applied) and a high level of involvement.

In relation to the question how to identify empirically the interactions between explicit and implicit (tacit) knowledge, it would be advisable to identify the relative importance of 'learning by interacting', 'learning by practicing' and 'learning by doing' practices in the various business functions, organisations and occupations in comparison with the formal training (education). The later forms of the knowledge creation aim mainly to share and develop explicit knowledge. Even the smooth transfer of explicit knowledge requires it to be combined with the transfer of implicit knowledge (Makó & Nemes, 2003).⁴⁵

This little excursion demonstrates the complexity of creating organisational learning. According to Willke, organisational learning or institutional knowledge can be identified by the personal-independent, anonymous systems of rules of every single organisation. This includes the firm's traditions, the specific organisational culture, the operating procedures that are currently in use, guidelines, descriptions of work processes, specific data banks, and codified knowledge of the production process as well as of projects (Willke, 2001: 16). Thus, every firm creates its own 'community of practice' or its own collective context of experiences, which can be recognised on the basis of individual learning processes. The exchange of information can only succeed if this transformation process is embedded in the ambitious context of mutual learning.

The importance of the 'community of practice' has been intensively discussed using a variety of economic approaches. This new field has developed around two different traditions. The first of these was largely inspired by the seminal works of Simon (1958 & 1972) in which firms and knowledge are represented in terms of abstract information processing. The second, the implicit knowledge tradition (Polanyi, 1967), is more empirical and emphasises the situated nature of knowledge (Nonaka & Takeuchi, 1995). The originality of Nelson and Winter's analysis (1982), which is one of the major works in knowledge economics, has been to connect these two different traditions by introducing the notion of 'organisational routines' (in their 'evolutionary theory of the firm'). This link is possible because these authors follow several levels of explanation. While their analysis gives a representation of changes that can affect a firm, an industry, or even the whole economy, they also aim for a good understanding of how the members of an organisation develop and co-ordinate their skills. In order to characterise routines, the authors emphasise the implicit dimension of knowledge. But, when they discuss the way routines are used in processes of change, the implicit dimension of knowledge can be ignored, and routines can be conceptualised by reference to Simon's notion of search routines. The

⁴⁵ Special thanks to Carla Dahl-Jørgensen and Hans Torvatn (SINTEF) for their fruitful comments. They also asked for concrete empirical findings related to the implicit and explicit knowledge. As the theoretical description shows, the relationship between explicit and implicit knowledge can be considered as somehow very individual and special for every enterprise. The empirical analysis of the (more effective) organisation of implicit and explicit knowledge will be one of the challenging tasks of WORKS, therefore this chapter focuses mostly on the scientific debate in order to formulate some interesting hypotheses.

authors can then give a representation of the changes in a particular industry in terms of technological trajectories that exist within a selection environment. Thus the works of these economists model the core of the firm as a set of communities of practice. They try to reconcile the knowledge-based theory of the firm and the transaction cost approach in order to formulate a dual theory of the firm. David (2001) points out the consequences for the firm, particularly in terms of 'trade secrets', having members who also belong to technological networks ('double agents').⁴⁶

As the management literature shows significantly, there remains a theoretical lack of a model for the closed relationship between personal and organisational knowledge.⁴⁷ Only when the role of the organisation as 'collective minds' gains the same attention as the role of the individual mind can the idea of an 'intelligent organisation' be fulfilled (Willke, 1998 & 2001). In the sociological debate there is an agreement that the reaction in a dynamic market situation should be the development of 'learning organisations', but generally the discussion of new organisational concepts mainly emphasises the empowerment of employees. These demands - well known within the 'lean management' concept (Womack, Jones & Roos, 1990) - focus on the creation of new models of professional performance like creativity, responsibility, social skills, networking, *etc.* The 'improvement of the human resources' (Sauer & Döhl, 1997) is often described as a sort of learning process, which should be considered as an appropriate reaction to ongoing market changes.

During the 1990s, in particular, the introduction of the 'lean' concept provoked an intensive discussion about the success and failure of market-oriented decentralisation (extreme outsourcing, loss of know-how, internal conflicts, barriers to motivation, *etc.*). Experiences in many sectors and branches show that the empirical evidence of a relationship between organisational support and individual work achievement has still to be demonstrated (Boyer & Durand, 1997). It seems clear that not only from the perspective of the employees but also from the perspective of firms, the open-ended situation of the capitalistic market still continues to produce economic pressure. For this reason the development of integrated or 'intelligent' organisations, and the long-term maintenance of knowledge within firms have become important topics in the public and scientific debates (see Chapter 4).

6.2.2 Changing use of knowledge

Roughly, it may be said that the transition from Fordism to new production principles finds its counterpart in the transition from traditional services to those based on the mastery of abstract knowledge via software systems and communication networks (Boyer & Durand, 1997).

Although there is a lack of empirical work that analyses the transition processes in different cultures, from a technical perspective these processes can be described as the computerisation of society. The process 'through which domains of human activity became substantially dependent upon electronic programmable devices for rapidly storing and

⁴⁶ Many thanks to Christian Bessy (CEE), whose additions of the economic approach have been integrated into the paper. He also mentioned the distributed cognition approach, which seems very interesting for the further discussion of the project.

⁴⁷ This aspect is also emphasised in Chapter 4, which pays special attention to the risks in overestimating the codification of knowledge in work processes.

manipulating data in order to extract information' (Hakken, 1990: 11) still continues and is expanding into different societal fields. Whereas twenty or thirty years ago this transformation process was studied in 'classical' sectors like metal engineering, automotive or electronic industry, nowadays the technological penetration reaches even the health care sector, the transport system and other societal fields with a high human resource proportion. In this process, knowledge becomes - in addition to the classical factors of capital and labour - an increasingly central factor in the value chain.

In the literature, the distinction between 'information' and 'knowledge' is remarkable insofar as it presents 'knowledge' as that which is necessary to produce valid and useful material and to be able to interpret this material. While 'information' tells the current or past status of some parts of the production system, 'knowledge allows the making of predictions, causal associations, or prescriptive decisions about what to do' (Bohn, 1995: 62; Stehr, 1994). Therefore it is important to understand knowledge itself, as well as the production of knowledge, as an active process. In this sense knowledge is not just the content of a database or a mass of information, but it involves the ability to interpret data (Miles & Robins, 1992).

Another important aspect is considered by Nico Stehr. According to Stehr, the production of knowledge mainly implies the reproduction of knowledge: the ability to gain an overview of particular situations in order to take decisions quickly becomes more important than the deep understanding of coherence (Stehr, 1994). Thus knowledge management means the ability to create decision-making processes as a quick response to market demands.

Especially in the management literature, the importance of knowledge in working processes has shifted from the notion of a formal qualification to a highly individual aspect. Whereas in the past knowledge was treated as a technical indicator for professional skills, in recent years it has increasingly become a 'soft' indicator, which has a subjective, dynamic and process-oriented bias. The utilisation of the flexible, subjective and innovative knowledge of employees has been described as a 'paradigm change' in the production process (North, 1999). Therefore the operational aspect of knowledge remains very difficult to transmit.

These changes are therefore also reflected at the operational level. Knowledge-based management is defined as an integrated concept, which implies a need for psychological, organisational and technical indicators in order to develop effective workflow as well as to guarantee the ongoing innovation process. This organisational approach differs from other approaches mainly in its individual aspects. As a result, the organisational level is increasingly connected with individual and personal attributes like communication skills, social competences and the capacity to resolve problems at different levels. 'Knowledge' within working processes can thus be described both as content and as a procedure. Both are related and have major impacts on the structure of work (Degele, 2000).

Through speed-up processes, the emphasis of knowledge may move from content to processes with less content, but the application of knowledge becomes more dynamic, flexible and recursive. Knowledge is less produced than moderated and the competence for moderation and social co-operation becomes a centrally important qualification. As the whole management literature points out, moderation and organisation of knowledge are the basic activities needed in order to be efficient with knowledge. The result can be 'knowledge at work' (Palshaugen, 2004).

In summary, we can conclude that the knowledge management has been discussed as a strategic indicator for the development of micro- and macro-economic development. At the organisational level, knowledge management can be embedded into a lean management model as well as into new re-engineering concepts (Nippa & Picot, 1995; Osterloh & Frost, 1996).

6.3 The organisation of communication

The precondition for the network organisation is communication. As described above, support for a transformation to a post-Fordist production model is based on:

1. technological communication systems;
2. organisation of communication structures.

6.3.1 Technological communication systems

One of the central advantages of modern ICTs is that they bridge both time and space, which traditionally have been key barriers to information and knowledge exchange. ICTs enable rapid communication across geographical space and organisational boundaries. It is no longer necessary to combine all competences and resources in the same place. Because of the networked character of these technologies, people from all over the world with different expertise can work together to resolve specific problems (Fulk & De Santis, 1995).

This ability to overcome geographical limitations together with the rapidity of transmission can be seen as the major ways in which modern ICTs can facilitate further acceleration of the innovation process. The communication and storage capacity of network technologies enables the creation of innovation as well as the production of knowledge. In this respect, it seems very important that modern ICTs support the exchange of both codified and tacit knowledge. The codification of knowledge on the one hand reduces transaction costs and on the other hand makes it possible to establish information bases and electronic networks for enterprises.

Modern ICTs are the first global technology with the potential for international codification and transferability of intercultural communication. 'Knowledge is from this perspective a non-rival good. It can be shared by many people without diminishing in any way the amount available to one of them' (Soete, 1999: 16). The egalitarian as well as the democratic aspect of ICTs are emphasised especially by Castells, who predicts an improvement in participative culture not only in the highly industrialised societies but also in the countries of the developing world (Castells, 1996). As the digital divide debate shows, however, the egalitarian and participative aspects of communication structures do not depend only on technical access to ICT (Katz & Aspden, 1998; Martin, 2003), but to a considerable degree also on social, cultural and political factors. Without taking this important issue into account, the new possibilities of worldwide communication, the models of networking and the creation of new social and cultural perspectives through ICTs cannot be considered seriously.

At the firm level, ICTs contribute to the creation of new knowledge which can accelerate different learning and innovation processes. They radically transform both intra- and inter-firm communication which is of particular importance in the daily operation of in-

tensively co-operating company networks. ICTs can also radically transform communication between firms and their clients. The possibility of direct communication with clients (who are becoming one of the most important sources of knowledge) opens up new paths to company level learning.

As well as technical access to modern ICTs, specific skills and routines are needed to use the technologies, which are also strongly connected with the capability to generate non-formalised communication. From this perspective, the emphasis is on their potential to reinforce human interaction and interactive learning and ways that companies can support and mobilise tacit knowledge (Ernst & Lundvall, 1997).

6.3.2 Organisation of communication structure

In the literature there is agreement that ICTs are becoming critical ingredients of work processes, because they largely determine innovation capability and provide the infrastructure for flexibility and adaptability throughout the management of the production process. According to Castells, four dimensions are important in order to improve the creation of value or the production of knowledge within firms.⁴⁸ 'The first dimension refers to the actual tasks performed in a given work process. The second dimension concerns the relationship between a given organisation and its environment, including other organisations. The third dimension considers the relationship between managers and employees in a given organisation or network. I call the first dimension value-making, the second dimension relation-making, and the third dimension decision-making' (Castells, 1996: 243).

Faced with the increasing complexity at all organisational levels, the importance of communication for bridging the gap between individual knowledge and organisations is clear.

Lam (2000) brings together the types of knowledge and organisations, creating a matrix that distinguishes between four models of organisational learning⁴⁹ (shown in Table 6.1).

Table 6.1 Types of knowledge and co-ordination of knowledge

		Knowledge agent (autonomy and control)	
		Individual	Organisation
Standardisation of knowledge and work	High	Professional bureaucracy	Machine bureaucracy
	Low	Operating adhocracy	J-form organisation

Source: Lam, 2000: 494

⁴⁸ Chapter 7 deals extensively with the increasing skill requirements associated with the expansion of ICT. There the additional 'supportive' role of ICT, the speeding-up processes of innovation cycles and the knowledge-intensive character have demanded more adaptability, learning competences and flexibility from workers of all educational levels.

⁴⁹ Christian Bessy (CEE) has drawn attention to the outstanding role of Lam (2000) in this discussion. Indeed, with regard to knowledge creation and storage in firms her works are directly derived from that perspective. By focusing on learning processes she analyses how the members of different organisations develop and co-ordinate their skills and what role the institutional context plays in these cognitive processes.

The assumption here is that the Fordist production model is based on professional bureaucracy and mechanical bureaucracy.

1. *professional bureaucracy and embrained knowledge* represents a form of organisation whose capability derives from the formal 'embrained' knowledge of its highly educated professionals/experts. 'Although the professional bureaucracy accords a high degree of autonomy to individual professionals, its structure is primarily 'bureaucratic': co-ordination is achieved by design and by standards that pre-determine what is to be done' (Mintzberg, 1979: 351). The source of standardisation originates outside the organisation. External educational institutions and professional bodies play an important role in defining the standards and boundaries of the knowledge in use (Lam, 2000: 494);
2. *machine bureaucracy and encoded knowledge* relies basically on explicit or formalised ('encoded') knowledge. The key organisational principle in this type of organisation is the well known triad of scientific management: specialisation, standardisation and control. The core aims of this type of bureaucracy are stability and efficiency. This model of organisation resembles the Weberien 'ideal type of the bureaucracy'. 'The knowledge agents of the machine bureaucracy are not the individuals directly engaged in operations but the formal managerial hierarchy responsible for formulating the written rules, procedures and performance standards. There is a clear dichotomy between the 'application' and 'generation of knowledge' ... Knowledge within a machine bureaucracy is highly fragmented and only becomes integrated at the top level of the hierarchy ... and the structure is designed to deal with routine problems, but unable to cope with novelty or change' (Lam, 2000: 495-496).

Post-Fordist production models can be achieved through the development of operating ad-hocracies or 'J-form' organisations:

3. *operating adhocracy and embodied knowledge*: this shape of organisation represents little standardisation of either labour process or knowledge and is often called organic organisation. It requires mobilisation of both formal and practical-tacit knowledge from its members. The latter types of knowledge are generated through learning by doing and learning by interacting. This way of organising activities and knowledge is characteristic of such activities as software development, new media studies, knowledge-intensive business service firms, etc. 'The individual's performance is assessed in terms of market outcomes: the ultimate judges of their expertise are their clients, and not the professional bodies' (Starbuck, 1992). This way there is a strong incentive to engage in 'extended occupational learning and the accumulation of tacit skills beyond the pursuit of formal knowledge ... Operating adhocracies are fluid and fast moving organisations and the speed of learning and unlearning is critical for their survival in a complex and dynamic environment ... is the most innovative and yet it is the least stable form of organisation' (Lam, 2000: 497);
4. *'J-form' organisation and embedded knowledge*: this form of organisation represents an ideal setting for 'cumulative innovation'. In this type of business organisation, the strength of the firm derives from the knowledge accumulated in the expertise of the working team, the operating routines of employees and their shared norms and values (organisational culture). The designation 'J-form' or 'J-firm' refers to the 'Japanese type organisation' (Aoki, 1988; Nonaka & Takeuchi, 1995). As Lam (2000: 497) writes: 'Co-ordination is achieved via horizontal co-ordination and mutual adjustment. This is

reinforced by shared values embedded in the organisational culture ... 'hypertext organisation' (Nonaka & Takeuchi, 1995), an analogy borrowed from computer science to illustrate the dynamic interaction between different layers of the organisation and the freedom of its members to switch among different context, ... facilitates the interaction between tacit and explicit knowledge, and that this ultimately determines the capability of the organisation to create new knowledge.' In spite of the capacity of J-form organisations to generate new knowledge, this form of organisation is well suited to the creation of cumulative innovation (as opposed to radical innovation).

From a systemic perspective these models can be useful for describing the relationship between knowledge and organisations. Especially for the analytical distance and empirical interrelation between cultural modes of production and modes of economic development these models seem to root distinctions in a theoretical basis. However, these models have less potential for guiding empirical and theoretical research projects focused on the analysis of new social structures in the working context. In order to gain more information about change processes in working structures we need a theoretical perspective rooted in the approach that societies are organised around human processes structured by historically determined relationships of production, experience and power (Castells, 1996). Such processes have mostly been analysed at the individual level of the working structures.

Some hypotheses that may be relevant for the WORKS project

1. Coming from the tradition of the industrial society, the characterisation of knowledge-based societies is grounded on new production patterns taking place within global value chains. The (technical) possibility of the digitisation and codification of all types of products as well as the decentralisation of working processes has led to a new concept of knowledge. This knowledge relies on specific technological and cognitive conditions, which are strongly connected with a reorganisation of working structures.
2. The knowledge-based concepts mainly rely on acquaintance with, elaboration, distribution and moderation of immaterial data, databases and information. The computer can be considered as the symbolic tool for these activities. This means that specific competence needs are required (formal qualification, social skills, networking capabilities, etc.).
3. The distinction between knowledge management and social capital has been influenced strongly by the idea of knowledge as a 'new organisational concept'. One hypothesis is that the knowledge-based concept as a management concept focuses mainly on the individual level. This means that the continuous improvement of individual skills (social skills, increasing qualification, flexibility, etc.) should be adapted to market demands. The role of 'learning organisations' as the counterpart of this process remains somewhat unclear and open.
4. Networking, decentralisation, internal and external flexibility and new career trajectories can be considered as reactions to new market demands. Therefore 'knowledge management' as an organisational concept has become an important issue in the restructuring processes of work. These changes have created new social and political insecurities.

6.4 Tools of communication and co-ordination: networks, social capital and communities of practice⁵⁰

The analysis of various types of knowledge and learning processes, especially collective or organisational forms of knowledge development and transfer, together with the speed up of the global value chain (Huws, 2006: 10-11) draw attention to the central role of networking and co-ordination/communication. Since the 1970s, an abundant literature has emerged in the social sciences focusing on various characteristics of networking. In analysing this large literature, this section aims to make a typology of networking in order to arrive at a better understanding of communication and co-ordination mechanisms of knowledge and the related learning processes in the new forms of work organisation. In addition, we make a distinction between the forms and mechanisms of communication and co-ordination.

Differences in technologies, organisational design, cultures or the expectations of social actors may produce communication problems even in cases where firms are interested in co-operating with each other. However, solving the communication problems in organisations in the context of a rapid restructuring of global value chains using leading edge communications technologies cannot overcome the problems related to the appropriate co-ordination mechanisms in the knowledge/learning economy. Whilst communication represents the cognitive form of regulation, co-ordination-based regulation is related to incentive alignment in order to solve co-operation problems within and between organisations (or networks).

Table 6.2 Forms of network: a stylised classification

Dimension	Dichotomy	
Time*	Early phase of networking	Matured phase of networking
Intensity**	Weak ties	Strong ties
Symbolic consistency*	Community centred	Performance-orientated

* Lesser, 2000; ** Granovetter, 1982

Table 6.2 summarises a stylised classification of forms of network. In this diagram, the time dimension indicates the importance of the life cycle of network formation. In the early period of network formation, weak ties serve as important sources for the creation of new networks and for generating enough information for the selection of partners for future co-operation (information benefit), while in a later period strong ties - with trust-based relationships resulting from long common work experiences - serve as a basis for longstanding co-operation (solidarity benefit). Previous research experiences draw our attention to the advantages of weak ties in collecting as much information as possible and through this in developing as large a network as possible. This type of network formation is a source of learning and innovation for new 'start-up' firms. At this stage they are mainly looking for the 'information benefit' of networking and knowledge sharing in-

⁵⁰ We would like to acknowledge the contributions made to this literature review by Emőke Palócz and Katalin Melles who are both involved in the work of the Hungarian National Research team (ISB).

stead of solidarity based ‘partnerships’. Depending on the momentary importance of the given benefit, they will choose one or another network configuration. At a later stage, future aims assume a greater role. In this case, the primary aim is to develop a close network on the basis of repeated exchange relations among the partners, and consequently, this type of network formation can be described as trust-based solidarity. This approach illustrates well the importance of the links between social capital formation, knowledge creation and sharing in the life cycle of a network.

In relation to symbolic consistency, it is necessary to make distinction between community-based *versus* performance-based network formation. The community-based network and its role in creating co-operation among otherwise individually competing economic actors is based on close and strong ties, the development of which is a time consuming process (Sabel, 1993; Makó & Simonyi, 1992; Makó & Kuczi, 1997). The performance-based network has gained crucial importance with the development of knowledge/learning economy. This phenomenon is well illustrated by the examples of Silicon Valley, Route 128, *etc.* The following quotation illustrates well the genesis of performance-orientated network formation: ‘The main networks of social capital in Silicon Valley are not dense network of civic engagement, but focused interactions among (...) the great universities, US government policies, venture capital firms, law firms, business networks, stock options, and the labour market’ (Lesser, 2000: 12).

Networks provide important channels for communication and co-ordination and, as we argued earlier, the formation of a given network depends on the time during which the constituting actors co-operate, the primary aim of the network formation, the symbolic consistency of the network, *etc.* In order to manage different types of network efficiently, it is necessary that the actors participating in the network create, maintain and develop some kind of social capital. There is a plethora of definitions of social capital in the social sciences. From among them the most convenient for the purpose of analysing both the process of knowledge and network creation seems to be that of Adler and Kwon (2000: 93) who say that ‘social capital is a resource for individual and collective actors created by the configuration and content of the network of their more or less durable social relations’.

The notion ‘capital’ may be misleading, therefore it is worth drawing attention to the similarities and differences of social capital in comparison with other forms of capital. The similarities can be summarised in the following way:

1. ‘social capital is a resource into which other resources are put with the expectation of future, albeit uncertain, returns;
2. social capital is ‘appropriable’ (Coleman, 1988) and ‘convertible’ (Bourdieu, 1985);
3. like physical capital and human capital but unlike financial capital, social capital needs maintenance. Social bonds have to be periodically renewed and reconfirmed, or else they lose efficacy;
4. ‘like human capital but unlike physical capital, social capital does not have a predictable rate of depreciation, and that is for two reasons. First, while it may depreciate with non-use, as suggested in the previous paragraph, it does not depreciate with use. Like human capital and some forms of public goods such as knowledge, it normally grow and develops with use: trust demonstrated today will be reciprocated and amplified tomorrow. Second, while social capital is sometimes rendered obsolete by contextual change (see Sandefur & Laumann, 1998, for examples), the rate at which this happens is most typically unpredictable, so that even

conservative accounting principles cannot estimate a depreciation rate' (Adler & Kwon, 2000: 93-94).

Although Adler and Kwon argue that there are similarities between social capital and other forms of capital, important differences can also be identified:

1. 'social capital of aggregate actors is a collective good, in that it is not the property of those who benefit from it' (Coleman, 1988);
2. 'unlike all other forms of capital, social capital is located not in the actors but in their relations with other actors' (Adler & Kwon, 2000: 94).

Concerning social capital, two dimensions seem important: first 'structural preconditions' (*i.e.* stressing that social capital or collectively shared knowledge are embedded in the structure of network relations), 'interpersonal dynamics' (*i.e.* network creation through product and service provision) and a 'common language and subculture'. Second, it is necessary to draw attention both to the positive and negative aspects of the role played by social capital in the practice of different business functions. Unfortunately, in the mainstream literature on social capital, authors only stress the beneficiary impacts of this kind of capital and do not analyse the possible risks that may arise from using it. With regard to this, our own empirical research results broadly support the results of Adler and Kwon which are summarised in Table 6.3.

Table 6.3 The benefits and risks of social capital

	Benefits	Risks
For the focal actors	<ul style="list-style-type: none"> * Information access * Power * Solidarity 	<ul style="list-style-type: none"> * Costs of creating and maintaining relationship * Trade-off between power benefits and information benefits * Overembedding due to excessive external ties * Excessive claims * Restriction of freedom * Lower creativity and innovation * Downward levelling of norms
Externalities for the broader aggregate	<ul style="list-style-type: none"> * Information diffusion * Task accomplishment adds to social welfare * Civic community/organisation citizenship behaviour 	<ul style="list-style-type: none"> * Excessive brokering * Negative externalities of successful task accomplishment for broader aggregate * Fragmentation of broader whole due to excessive identification with focal group * Collusion by focal actors against broader aggregate interests * Restricted access by outsiders to focal groups' knowledge and resources

Source: Adler & Kwon, 2000: 104

The other driver of social capital creation is the speedup of networking, that is new forms of work organisation increasingly have an interorganisational character (due to several factors we have no space to develop, such as increasing competition, the growing impor-

tance of innovation activities, *etc.*). In this respect we have to draw attention to the important resources existing outside an organisation which are necessary for it to produce its end products or provide its services. Organising resource utilisation in this way (*e.g.* through constant exchange and sharing of information) becomes ever more crucial, as does the ability of producers or service providers for building social capital across these networks of actors. Thus, social capital and collective knowledge are embedded in the structure of relationships, in the interpersonal dynamics within these relationships and in the context of network formation.⁵¹ In what follows we focus on these three dimensions.

Some authors draw attention to the limited interpretative value of such dichotomies as 'weak *versus* strong' ties in networking, and suggest that a multidimensional approach should be used instead. In social capital creation, we have to distinguish the following dimensions:

1. structural preconditions;
2. interpersonal dynamics within the relationships;
3. common context and understanding.

It is widely accepted in the recent literature on knowledge and social capital that the development of communities of practice is a key structural precondition for social capital creation. We often speak about the need to bring such informal groups of employees into the organisation who do not only share knowledge and experiences but are also related to each other by shared motivation and interests. The 'community of practice' - which represents a structural aspect of social capital formation as well as a new form of work organisation - is an important enabler of building social capital (Lesser, 2000: 13-14). It can help to develop social capital in the following way:

1. the community serves as an intra-network clearinghouse by identifying those with relevant knowledge and helping individuals within the community make connections with one other. This is particularly valuable as the organisation grows and goes virtual and individuals find it increasingly difficult to know who knows what;
2. the community acts as a reference mechanism, quickly enabling individuals to evaluate the knowledge of other members without having to contact each individual within the network;
3. communities of practice can help connect individuals from outside the network with those who are already identified as community members. This function can be critical, especially for new employees who are looking to identify individuals who hold the firm specific knowledge needed for them to be successful in their new roles;
4. by being able to bring people together to develop and share knowledge, the community creates the conditions whereby individuals can test the trustworthiness and the commitment of other community members. Through this process, the community builds its new form of informal currency, with norms and values that are commonly held, and provides conditions of payment that are generally accepted. It is through these repeated interactions that individuals can develop empathy for the situations of

⁵¹ Special thanks to our colleague Marcel Hoogenboom (University of Twente), who formulated some doubts in this context. The question however remains for him whether these descriptions are possible at all. Generally the types of networks found in the knowledge-based society are complicated and unstable, and often consists of participants that do *not* share a common set of norms and values.

others and can develop the rapport with other individuals in the community (Lesser, 2000).

Communities of practice help shape the actual terminology used by group members in everyday work communication. In addition, they generate and share the knowledge objects or artefacts that are used by community members. Equally as important, communities generate stories that communicate the norms and values of the community and of the organisation as a whole. 'These stories enable new members to take cues from more experienced personnel and allow the development of a community memory that perpetuates itself long after the original community members have departed' (Lesser, 2000: 13-14.).

The tension between the conflicting aims of management both to develop well-functioning communities of practice and to diversify (and divide) their work force does present a real source of conflict. However this managerial strategy is as old as the history of business organisation. This is the practice of continuous reproduction of 'core' and 'peripheral' employment and working conditions in the workplaces both in the perspective of single organisations and of the network. However, it would be interesting to identify the continuity between this existing management strategy and the emergence of a new one in the knowledge-based economy. The new managerial methods (for example the support of the systematic renewal of knowledge) are as important for many categories of core worker as they are, for instance, for web developers in the new media sector, in the same way as the widely publicised special incentive packages are important. The use of new managerial roles (*e.g.* that of 'knowledge broker') is becoming crucial in the changing management strategies that are developed to regulate knowledge use, knowledge sharing and development in the project-type form of work organisations, especially in its 'agency model' version (Makó & Csizmadia, 2006).

The final social product of this briefly presented process is social capital reflected in the shared norms and values of all members of the community, which may facilitate access to the tacit dimension of knowledge.

The interpersonal dynamics of the relationships of social capital are related to the trust-based regulation of human behaviour. Without a shared history of common experiences and interactions or, in other words, without participating in a 'collective learning process' we cannot speak about trust relations based on reciprocity. In this respect, it is worth drawing attention to the analytical importance of the dimension of social time in any or-

ganisational adaptation process and especially in the case of building trust. This feature of trust is referred to, for example, by the term 'studied trust' (Sabel, 1993).⁵²

Finally, in connection with social capital creation, we have to stress the importance of a common understanding of the tasks, assumptions, hypotheses and language used by the participants in a given network. Once again, similarly to the 'learned' or 'studied' character of trust, the time perspective is also very important for understanding the individual and organisational investments that are necessary to develop shared understanding, the precondition of social capital formation.

Among such sources of social capital such as 'networks', 'norms', 'beliefs', 'rules' and 'trust' relations, we intend to add some ideas to the interpretation and identification of trust relations. In particular, we stress the heterogeneous character of the category 'trust' because of the frequently mentioned importance of trust relations in sharing and developing non-coded and diffused knowledge, especially in project-based firms. We suggest making a distinction between '*category or role driven trust*' and '*person focused or dyadic trust*'. In the case of role or category driven trust, the actors participating in the network can deal with one another more as 'role performers' than as 'individuals'. Expectations are consequently more standardised and stable and defined more in terms of tasks than in terms of personalities. However, it is more difficult to identify and measure empirically 'person focused' trust relations. In this case it is necessary to map and measure the density and internal dynamics of the network. For the empirical investigation of this kind of trust relation, we suggest that the following dimensions of trust creation should be measured:

1. the professional reputation of the persons concerned (*i.e.* we trust a person because his or her personal performance is tested by the other members of networks and by people outside the network too);
2. the person's moral reputation (*i.e.* we have enough tested experiences that the person with whom we are developing relations is eager to understand our special needs and does not exploit unilaterally our weakness to strengthen his/her immediate position in the network. In other words, this dimension of trust relations indicates the importance of mutuality or reciprocity of interest relations between network members);
3. social time, or the time that is necessary for the members of the network/project/cluster/industrial district, *etc.* to monitor and test continuously each other's reputations, both professional and moral;

⁵² This is the least visible tool of social integration, but at the same time it is also a factor of social control that makes its effect felt in the long run. It is usually said to have three components. One is technical competence or professional skill: we trust somebody if he or she is capable of carrying out what is planned. The second component is so-called moral competence, *e.g.* the assumption of responsibility for the community, toleration of another's values and interests, and action in accordance with mutually observed and respected norms (*e.g.* those represented by communities of practice). Besides developing technical knowledge or competence in the self-regulating social subsystems, securing moral competence (*e.g.* to create a solidarity based network) appears to be a more difficult task, though it is precisely trust based on moral competence that can forge co-operation and create stability in reducing mutual losses caused by sharp individual competition and tensions arising from the diversity of social and organisational relations. Time is the third dimension of trust-based relations: participants of interrelationships may test the trustworthiness and commitment of other community members only through shared and repeated experiences. In this interpretation, trust-based regulation of human behaviour is not interest-free but is based on long-term interest relations.

4. in relation to the social time dimension of trust relations, we stress the learning character of trust. Trust is not an automatic outcome of the professional and moral reputation, but it requires continuous monitoring and testing by network members. Stressing the importance of the learning process in creating trust-based relations some authors even use terms like 'studied trust' to indicate its importance (Sabel, 1993: 1133-1170).

In order to develop a concept of knowledge it seems important to identify strategic social places of production and distribution of knowledge as a first step. As a second step, routines and professional skills should be observed as well as their links and institutional patterns, ranging from local structures to global regimes. This is by no means trivial because one is looking for new knowledge-based professions and branches, is developing new categories against the background of societal developments and last but not least is looking for large-scale technological changes. This scheme nearly implies a whole research program.

Already now, and especially in the future, individual and collective ability (the ontological dimension of knowledge development) to create new knowledge, to share existing knowledge and to apply them to new situations is crucial. Knowledge in organisations is typically categorised as being either explicit (relatively easy to acquire, transfer and maintain its value) or tacit (difficult to code and document without losing from its value which is the so-called 'epistemological dimension' of the knowledge).

Table 6.4 Types of knowledge

Epistemological dimension	Ontological dimension	
	Individual	Collective
Explicit	Embrained	Encoded
Tacit	Embodied	Embedded

Source: Lam, 2000: 491

This combination of explicit-tacit and individual-collective dimensions of knowledge (first mentioned by Collins, 1993; cited by Lam, 1998) results in the four types of knowledge presented in Table 6.4:

1. embrained knowledge (individual-explicit) is formal, abstract, theoretical, standardised, easily acquirable and transferable; it can be used and applied in various heterogeneous situation and can be incorporated through formal education and training (learning by studying);
2. embodied knowledge (tacit-individual) is based on the practical experiences of the individual; it can be used in specific contexts and is emergent, fluid and individually-bounded. Embodied knowledge can only be acquired in practice, through personal experience (learning by doing);
3. encoded knowledge (collective-explicit) is codified in signs and symbols and stored in blueprints and recipes using written rules and procedures. It has a collective and public character and is transferable almost independently from the knowing subject to a wider audience;

4. embedded knowledge (collective-tacit) resides in organisational practices, routines and shared norms. It is heavily context-dependent and deeply rooted in specific work practices and socio-organisational structures. It can be transferred through relation specific informal channels where communication, co-ordination and organisational identity play crucial role. It is often referred to as social skill or social knowledge.

In this section, we have stressed the interrelations between the different types of knowledge and the varieties of learning processes. In addition, this analysis aims to identify the tools of communication and co-ordination that play a growing role in the emerging knowledge/learning economy. In this relation, the characteristics of networking and such social institutions as 'social capital' and 'communities of practice' have been identified and evaluated in connection with the complex practices of knowledge use and learning.

In presenting the learning processes, we intended to focus on the forms of learning that help people to acquire, develop and transfer the tacit and social skills of the various actors co-operating in the work organisation. Finally, in relation to the tools of communication and co-ordination, our intention has been to classify the great variety of networking which depends largely on the context or on contingencies. In emphasising the growing role of co-ordination in knowledge creation and sharing and in the related learning processes, we have focused on the regulatory role of social capital and communities of practice. In this analysis we have aimed to highlight the various forms and content of trust relations and the social time necessary to create them (studied trust).

6.5 Some hypotheses related to the WORKS project

6.5.1 Relations between the practice of knowledge use and labour relations regulations

Combinations and degrees of knowledge/skill used in the business functions/sector (*e.g.* explicit *versus* implicit knowledge) may influence the bargaining position of employees with employers/managers in the organisation investigated. Individual or collective representatives of the occupational groups who are using non-coded or tacit knowledge may strengthen their power position in the bargaining over working and employment conditions. For this 'core' group of employees the use of official actors (*e.g.* trade unions) and institutions (*e.g.* collective bargaining) may be less attractive in comparison with informal bargaining and consent. The group of employees who have such key positions in the use and development of tacit knowledge may prefer the individualisation of their negotiations with their employers.

6.5.2 Relations between the forms of co-ordination of tasks and the types of knowledge processed and used

In the case of a project-based work organisation or a network-type co-operation which aims to use, share and develop products and services based on non-coded or formalised knowledge and requires the deep involvement of the customer (clients, suppliers, *etc.*) we may presuppose the creation of new co-ordination roles. For example, the importance of

special roles such as knowledge brokers and project leaders is increasing in the case of products or services which are based on diffused knowledge.

6.5.3 How to measure the role and importance of 'trust regulations' as a special mechanism in the use and mobilisation of both coded and non coded knowledge

In our view, the various dimensions of trust relations should be identified through reference-testing of the members of the network surveyed in the organisational or occupational case studies in relation to their professional and moral reputations. In addition, it is necessary to describe the testing mechanisms used by the network members to monitor these reputations over time. Finally, we have to note that the operationalisation of these hypotheses will be rather different in the case of the quantitative and qualitative research tools used.

7 Organisational change and the demand for skills

MONIQUE RAMIOUL (HIVA-K.U.LEUVEN)

7.1 Impact of ICT on organisations and qualification structures

7.1.1 Introduction

The core issue of the WORKS project is ‘changes in work viewed from the perspective of the restructuring at the level of global value chains’, which lays the major focus at changes in firms and organisations and how they deal with these changes given the regional context and environment. Firms are undergoing fundamental shifts under the influence of the widespread dissemination and use of ICT, the emergence of the knowledge-based society, global restructuring of economic activities and tendencies towards the global relocation of jobs. In the networked organisation the ‘traditionally’ clear boundaries between production and information related activities, are blurred. It is plausible that information-intensive work and material production work are divided based on different logics than in the ‘old economy’. These tendencies influence the production processes and work organisations at the level of the establishments of companies. The changes in technology, production organisation and work organisation have a considerable impact on the actual jobs and their characteristics, notably the required skills and competences.

Under this topic we need to investigate what is known about the impact of both ICT and global restructuring of firms on the work organisation and on the required skills for the jobs in the organisation.

The ‘demand for skills and employment change’ can be studied from very different perspectives and with very different objectives: from a macro-economic perspective in view of developing educational and other labour market policies, from a meso-perspective in relation to organisational strategies and personnel policies, or from a micro-perspective focusing on job requirements, individual career trajectories and ‘employability’. In the history of sociological and economic research on the demand for skills, a huge number of studies, if not the major part, have investigated the role of technological innovations because of their obvious impact on the way jobs are designed and skills requirements are changing as a consequence. The study of the impact of technological innovation on the demand for skills can be carried out from the perspective of these different levels: the macro level of regional or national economies (related to issues of labour market and economic performance) the level of organisations and the level of the individual workplace and the employee.

7.1.1.1 *The fundamental transformations related to ICTs*

The massive dissemination and widespread use of information and communication technologies (ICTs) in organisations has yielded a new wave of research on the consequences

of technology on work, organisation, employment and labour markets. Here, most authors seem to agree on one aspect: ICTs are fundamentally different from previous technological transformations that mainly involved automation of manufacturing and production of products and services. According to Soete (2001: 143) three basic features of ICT can account for structural transformations in the economic, social and organisational framework of society: (1) the capacity of ICTs to store, process and disseminate information at minimal cost leads to a continuous expansion of the use and the steady broadening of applications based on ICTs; (2) the digital convergence between communication technologies and computer technologies renders feasible any combination of communication forms (between individuals, organisations and machines) and creates possibilities to network, interact and communicate around the world; (3) the rapid growth of international electronic networking makes ICTs the first real 'global' technological transformation. These characteristics, together with the fact that ICTs are 'general purpose' technologies⁵³ (Bresnahan & Trajtenberg, 1995; David, 1990) bring about fundamental transformations in the economy that are historically unprecedented, affecting not only the production of goods and services but above all every form of communication. Obviously, ICTs effectively transcend space and distance and therefore affect geographical, institutional and organisational boundaries. Finally, ICTs play a crucial role in the on-going codification of knowledge: their capacity to store, process and disseminate information makes it technically possible and economically attractive to codify kinds of knowledge which have so far remained tacit (Soete, 2001: 152). This last characteristic is reactivating the debates on the definition and meaning of 'knowledge' (and of derived concepts such as the knowledge economy, the knowledge society, knowledge management, *etc.*).

7.1.1.2 *A wide range of impact studies*

Macro-sociological studies focusing on the impact of ICT on the demand for skills mostly concentrate on the following issues: quantitative impact on employment (job creation and job destruction), qualitative impact on the labour market (relation to increasing educational levels in the work force, skill-biased technological change) and issues related to inequalities such as the impact of ICT use on wage differences (the so-called computer premium debate) and the gender-biased effects of ICT and ICT-related changes. At the meso and micro levels, the impact of ICTs is studied in relation to organisational changes (new production concepts, flattening of organisations, forms of networked organisations, virtual teams, 'industrialisation of services', new forms of Taylorism, *etc.*) which in turn affect the skills profiles of jobs (upgrading *versus* deskilling), and power, control and hierarchy patterns within the employment relationship. A lot of studies aim at a better understanding of the assumed need for new and/or specific ICT skills, the shift to other skills, for instance the growing importance of soft skills or 'generic competences', the opportunities of ICTs for (organisational) learning, the emergence of 'knowledge management' in organisations, the relationship between codified and tacit skills in the use of ICTs, the impact of ICTs on flexibility and the time use of individuals, the impact on learning, *etc.*

⁵³ General purpose technologies are universal and different generations can easily be combined. They are also adapted to very different types of organisational contexts.

All these different approaches can be based on both quantitative research (using macro-economic data, sectoral data, establishment-level data and individual data) and on a broad range of qualitative research methods, using case study methods, individual biography methods, *etc.*

7.1.2 The macro debate

Macro-oriented studies stress the role of information technologies in the accelerated speed of industrial transformation and their contribution to the emergence of the 'information society'. In particular, there is a focus on the specific impact of ICTs on service activities and the shift to the post-industrial, information economy is important. Furthermore, the impact of new technologies and organisational innovation on both job reduction/creation and the qualification structure are important research domains.

7.1.2.1 *The service economy*

The shift to a post-industrial or service economy was already announced and investigated in 1949 by Fourastié and in 1974 by Bell (Bosch & Lehndorff, 2005: 1). Bosch and Wagner (2005: 96-97) identify the most important drivers of the emergence of the service economy as: 'rising incomes, the move towards high-quality production in manufacturing industry, the integration of women into the labour market, the development of the welfare state and other funding mechanisms for overcoming the cost effects of disease in socially important services, the improvement of the supply of services through greater professionalism and innovation; the relatively greater reduction in working time in the service sector and specialisation at country level in services for export'. These factors all account for the growth in service sector employment in the EU. It is obvious that the shift to a service economy is a structural trend in itself and affects in a fundamental way the qualification and occupational structures of labour markets. However, the power of information technologies to act upon this structural transformation of the economy cannot be underestimated. Whereas service activities have often been described as those activities where the output is 'consumed when produced' (Quin, 1986) and both temporal and geographical proximity are by definition required because of the intangible nature of services (Soete, 2001), the information processing and storage capacities of ICTs and their impact on communication allow for a growing separation of production and consumption of a lot of services and therefore make distances irrelevant. A second important effect of ICTs on the economy is related to their technical capacity to - by definition - contribute to the codification of knowledge in a cost-effective manner, and to allow for the storage, processing, communication and retrieval of this codified knowledge. The embodiment of this knowledge in material goods enables the 'industrialisation' of services: 'the continuous replacement of particular service activities by material household goods, embodying at least the 'codified' knowledge component' (Soete, 2001: 152), Huws (2003: 17 & 60-76) describes in detail how current technologies reinforce the historical trend of standardisation and commodification and the related social division of labour, and how services are affected in this development to a greater extent than before. The related growing industrialisation and (international) tradability of services affects the economic restructuring of regional

economies and as a consequence the quantitative and qualitative structure of the demand side of the labour market.

7.1.2.2 *Skill-biased technological change*

In the relationship between ICT and skill changes, a central concept in research is ‘skill-biased technological change’, focusing on the question of which educational categories of the work force profit more or less from ICT. The concept of skill-biased technological change validates the selective and diversified effects of new technologies, taking into account the intermediate role of a lot of additional factors and processes, such as whether product or process technology is concerned, which phase in the lifecycle of innovation one is measuring, the organisational characteristics, notably the division of labour, *etc.* Even the spatial environment can explain a different outcome of ICTs on skills structures (van der Laan, Raspe & van Oort, 2005). The importance of acknowledging a diversified and selective impact of the use of ICTs on the demand for skills has been confirmed in a lot of empirical research, with a diversified research design (from large scale surveys to in-depth case study research), focusing on different sectors, different occupational groups, different regions, different technological applications, *etc.*

In the economics literature,⁵⁴ the theory of technological bias describes technological changes as exogenous shocks on the production function. This implies a modification in the productive combination of factors, the evolution of the relative productivity of each factor, and a change in the demand for each factor. From the 1930s to the 1950s, growth economists successively focused on the relation between capital and labour, by assuming first that technological change was biased in favour of capital and next that it was neutral on the combination of capital and labour. During the 1990s, the debate on the bias of technological change has been updated by labour economists observing the development of inequalities between skilled and unskilled workers. The labour factor was no longer considered as homogenous; technological change implies an increase in the relative demand of skilled workers. Different empirical papers, based on macrodata, sectoral data and individual data, confirm the existence of skill-biased technological change in a range of developed countries. In most of these studies, skills are measured either with occupational breakdowns (*e.g.* between manual and non manual workers) or with educational breakdowns.⁵⁵ As a result of this research tradition, there is nowadays a broad consensus on the conclusion that ICTs (and new forms of organisation) are, on average, biased in favour of skilled labour.

Job destruction and creation⁵⁶

The impact of technological (and organisational) change on job destruction and creation is important in this context because job creation and destruction will affect the qualification and occupational structures: analyses of job creation and destruction try to clarify how skill structures evolve and to describe skill-biased technological change (and skill-biased

⁵⁴ The following section is provided by Emmanuelle Walkowiak and Nathalie Greenan (CEE).

⁵⁵ One can find a synthesis of these results in Acemoglu (2002), Pianta (2003), Chennels and Van Reenen (2002) or in Bouabdallah, Greenan and Villeval (1999).

⁵⁶ The following section is provided by Emmanuelle Walkowiak and Nathalie Greenan (CEE)

organisational change), notably by analysing the combination of destruction of unskilled jobs and the creation of skilled jobs. Greenan (2003) and Walkowiak (2006) show that in French manufacturing firms that have been implementing new technologies during the 1990s job destruction and job flows are lower than in other firms. Firms implementing new technologies tend to stabilise their work force and increase employment security. On the other hand the authors observe that firms adopting new organisational practices (like just-in-time production system, quality norms and teamwork) tend to renew their work force by an acceleration of job destruction and creation. In Germany, Bauer and Bender (2004) also observe that the modernisation of firms entails job reallocations. Modernisation first and foremost reduces the net employment growth rates of unskilled and medium-skilled workers via higher job destruction and separation rates, whereas the employment patterns of skilled workers are not affected significantly. New information technologies increase churn rates for skilled and highly-skilled workers.

7.1.2.3 *No answers to the question of the globalised knowledge economy*

Despite the huge number of studies, the precise intensity and direction of the relationship between the use of ICTs and the related service-based character and internationalisation of the economy on the one hand and the skills or 'knowledge' structure of (regional) labour markets on the other hand, are far from clear or foregone. Empirical studies on this issue struggle with major measurement difficulties, such as the problem of how to find valid classifications of businesses and occupations related to the knowledge economy (see for instance Ramioul, Huws & Bollen, 2004), on how to map (the growing) international trade in services (Huws *et al.*, 2004), or on how to measure the knowledge-intensity of companies, sectors, let alone regions or nations (Smith, 2002). Furthermore, it is not obvious how to disentangle the real causes of increased 'skill- or knowledge-intensity' of organisations. The growing skill-intensity of organisations can (at least partially) be supply side induced, caused by the steady increase of the educational attainment level of the work force, while another 'part' is caused by an increase in the skill and qualifications required to perform the jobs adequately. At the level of organisations, the impact of ICT on skills is shaped by associated changes in employment policies and practices (Rubery & Grimshaw, 2001: 181) for instance personnel policies of employers that can be characterised as 'credentialism', resulting in crowding out or displacement mechanisms. The disentanglement of influencing factors is however crucial and should prevent using supply side related indicators to explain changes at the demand side of the labour market.

To gain a better insight into changed skill requirements, it is necessary to find validated proxy variables that may shed light on the (changing) skill-level requirements of jobs⁵⁷ (as contrasted to the actual skills levels possessed by the employees executing these jobs). Another approach is to perform in-depth analyses at the level of jobs and workplaces.

⁵⁷ Valuable attempts in this respect are made among others, by Green, Felstead and Gallie (2000). The evolution of the skill-intensity of jobs and its relation to the 'use of computers' is measured not by educational attainment or occupational grouping of the workforce, but by a 'composite skill index', combining variables of survey questions on the required qualifications, the training time and the learning time to perform the job.

7.1.3 The meso level: technological determinism or organisational choice

At the meso level, the level of the organisation, it is important to stress the distinction between technological deterministic and organisational choice approaches in the mainstream literature on the impact of technology on work and organisation and on skills and employment in particular. Both technological determinism theories and organisational choice theories aim at explaining the relationship and interaction between technological and organisational change.

7.1.3.1 *Technological determinism*

Theories related to technological determinism investigate the direct impact of technological change on the tasks that have to be executed at the level of the organisation: the so-called 'task pool' of an organisation, referring to the tasks that are left to be executed by the work force once the technical infrastructure of production processes has been implemented (Batenburg *et al.*, 2002: 21). By means of the division of labour applied in the organisation, these tasks are then combined to functions and workplaces which results in a specific form of work organisation. Technological determinism theories assume that a specific technological infrastructure highly determines this task pool and thus the specific division of labour that is necessary to make the technology work. These theories also investigate the direct impact of technology on workplaces and on the quality of jobs, for instance the impact on autonomy and learning opportunities, on stress risks, on time use, on health and safety risks and the impact on the skill and qualifications requirements. A lot of studies, even contemporary ones, are still studies of the direct impacts of technological applications.

When ICTs are concerned, such impact studies have focused for a long time on isolated workstations (*e.g.* those involving work with PCs or monitors). The impact of ICTs on organisations cannot however be limited to the introduction of personal computers. The capacity of ICTs for integrating all information flows within and beyond organisational boundaries, the steering and monitoring capacities of production flows and workflows, the growth of ICT-enabled services, *etc.* can have a considerable impact on the way that production is organised at the level of the value chain and at the establishment level and is qualitatively different in nature from automation. These characteristics make ICT technology an 'organisational technology', because of its integrative nature and because of its impact on knowledge and communication structures. Whereas in the case of production automation such as robots or CNC machines the impact of technology on the task pool of an organisation can be clear and direct (manual and assembly work are automated, new (control) tasks are created, *etc.*), in the case of ICT this impact is less obvious and clear-cut.

7.1.3.2 *Organisational choice theories*

The contribution and value of the organisational choice approaches to the explanation of the impact of ICTs on organisations and workplaces is their acknowledgement of 'degrees of freedom' in both the technological and organisational design of production processes, task pools, division of labour and workplaces. The design of the production and work processes accompanying the implementation of ICTs is regarded as a result of both vol-

untary and unintentional, implicit management strategies and decisions. The concept of organisational design is well defined in the sociological, management and economic literature. Organisational design is the organisation chosen by a firm to implement its strategy in a particular environment (Roberts, 2004). As strategy can be changed more quickly than organisational structure, this means that organisational design could influence the strategic choices made by firms.

Research on different forms of organisational innovation in similar sectors and with similar technological innovations such as teamwork, high performance work systems, socio-technical design, business process re-engineering, lean production and new forms of Taylorism highlights the organisational varieties that can be detected in reality and therefore pertinently questions technological deterministic approaches. The debates and research findings on organisational innovation have therefore strongly supported the development of organisational choice approaches. The implications of organisational choice theories for research on skills structures is the acknowledgement of skill-biased organisational change (Bresnahan, Brynjolfsson & Hitt, 2002; Caroli & Van Reenen, 2001). The trend towards new forms of work organisation has different and selective effects on the work force according to their educational levels; when it is assumed that new forms of work organisation require more communication and negotiation skills, leadership, autonomy and responsibility, there is a likelihood that they may have selective effects, notably leading to the social exclusion of certain groups of workers who do not possess such communication skills and social competences.

7.1.3.2 *Mutual shaping as a realistic approach*

Today, it is widely acknowledged that neither technology itself nor organisational design should be treated as 'deterministic' for a given outcome on the functional and qualification structures of firms. Rather, the outcomes should be seen as the result of a 'mutual shaping' of ICT and organisation (Batenburg & Steijn, 2005: 264), while the environmental context of the organisation, determining its competitive and market position, the regulatory context, *etc.* should be acknowledged as well as a further shaping factor. This means that ICTs should be approached as having 'the potential' to destroy or to create jobs, to reduce the required skills or to make jobs more interesting, to worsen or to improve the quality of work, *etc.* The actual outcome depends on a complex interaction between the technology, the organisation with all its characteristics, managerial choices and behaviour, interaction with the employees and with the external environment of the firm.

The concept of complementarity used in the economics literature may be useful here.⁵⁸ Greenan and Walkowiak (2005) define the concept of complementarity as follows: 'according to Milgrom and Roberts (1990), any two productive activities or practices in a firm are said to be complementary if the development of one increases the productivity of the other. In this case, the choices made by the firm in these two domains must be coordinated. In a standard production function, the firm essentially chooses the quantities of its production factors. In addition to these operational choices, there is a set of strategic choices of products, equipment, and organisational practices. If the complementary variables of the production function increase simultaneously, the value of that function in-

⁵⁸ This addition has been provided by Emmanuelle Walkowiak and Nathalie Greenan (CEE).

creases by more than the sum of the value of the changes induced by the increase in each of the variables when taken separately'. In the model of industrial excellence mentioned by Milgrom and Roberts (1990 & 1992), computer-aided drafting, computer-aided design, computer-aided design and manufacturing, and computer-aided production management software, as well as programmable automated machines and robots are complementary to the rapid renewal of products, to small-batch production, to multitasking and multiskilling, as well as to just-in-time production and delivery practices, outsourcing and subcontracting. Using micro data, several empirical studies have sought to test the complementarity between ICT equipment and new forms of organisation using firm-level data (Goljac, Greenan & Hamon-Cholet, 2000; Caroli & Van Reenen, 2001; Bresnahan, Brynjolfsson & Hitt, 2002; Greenan, 2003)' (extracted from Greenan & Walkowiak, 2005).

In the field of sociology too, empirical research shows that structural and organisational changes at firm level do not entail deterministic impacts on the skills structure. Case studies often reveal a wide variability of skills configurations, depending on managerial options and social relations (Vendramin *et al.*, 2000). An interesting approach, elaborated by Steijn and Tijdens (2005: 284) is to differentiate ICT use in order to better understand the diversified outcome for workers. ICT use can differ according to individual, sectoral and organisational characteristics. Their analysis shows that HRM practices and the applied production concept highly differentiate the diversity and intensity of ICT use: more HRM policies and non-Taylorist production concepts imply more diversified and less intensive ICT use, which supports the conclusion that organisations influence the ICT use of their employees through their organisational choices and strategies (*ibid.*: 295).

Research on ICT and organisational innovation has to clarify in the first place the relationship between a specific technological application (for instance the introduction of ERP systems) and the organisational context in order to better explain what precise effects on what educational and occupational groups occur under what conditions. In fact such an approach is more realistic than either the technological determinism or the organisational choice theories because it acknowledges the fact that, for a given organisation, the 'degrees of freedom' with respect to both technological and organisational choices are smaller than might be assumed on a theoretical basis. This approach indeed (implicitly) acknowledges the fact that an organisation is mostly not designed 'from scratch' but is in its turn the result of historical decisions and strategies (in other words, path dependent). It also acknowledges the fact that for most enterprises the development of ICT applications 'from scratch' is less an option than the acquisition of available technology on the market or the implementation of technologies imposed by the customer. As a consequence, the variety of organisational models to fit the (standardised) technology is likely to be restricted and the managerial choices for designing the organisation of work limited.

Technology diffusion and implementation research⁵⁹

Finally, we want to draw attention to the fact that research on new technologies has also inspired a large body of management literature focussing on the process, rather than the impact, of technological innovation. Technology diffusion research is a rich research tradition stretching back to the very dawn of information technologies and focussing on how

⁵⁹ This addition has been provided by Hans Torvatn (SINTEF).

technology is applied in organisations: ‘Under what conditions does an organisation implement new technologies?’, ‘How should the implementation process take place to be as effective as possible?’, ‘What kind of changes takes place in an organisation in the process of innovation?’, *etc.* The outcome of these studies mostly concludes that there is an underestimation of the complexity of technology implementation projects and of the costs related to it, combined with an overestimation of the benefits. This leads to the development of sometimes detailed advice and recommendations for technology projects.

Later strands of technology diffusion research focus on data quality and the upkeep of information in large information/knowledge systems (MIS, ERPS, *etc.*) and the continuous transformation from tacit to codified knowledge. The relevant point here is that codified knowledge is not stable but changes over time. Any organisation using a large information system is faced with the challenge of establishing and maintaining the data quality of the system. The GIGO principle⁶⁰ applies: no matter how sophisticated the system, if the data quality is too poor the system is useless. Case studies on this issue (Scott & Wagner, 2003; Newell *et al.*, 2003) demonstrate that maintenance of data quality in such systems is both difficult and resource-intensive. Furthermore, if data is not adequately maintained the users will not trust the system and its use will therefore decline. In order to cope with problems of the changing nature of codified knowledge, a stress is placed on the need for routines for updating of data, limiting data capture to what is vital for the organisation (on a ‘need to know’ rather than a ‘nice to know’ basis), tailoring data capture to work processes and finally the need to develop new skills for managers as well as operative/shop floor level in the use of and reporting to the new systems (Ellingsen & Monteiro, 2003; Næsje *et al.*, 2005).

Obviously similar or even greater problems are expected to occur when work processes and information flows stretch beyond the borders of organisations. In cases of outsourcing and restructuring of value chains, codification of knowledge is enhanced in order to develop knowledge systems. Standardisation of information and formalisation of procedures increase in view of the need for monitoring and steering work and information flows along the different units of the value chain. One might expect that in case of (offshore) outsourcing too, complexity and costs are often underestimated, while benefits are overestimated (Huws & Flecker, 2004). In addition, updating data and information along the value chain will equally require dedicated and continuous resources, including the necessary organisational and managerial skills.

7.2 What is new with ICT skills

Despite the need for awareness of new forms of technological determinism when it comes to investigating the effects of ICT, a lot of research still focuses on the direct impact of ICTs on the required skills and qualification of employees using them.

⁶⁰ GIGO means ‘garbage in garbage out’.

7.2.1 Increasing skill requirements?

7.2.1.1 *The upskilling-deskilling debate revisited*

Since Braverman showed in 1974 how automation tends to reduce skilled work to semi- or unskilled work while developing a need for managers and professionals to supervise the work, a huge amount of empirical research focusing on different technologies has tested upskilling and deskilling tendencies and has developed more diversified conclusions. Somewhat in contrast with the research on the impact of automation of manufacturing and production processes a lot of research on the impact of ICT on the demand of skills tests assumptions relating to the increased skill requirements of ICT-enabled jobs. Greenan and Walkowiak (2006) for instance show that - in 1997 - for stable employees in industrial firms, the use of automated machines is positively correlated with work enrichment. Deskilling of the work force seems related to exclusion from the use of ICT and automated machines, rather than to their use. Autor, Levy and Murnane (2001) confirm the existence of such an upskilling process in the banking sector where jobs become more complex for unskilled manual workers when they use ICTs. These results suggest that the upskilling process associated to the use of ICTs would mainly concern less skilled labour. In addition, other empirical research shows the deskilling of managers working in operational functions losing their autonomy with the implementation of new technologies like ERP. Such process technologies would lead to deskilling of middle management occupations (Buscatto, 2002).

In their investigation to identify occupations that are potentially be affected by offshoring, van Welsum and Vickery (2006) cite another study of Autor *et al.* (2003) who differentiates between the substituting and complementing effects of ICTs: computer technologies substitute for workers performing routine tasks that can readily be described with programmed rules and can easily be digitised and/or codified, but on the other hand, they can also act as a complement to workers that perform non-routine tasks 'demanding flexibility, creativity, generalised problem-solving capabilities and complex communications'.

Except for direct impacts and for the organisational changes accompanying the implementation of ICTs, explanatory factors for the assumed upskilling effects of the use of ICTs also refer to the fast-changing nature of jobs due to the continuous expansion of ICT applications and the dramatically shortening of innovation cycles in both products and services and in production processes, related to the convergence of ICTs. These characteristics in themselves require more adaptability, 'learning competences' and flexibility of workers of all educational levels.

7.2.1.2 *The shift to soft and generic skills*

It is noteworthy that changing skill requirements related to the use of ICT seem to a lesser extent to concern professional and technical competences, but rather point at 'generic' or 'soft' skills such as communication competences, customer-orientation, autonomy, problem-solving, learning competences, responsibility, *etc.* This is related to the increasingly rapid obsolescence of technical skills, but also, and more importantly, to the organisational dimensions of ICT applications. In other words, the growing importance of generic

skill requirements seems more related to the organisational changes that accompany technological innovation, such as the flattening of organisation, the emergence of project work, of virtual teams and geographically distributed teams, than to the technology itself.

On the issue of skills changes in geographically distributed teams, Meil concludes for instance that 'despite efforts at formalisation, within project groups, especially the project leaders find their competence profile shifting from an expert-based one toward a socially interactive one, with dimensions such as conflict resolution, negotiation, representing and pushing through company interests, pacifying customers, *etc.* taking on importance. Competency requirements are simultaneously technified and obfuscated: there are plans and tools and procedures and standardisation, and at the same time there are vague requirements for social competences' (Meil, 2005: 11).

In addition, the shift to customer-related competences, for instance in telemarketing and call centres, is more an effect of the growing importance of customer orientation than the call centre technology in itself.⁶¹ The struggles for increased market shares through quality strategies and product development, tailor-made products and flexible work systems, but also deregulation and liberalisation of *e.g.* telecom businesses have had a considerable impact on the increase of skill demands as a competitive factor.

The debate on the growing importance of soft and generic skills still needs to be further qualified. These tendencies seem to be observed in Western European countries, while it is not clear to what extent the same trends can be supported with evidence for Central or Southern European countries. Next to the fact that ICT diffusion might be still less developed in outer regions of these countries, often still more agricultural economies, another possible explanation might be that the new information economy related businesses that are settling on the more urban regions concern activities where the need for such skills is less obvious. The diversified outcome of skills requirements along (restructured) value chains could then be explained by the specific division of labour that results from this restructuring, with back-office functions (requiring fewer 'soft' skills) being more likely to be located in Central and Eastern Europe whilst the more customer-facing functions are concentrated in the more developed economies of Northern and Western Europe.⁶²

Monitoring and control

An equally large amount of studies concludes not that there is an increase of skills level of jobs where ICTs are used intensively, but on deskilling, despite the shift towards more soft competences. Typically research on activities such as call centres, customer-related work, data processing, *etc.* is showing such deskilling tendencies.

Grugulis (2005), to name but one author, observes that increased performance monitoring and control systems (such as scripts and procedures) accompanying new forms of networked organisations supported by ICTs, limit the opportunities employees have to exercise and develop technical or professional skills. At the same time other 'soft' skills are actively encouraged. These soft competences are however not necessarily linked to skilled work, precisely because of increased monitoring and formalisation of procedures (Grugulis, 2005: 209). It is quite clear from a lot of research that even emotional dimen-

⁶¹ This point has been contributed by Per Tengblad (ATK).

⁶² This was suggested by Vassil Kirov (IS) and Ursula Huws (WLRI).

sions of customer-related work, so typical for service work and often assumed to be 'uncodifiable', are governed by both ICT systems capable of intensively monitoring workers and appropriate organisational control or 'alienation' mechanisms (see for instance: Hochschild, 1983). 'Work is not redesigned to accommodate employees' emotions; rather employees are redesigned to fit to what is deemed necessary at work' (Grugulis, 2005: 202).

However, other research shows that ICTs as such still confirm the importance of technical specialisation and that in reality for many occupational groups there is a combined effect of generalisation and specialisation (den Boer & Hövels, 2005: 181).

For many occupations, the precise relationship between generalisation and specialisation effects, skilling and deskilling, soft and technical skills is still an open question and requires sector specific and occupational, longitudinal approaches. A further problem here is that a lot of empirical research seems industry-biased in the sense that it is mostly carried out in the manufacturing sector while data on the service sectors are more scarce.

7.2.2 ICT skills, gender and age

A huge number of studies, too many to include here, investigate the nature of specific ICT skills, and the relative importance of these skills for different groups of workers. Research on the specific 'meaning' of computers and ICT for female workers deals with questions such as: 'does the growth of the new ICTs provide a chance for women to acquire and apply new skills, and thus reduce gender inequality, or does it serve to exclude women from good employment opportunities?' (Brynin, 2005). As the use of computers is fairly evenly spread by gender, it might be expected that women gain as much as men do from the use of the computer. However, it is obvious from research that, generally speaking, women and men still do different jobs because of existing segregation patterns and also that their computer use is different. This implies that they are less able to develop ICT skills, which in turn is reflected in their wages and wage development. In his study, Brynin concludes that 'women on average have somewhat lesser skills (though this appears not to be reinforced by any substantial differential in attitudes to computers). Yet the margin is not great and is unlikely to explain the fact that women obtain a lower wage premium from their computer skills than men do. This differential applies even where only those who actually use a computer are included in the analysis. It means that every increment in skills which a man has earns a greater premium than the very same increment which a woman has. The skills are differentially rewarded' (Brynin, 2005: 9).

Steijn and Tijdens (2005) introduce in their analysis three different dimensions of ICT use: complexity, intensity and diversity, assuming a better quality of life with more complex and more diverse ICT use. They assume a diversified computer use determined by personal characteristics (gender, age, educational level), job characteristics (hierarchy, employment contract) and organisation characteristics (size of the unit, sector, HRM, production concept). The results show that a more differentiated analysis of the ICT use makes sense: complexity, intensity and diversity of ICT use do not necessarily correlate with each other and differ according to personal, job and organisational characteristics. In particular the individual characteristics, gender and educational level, and the economic sector account for differences in complexity and in diversity of ICT use. The research shows important gender-biased effects: men have a more complex and diverse use of

ICTs, while women make use of ICTs more intensively. This confirms other research results that men predominate in the more complex functions of the computer (Panteli, Stack & Ramsay, 2001). It is plausible that these gender-related differences in ICT use also generate a different impact on both the quality of the jobs, the wages and the learning opportunities. The assumed relationship of complexity, diversity and intensity with the quality of working life, and the disadvantage of intensity, could indicate that women do not necessarily gain from the use of computers in their work if this mainly results in intensification.

Greenan and Walkowiak (2006) show that in French manufacturing industry, women are excluded from workstations with innovative organisational characteristics. Indeed, they observe that women are less autonomous, have fewer management responsibilities, train new employees less often, work to quality standards less often, work less often in teams, have a less intensive job, communicate less frequently with close or distant colleagues inside or outside the firm, participate less often in meetings, and receive less information in written form than men.

In their analysis of the gender dimension of ICT use, ICT professions and ICT skills, Valenduc and Vendramin (2005: 9) plead for a more nuanced debate because of the huge and growing diversification of ICT professions, for women as well as for men, and because of the lack of stabilisation and institutionalisation of some of these occupations. Based on case studies as well as on survey data they further stress the importance for men and for women both of solid ICT technical skills, including project management, and non-ICT skills, such as knowledge of languages, communications and business domains.

Some empirical papers also test the assumption that technological and organisational changes could be biased against older workers.⁶³ For example, in the French manufacturing sector, Behaghel and Greenan (2005) show that older workers do not suffer from a systematic disadvantage with regard to training that would limit adaptation, nor from an adverse impact of organisational changes. The age bias is limited to older workers in lower occupations and in firms with advanced computerisation. They interpret this phenomenon as a skill obsolescence that is most acute for older workers and especially a lack of computer literacy that is a prerequisite for further computer training. In their study, cited earlier, Steijn en Tjeldens (2005: 295), contrary to their expectations, did not find a relationship between age and complexity, diversity and intensity of ICT use, which leads to their conclusion that obviously older workers have made up arrears in computer use and do not lag behind on either of the dimensions. On the other hand, these authors also found a significant effect of educational level on complexity, intensity and diversity of computer use to the disadvantage of lower skilled workers.

7.2.3 Knowledge-intensive work

'The most important impact of ICTs is that they move the border between tacit and codified knowledge' (Soete, 2001). The attention to increasing skill requirements and the growing knowledge-intensity of jobs related to ICT and to the structural transformations they bring about in the economy, also results from the incompleteness of the codification of knowledge and the growing relative importance of the remaining tacit knowledge

⁶³ This addition has been provided by Emmanuelle Walkowiak and Nathalie Greenan (CEE).

components. Other researchers also agree on the growing importance of generic skills because of the limits of codification and automation (Borghans & ter Weel, 2002: 214). In particular in knowledge work it is now assumed that precisely the remaining tacit knowledge part will embody the main value of the activity and that work relies to an important extent on tacit knowledge (creativity, talent, experience), that by definition requires more autonomy and discretion in the job.

With respect to the tacit *versus* codified skills debate it is important to note that the interaction between both kinds of knowledge (tacit and codified) should be acknowledged. Knowledge creation or learning is 'an accumulative process whereby tacit knowledge is transformed into codified knowledge and new kinds of tacit knowledge are then developed from close interaction with the new piece of codified knowledge. Such spiral movement is at the every core of individual as well as organisational learning' (Soete, 2001: 153). In Chapter 2 of this study, Huws describes this dynamic relationship between tacit and codified knowledge and the concurrence of upgrading and deskilling in the processes of innovation and technical division of labour. Codification and deskilling are counterbalanced by tasks that require different kinds of (new) skills related to new emerging tasks, such as creative tasks, but also relational, communication or commercial tasks (Perret, 1995).

The implications of a - proportionally - growing knowledge-intensity of jobs, can be considerable. If knowledge-intensive jobs can be defined as those jobs where the active and independent acquisition, processing and development of knowledge and information plays a dominant role, this implies that these jobs are by nature complex and non-routine, because of the importance of non-codified knowledge in this process. The assumption is that a so-called 'knowledge worker' can easily access complex knowledge, is continuously learning and is qualified to use formal, abstract and complex information. The work organisation of such work will have specific characteristics, notably these workplaces will be characterised by non-routine, non-standardised jobs, requiring autonomy and opportunities for learning and intensive interaction and collaboration with others (inside and beyond the firm) in view of problem-solving requirements. The question remains what is the spread of such knowledge-intensive jobs in firms and organisations and to what extent and under what conditions knowledge work, is becoming a more dominant type of work in Europe to the detriment of routine work.

Related to the debate on knowledge work and increasing knowledge-intensity, in recent years a growing body of research has emerged from studies in computer science and organisational studies focused on knowledge management systems within organisations and beyond.⁶⁴ In order to manage knowledge, knowledge and information is codified and standardised. Some approaches to knowledge management prioritise structural models and IT systems whereas others focus on processes, communities of practice and dialogue (Nonaka & Takeuchi, 1995). The main problems knowledge management aims to solve, *i.e.* the generation, representation, storage, distribution and application of knowledge, are of particular importance in networked organisations and with distributed work. While advanced databases greatly support co-operation over distance, recent trends in the debate on knowledge management emphasise implicit knowledge and the role of communities of practice. Research on various forms of work indicates that neither higher levels of

⁶⁴ This addition has been provided by Hans Torvatn (SINTEF).

codification of knowledge, increased planning, nor a more intensive use of technology can fully replace tacit forms of knowledge in the light of increasing complexity and critical situations. Likewise, the more information is codified and stored in ICT, and retrievable from it, the more important tacit knowledge becomes in selecting, combining and applying knowledge. With respect to distributive teams, it is however worth making a distinction between the uses of ICT in 'task-orientated' *versus* 'space-time dependent' forms of distributive virtual teams.⁶⁵ In task-oriented teams, the ICT support is more useful for efficient co-ordination (management of workgroup interdependencies) in comparison with space-time dependent teams. This distinction is especially important in the case of use, transfer and sharing of so-called diffused knowledge (tacit skills) in comparison with codified knowledge. It is anyway crucial to understand the impact of new forms of work organisation on the opportunities for the acquisition, mobilisation and utilisation not only of explicit, but also of implicit knowledge. This is further elaborated in Chapter 6.

7.3 Changed internal labour market strategies related to new forms of work organisation and to the use of ICT

7.3.1 Introduction

The restructuring of value chains is, next to ICT, a second important 'driver of change' which is of interest in relation to the introduction structural changes in the skills structure of organisations. In this respect the emergence of the so-called networked organisation is especially relevant. As elaborated in the introduction of this chapter and elsewhere (see Chapter 2), the impact of ICTs on knowledge and communication is a crucial factor in globalised corporate restructuring, implying an increased externalisation of activities through outsourcing and subcontracting, a considerable change in transaction costs and - thus - a growing importance of market-led forms of control and management of businesses functions. A number of authors describe this transformation from the traditional bureaucratic organisation to a networked organisation. It is argued that organisations are disintegrating and networked forms of co-ordination of economic transactions are emerging.⁶⁶ Several recent studies focus on the different forms these networked organisations can take and what implications this can have on different aspects of the employment relationship (see notably: Marchington *et al.*, 2005) and on the social dialogue.⁶⁷ Without describing in detail the different forms of 'multi-employer' environments (Rubery, 2003) networked or boundaryless organisations, it is obvious that such new organisational models will have huge implications for the way skills acquisition and development are organised in firms.

⁶⁵ This addition has been provided by Csaba Makó (ISB).

⁶⁶ However, based on intensive case study research on different forms of relocation and eWork, it is questioned to what extent the networked organisation is the dominant (and sole) new form of corporate structure. Flecker (2005: 7) argues that at the same time growing concentration and consolidation of business functions lead to new forms of big transnational companies.

⁶⁷ See notably the Re-Lier project, <http://www.relier.org/uk/project.php> (downloaded January 2006).

7.3.2 Skills acquisition in a new environment

7.3.2.1 *The dismantling of the traditional internal labour market*

Traditionally the concept of the 'internal labour market' has been defined quite strictly as a form of structured labour market within organisations, characterised by providing internal career possibilities and discouraging exit to other companies. Internal labour markets typically have the following features: access from outside (the external labour market) is restricted to specific entry points, often at lower levels; more senior jobs are filled by internal promotion or transfer, often accompanied by in-house job specific and firm specific training (WORKS glossary). Such internal structures are seen as characteristic of typically large organisations, especially those that claim an organisational benefit from encouraging long service.⁶⁸

To state this in a somewhat simplified form, the 'traditional' internal labour market offered stable and secure employment contracts, had transparent wage structures, clear internal promotion opportunities and stabilised relationships between capital and labour. These are especially important for workers with low initial qualifications entering the firm. Today, it is observed that this 'sheltered' employment situation is increasingly hollowed out as a consequence of the increasing instability of the external environment of organisations. This can be observed both in the public and in the private sectors and both in manufacturing and in services. The increased flexibilisation of tasks, contracts, working time and wage systems, demonstrated by a vast amount of research, is the most obvious reflection of this tendency of hollowing out. Grimshaw *et al.* conclude that the 'long-standing principles associated with the classical model of the internal labour market structure have either been overturned or, when maintained, raise new areas of conflict and contradiction in the context of a transformed set of external conditions' (Grimshaw, 2001: 50). Wolff (2005) highlights the new division of hierarchical intermediations that result from the changes in the allocation of power and responsibilities to workers in France.

The transformation of employment policies and practices may have adverse implications for the reproduction of skills to the extent that the externalisation of the acquisition (and development) of the required skills are to the detriment of long-term internal skill development. This could especially be dramatic for lower-skilled workers that are the first to be confronted with more insecure working conditions as a consequence of the increased use of temporary contracts and the growing outsourcing and subcontracting tendencies. Additionally, the layering and flattening of hierarchies in organisations can imply a breakdown of internal job ladders (abolishing, for instance, middle management positions) which were crucial for the skills development and vertical mobility of employees with a low initial qualification. On the other hand, there may be paradoxical effects whereby when work is outsourced, externalisation may lead in turn to the generation of new internal labour markets within the organisations which are supplying the service. A career path within - for instance - large service suppliers may then offer more opportuni-

⁶⁸ However, the way organisations structure the entry and exit of the workforce, the skills development and promotion of employees, time and contractual issues, can also be regarded as an 'internal' labour market defined in a more general sense. It is therefore interesting to use the concept of internal labour market to describe changes in the employment relationship and in personal policies related to the changes in corporate structures.

ties for skills development than would be the case in relatively small internal departments - *e.g.* an HR or IT department - within outsourcing organisations.⁶⁹ We elaborate these assumptions and their possible implications for skills and qualifications with particular attention to offshore outsourcing.

7.3.3 Offshoring, outsourcing and skills policies

Important here is the question to what extent organisations (with the help of ICTs) outsource activities that require access and long-term availability of core skills. On the one hand, the access to skills may be an important driver to outsource when firms are confronted with skills shortages on the regional labour market. Such skills shortage in the 1990s were an important driver of outsourcing and offshoring of IT work to India. Formulated in a broader sense, organisations can be urged to form partnerships and alliances to gain access to knowledge and skills, especially in periods of accelerated product and process innovation cycles. On the other hand, companies still seem quite reluctant to outsource activities that they define as 'core' when they do not have to. For these core activities they will want to keep the skilled work force (and the knowledge) inside the company in view of their competitive advantages (Ramioul *et al.*, 2005). Despite the fact that some consultants predict that virtually every activity (with a minimal critical mass and not too much face to face contact requirements) can be offshored, in practice the model of the head and tail company still seems to prevail: activities related to research and development of new products and services, the technical design and prototyping on the one hand, and the deployment and fine-tuning with the customer at the end of the product development on the other are kept in-house for strategic reasons, while the standardised activities in the middle of the chain are outsourced or offshored.⁷⁰ The trend of outsourcing the more routine and standardised parts of a workflow might have considerable impact on the skills structures and will notably affect the employment opportunities of the lower skilled in the outsourcing organisation. Such concerns are raised in several (government) studies assessing the potential impact of offshore outsourcing (see for instance Berenschot, 2004; van Welsum & Vickery, 2006).

7.3.4 The varieties of the networked organisation and the implications for skills

The logics behind outsourcing and offshoring, and behind networking with organisations, will to an important extent determine the effects on skills. Firms that seek the secure (and relatively long-term) availability of scarce skills on the global market by forming strategic alliances, will develop different relations with these employees than when the externalisation of part of the low-skilled work to cheaper labour markets is involved. It is quite clear that firms need to be able 'to control vital pieces of knowledge - idiosyncratic knowledge as it is sometimes called - on which their own long-term competitiveness depends' (Rubery & Grimshaw, 2001: 169). One can assume that the restructuring of organisations

⁶⁹ This addition has been provided by Ursula Huws (WLRI).

⁷⁰ It should be noted, by the way, that which activities are defined as core and non-core seems an unstable and in any case an evolving concept. Which activities are considered strategic or core has changed over time, but the trend has been that an increasing number of parts and services are considered non-core and are produced by external suppliers (WTO, 2005: 268).

related to outsourcing and to new corporate governance policies (strategic alliances and long-term partnerships) will have different effects on the internal labour market structure and the skills policies, depending on the strategic importance of the activities concerned.

On the one hand, fragmenting work over different organisations belonging to the same multinational company or with third parties increases risks related to the quality and the quantity of the performance. To reduce these risks the relationships between the organisations, and between the employees involved, are increasingly dependent on legal contracts (outsourcing contracts, 'due diligence', service level agreements, *etc.*), explicit procedures and performance monitoring (whether electronically or not). The complexity of governance when combining all the work to be delivered by various links in the network will obviously require a risk policy against 'bugs'.

On the other hand, research shows that growing tendencies of outsourcing do not only lead to networked forms of organisations. Based on intensive case study research Flecker (2005: 7) argues that at the same time growing concentration and consolidation of business functions lead to new forms of big transnational companies. This growing importance of intermediaries is further elaborated in the Chapter 2. It would be interesting to investigate what the consequences are for the qualification profiles of jobs, the skill profiles and the career paths of employees shifting to (big or small) firms specialised in outsourced business functions, like IT services, IT enabled services, multimedia, HRM, logistics, *etc.* It is possible that there are more diversified internal labour market structures in these specialised intermediaries, allowing for more opportunities for learning and for horizontal and vertical mobility within the service supplier. However, such specialisation and scaling-up may also imply standardisation and more division of labour, leading to a deterioration of learning opportunities in comparison with the situation in the outsourcing company.

7.3.4.1 Risks or opportunities for skills acquisition in networks?

Based on several case studies of organisations with 'blurred boundaries', Grugulis (2005) shows that several tendencies may be observed with respect to skills policies in such new organisational models. On the one hand, the so-called high level networks can be characterised as 'learning networks'. Networking beyond the initial company can provide learning opportunities because employees gain access to networks of experts, new information and knowledge; such interorganisational relationships can also encourage firm specific and interorganisational trust. New organisational forms can also support skill development in the jobs by providing levels of discretion not found in traditional organisations. They may also support individual skills development by an increased offer of formal training opportunities, related to the formalisation of the relationships within the network, provided these formal training opportunities are not too task specific (Grugulis, 2005: 200). However, 'although relational partnerships and high-trust knowledge were often desired, the risks inherent in networks often resulted in a significant increase in performance monitoring. This implied that skills employees could exercise were limited and devalued. Such a context was rarely conducive to an exchange of expertise and completing the task took precedence over skill development' (*ibid.*: 202).

Another diversification of the assumptions on the learning opportunities in networked organisations is related to the growing control of private companies on the certification of

skills. This is in particular the case for ICT-related skills. Employees who are not up to date with respect to the newest software (from Microsoft, Cisco and other market leaders) are weakening their position on the labour market both in the firm and outside.⁷¹ Conditions for bidding on outsourcing contracts often include a detailed specification of required certifications of high-level knowledge of particular software packages. This ‘privatisation’ of skills certification beyond individual firms may lead to a deterioration of the control and management of vocational and educational training institutions and lifelong learning policies deployed by public authorities and by the traditional actors, such as sectoral funds.

Finally the new possibilities for externalising training costs by using the skills of workers in other locations and parts of the world might make firms less willing to cover the costs of continuous education. As these costs are significant, the question of who pays for further training is becoming more and more important. In general, the risks for the deterioration of skill development policies of companies in networked forms of organisation or in outsourcing relationships are quite similar to what happens when organisations increase their use of temporary contracts and other forms of contractual flexibility, because in both situations the ‘bureaucratic’ employment relationship between the employer and the employee is replaced by market logics. In the flexibility debate (both in research and in policy documents), the trade-off between more flexibility (*versus* rigidity) and a stable intra-firm skills development policy (*versus* externalised skills provision) has been acknowledged for a long time. It is recognised that market-based relations may not be the best basis for long-term skill development and expertise.

7.3.4.2 *The paradox of proximity*

A final skills and qualification issue related to networked organisations is the so-called ‘paradox of proximity’. This refers to the prevailing need for proximity of workers who are part of the same ‘workflow’ or team in a technological environment that bridges space and time. Including both successful and failed eWork projects, the case studies undertaken in the frame of the EMERGENCE project clearly showed the generally underestimated need for a pro-active knowledge management, for regular and non-planned face to face contact and for continuous knowledge sharing in outsourcing and offshoring projects: ‘it appears that the relocation of activities and new ‘spatial’ organisation increases the need for smoothly working unit interfaces and effective and fine-tuned communication lines and practices. This fine-tuning is a continuous process and thus does not end once the ‘relocation’ is a fact’ (Ramioul, 2003). This requirement is obviously related to the incompleteness of codification of knowledge and the role of tacit knowledge that is especially important in services and knowledge work as is described earlier.

The case studies of the EMERGENCE project illustrate that the role of implicit (tacit) knowledge and experience from the work floor is systematically underestimated by management. The crucial role of such knowledge precisely becomes explicit during the intensification of standardisation of knowledge, tasks and procedures at the occasion of outsourcing or offshoring projects. The need for a clear-cut division of work, the formalisation of knowledge, elaborated communication procedures and practices, the consid-

⁷¹ This addition has been provided by Christoph Herrmann (FORBA).

eration and 'management of cultural aspects of co-operation, the management of space and distance is in addition exacerbated when relocation to far destinations is involved. In this respect, the expectations put forward with respect to the capacities of ICTs are often overestimated, to say the least, and the risk of a new technological determinism is not fictitious. Based on her case study research, Grugulis cites for instance 'Even the simplest jobs, such as the security staff, were broader and demanded more skills to be performed well than was assumed by the performance indicators sets' (Grugulis, 2005: 216).

7.4 Conclusion

To the extent that ICTs allow bridging the boundaries of organisations, to steer and monitor global production processes, to connect different firms, teams and workers globally on a permanent basis, a new illusion is created: the illusion that collaboration and fine-tuning between mutually interdependent activities can be organised seamlessly over distance. The role of informalities in a team, the importance of spontaneous communication and random contacts, and the role of 'sharing' time, space and tools for mutual learning is often neglected. Despite several experiments and new organisational models, it can probably never be expected that integrated information systems, networks and interactive media can fully take over the key role of face to face human interaction and communication for performing work systems nor its significance for individual and organisational learning.

'Networked organisations are often assumed to have the capacity to tap into different forms of advantage: in expertise and experience, in markets and hierarchies, in control mechanisms and work design. Factors that offer opportunities for learning developing skills and transferring knowledge' (Grugulis, 2005: 214). However, such win-win or, 'high-trust' situations, can be regarded as rather exceptional and dependent on the combination of favourable circumstances.

7.5 Research questions for WORKS

Based on this literature review, we can now formulate some possible research hypotheses and questions for the next steps of the WORKS project.

7.5.1 Work organisation

Objective: analysing (new) forms of work organisation, division of work, and workplace design at the establishment level

The first level of impact of corporate restructuring is on the work organisation of the business function under investigation in the individual firm. The work organisation can be described as the distribution of the 'task pool' of an organisation over the work force (once the technical infrastructure of production processes is implemented). These tasks can be (1) assigned internally, (2) provided by employees belonging to the firm but not operating on the premises (eWork), (3) provided by third parties operating on the firm's

premises (subcontracting) or (4) supplied from outside (suppliers). The main hypotheses are:

1. the research on work organisation can no longer be limited to task structures and social relations within establishments and workplaces. The firm has become a multi-employer environment and employment is managed across organisational boundaries. With respect to control and co-ordination this implies not only hierarchical forms but also market-forms of management, including a pertinent role of the customer (customer-orientation);
2. other models of co-ordination than the bureaucratic vertically integrated firm increase risks related to the quality and the quantity of the performance at the level of the value chain. To reduce these risks the relationships between the organisations and the employees involved, are increasingly dependent on legal contracts (outsourcing contracts, due diligence, service level agreements, *etc.*) explicit procedures and performance monitoring (whether electronic or not);
3. under what conditions are jobs routinised and Taylorised, leading to deskilling, and when do they require autonomy and decision-making, which implies the use of more knowledge and skills? What is the role of ICTs and of organisational change in these processes?;
4. how is knowledge work organised in the new corporate environment and in a context of growing codification and commodification possibilities related to the widespread use of ICT? The complexity and uncertainty of knowledge (high-skilled) work has always implied the need for a work organisation with a high degree of autonomy, self-organisation and discretion, and delegation of responsibilities. These jobs require autonomy and opportunities for learning and intensive interaction and collaboration with others (inside and beyond the firm) in view of problem-solving and in view of the 'spiral of knowledge creation (tacit-codified)'. The new organisational environment, both stretching across the traditional boundaries of organisations and bringing different employers and customers into the firm, raises the question to what extent this autonomy is counterbalanced with internalisation of market principles into work processes and into the individual: tight financial control, formalisation and (self-)rationalisation, increasing centralisation of control, leading to more pressure and stress;
5. the 'paradox of proximity': what is the balance between the need for informal learning and 'communities of practice, organisational learning on the one hand, and formalisation, centralisation and control due to working over (legal and spatial) distance on the other?;
6. the gender division of labour: how are these changes gender-biased?

7.5.2 Internal labour market and skills and qualification issues at the level of the firm/business function

Objective: analysing the impact of organisational changes on internal labour market structure, personnel policies with focus on skill and qualification issues (in-, through- and outflow policies, learning and skill policies)

In the context of blurring organisational boundaries, longstanding principles associated with the classical model of the internal labour market structure seem to be overturned, leading to a differentiation of policies with respect to qualification issues at the level of the internal labour market. Intra-firm skills development policy measures *versus* externalised skills provision is a core issue in this part of the research. The main hypotheses are:

1. the logics behind corporate restructuring will to an important extent determine the effects on skills and skills provision policies. Firms that seek the secure (and relatively long-term) availability of scarce skills on the market will develop different relations with these employees than when the externalisation of part of the low-skilled work to cheaper labour markets is involved. What is the precise role and importance of in-house skills provision and development *versus* skills acquisition on the external labour market in restructured organisations?;
2. it can be assumed that the blurring of boundaries of organisations will reinforce the deterioration of internal skill development mechanisms. On the other hand, the emergence and growth of intermediary service suppliers might give birth to new internal labour market structure, providing employees with new learning opportunities and more horizontal and vertical mobility opportunities or on the contrary with more standardised and divided work processes and tasks;
3. the networking beyond the initial company can provide learning opportunities because employees gain access to networks of experts, new information and knowledge. On the other hand, the risks inherent in networks often result in a significant increase in performance monitoring;
4. increased performance monitoring and control systems (such as scripts and procedures) accompanying new forms of networked organisation supported by ICTs, limit the opportunities employees have to exercise and develop technical or professional skills;
5. there is a growing shift to social and relational forms of knowledge and a shift from technical to social collaboration structures;
6. what is the relative importance of soft and generic skills *versus* technical and professional skills for the occupations under investigation? How can these soft skills be described? To what extent are soft competences linked to skilled work under increased monitoring and formalisation of procedures?

8 New career trajectories and occupational identities

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European labour markets have changed profoundly. There are relatively more people engaged in the service sector and relatively more women and migrant workers in the work force. Collective regulation of labour markets is slowly being weakened (Alaluf & Prieto, 2001). Although the mode and extent varies between Member States according to national labour market regulations, there is a general trend towards non-standard forms of employment within the EU (European Foundation, 2003; Dasgupta, 2001). Non-standard forms of work include employment on fixed-term contracts, part-time, temporary and agency work, marginal employment and self-employment. However, it is also quite clear that for many countries it would be exaggerated to speak of an erosion of the standard employment relationship; rather there seems to be a stable core of rather protected employment (Bosch, 2002; Supiot, 2001). The emergence of non-standard forms of employment is linked to a growing polarisation of wages and income and an expanding low-wage sector in many European countries (Gray, 2004).

One of the most important changes in work organisation in the last two decades has been increasing flexibility in the assignment of task or deployment of personnel usually referred to as functional flexibility. A wide range of measures has been implemented to achieve this, ranging from job enlargement and multitasking to team working. There are, however, widely differing estimates of the extent of diffusion of new principles of division of labour such as 'team working', depending on the precise definition of the practices under investigation. Additionally, recent evidence has challenged the positive picture of new forms of work organisation. There seems to be a trend towards polarisation between a rise in broadly defined and autonomous forms of work and work with low levels of autonomy, co-operation and participation.

There are thus contradictory tendencies at play. On the one hand, a rise in the demand for 'soft skills', such as language, communication skills and self-management have encouraged a blurring of the boundaries between occupations and the emergence of new work roles. The dispersal of employees to clients' premises, as teleworkers or in projects, has also encouraged multitasking and self-servicing by workers. This has been accompanied by the flattening of decision-making structures, a fusion of conceptual and operative roles (*e.g.* production and quality control, or assembly and maintenance), and the broadening of the roles and skills required of individual worker (*e.g.* multitasking, team working). This latter form of work organisation is associated with the high-trust, high performance firm. In contrast to trends in high performance work, the increasing formalisation and codification of skills and a new emphasis on standardisation have encouraged new forms of control, for instance in call centres. Numerical or external flexibility in work organisation represents a further 'distancing' of workers from the final product and their contractual relationship to their employers is also divided into progressively shorter periods (fixed-term, temporary, on-call, subcontracting).

In global production and service networks, work is often organised into projects, which has major consequences for competence profiles, work pressure, and the responsibility of the individual employee. Advances in technology potentially enable employees to work at home or in distributed work environments which greatly increases autonomy, but which often means a change in company control measures. Distributed work forms also demand that employees constantly reorient themselves to new situations, colleagues and problems. Often this reorientation process takes place outside of familiar national contexts, in different 'experience spaces'. Educational and training systems as they exist now do little to prepare employees for this new situation (Meil & Heidling, 2005). Another challenge is that non-hierarchical virtual project teams, where each member shares responsibility, are still anchored in hierarchical organisations. The employee has decision-making autonomy but is simultaneously a subordinate. This tends to leave the worker without leadership whilst still holding responsibility for their work (Sennett, 2000).

But there has not only been rapid change in the skills and knowledge required from workers but also a widespread intensification of work (Huws, 2003) for many groups of employees. This is not only true for non-standard forms of employment but also especially for managers, professionals, technicians and self-employed workers (Wagner, 2000; Green, 2001; Basso, 2003). This change has blurred the boundaries between work and non-work (Taylor, 2001; Perrons, 2003). While new technologies (ICT) and flexible forms of employment might contribute to autonomy and commitment to work they have also significantly increased the pressure at work, and because of the blurring of boundaries between work and non-work, in private life too (Hyman *et al.*, 2003).

Summarising, current changes in the world of work in Europe (detailed in some of the other chapters in this report) have a significant impact on the transformation of occupational identities and forms of social integration. At the same time, the preferences of people in work and private life have become much more diverse, due to the rising culture of individualisation and emancipation. More people strive for a 'parallelisation' of activities, seeking good opportunities to reconcile employment with other activities, such as study, housework, child care, part-time retirement or cultural participation (Schmid, 2002).

Diversification may be an overarching concept to describe these changes. Through the emergence of new and non-standard forms of work and employment, careers become increasingly de-standardised and the life course becomes less uniform and less 'pre-shaped'. People have to cope with more frequent transitions between different statuses (work, domestic responsibilities, and education). Certain phases in life and thus certain needs and demands become more important as can be seen in relation to population and work force ageing as well as to new family structures and household forms. Forms of cohabitation and employment, the two main contracts individuals sign up to, have become more diverse. Diversification concerns many components of the relation to work:

Diversification of forms of employment along the career: wage earner or self-employed, fixed-term or permanent contracts, interim, transitional jobs (subsidised employment), part-time retirement, etc.:

- *increasing discontinuity:* alternating periods of unemployment and employment (under various work statuses); periods of retraining; career breaks (for maternity, caring or other personal reasons); moves from full-time to part-time work or vice-versa, etc.;
- *diversification of interactions between career paths and private life:* changing criteria for conciliation between work and private life, as well as changing evaluation of work-life bal-

ance, along the career; diversification of household models; diversification of entry routes to the labour market;

- *diversification of expectations towards work*: diversified expectations according to age, gender, levels of education, household patterns; increasing importance of personal satisfaction at work.

These changes, characterised by an increased diversification, create new challenges for individuals or reinforce existing challenges. The focus on autonomy and employability increases the part of subjectivity in work while at the same time the working environment becomes more and more insecure and unstable:

- *autonomy, empowerment, responsibility*: new forms of work organisation often rely on autonomy (increased, but framed), responsibility (decentralised, but monitored) and high personal involvement (required, but not always rewarded) of individuals at work. Project work and teamwork are examples of expanding organisational patterns in which this dialectics of autonomy, responsibility and empowerment take acute forms;
- *precariousness and insecurity*: precariousness and insecurity take many forms in work and impact strongly on trajectories and identities. However, the concept of insecurity is wide and needs clarification. Employment insecurity and labour market insecurity refer to the risk of losing a job or not finding a job because of high levels of unemployment and the emergence of precarious and atypical forms of employment. Income insecurity refers to the growing unpredictability of earnings caused by new remuneration systems but also low levels of household income due to growing low-wage employment. Skill reproduction insecurity refers to the devaluation of knowledge and skills and the lack of learning opportunities. Work insecurity refers to the erosion of institutional safeguards against flexible working conditions and flexible work schedules;
- *employability*: employability is a catchword covering a variety of changes in the employment relation during a working life and is currently used in many employment policies and business strategies so that it sometimes appears more like a policy concept than a scientific one. Employability tends to replace employment. Employability often consists of transferring the responsibility for training and updating skills and knowledge from the employer (and its HRM policy) to employees, but often without providing them with sufficient guidelines or accompanying procedures. Employability also relates to the individualisation of the relation to work, to uncertainties in career building and to the process of lifelong learning;
- *continuously changing organisational environments*: even for those who are in 'stable' segments of their career trajectory (and *a fortiori* for the others), continuously changing organisational environments introduce increasing uncertainty about the perception of the future, at the individual level and at the level of the social relationships at the workplace. Continuous restructuring entails continuous displacement of milestones in career paths. The accelerated rhythm of organisational restructuring also induces differentiated behaviours among workers according to their capacity to keep pace, resulting in selection processes. It is not only ageing workers who are affected by such processes.

8.1 New trends in careers and professional trajectories

This section will not develop a comprehensive overview of existing career theories, but focus on those theories which are connected to organisational changes and restructuring, in accordance with the research questions of the WORKS project.

Research on careers does not belong to a single discipline. Two main research streams can be distinguished and related to different theoretical approaches (Guerrero, Cerdin & Roger, 2004). The first stream relates to human resource management, psychology and organisation theories, and considers careers as individual paths within or between organisations. Here, *career* is the key word. The second stream relates to the labour market and focuses on insertion, mobility, transitions and professional paths. Here *trajectory* is the key word. In the first approach, the main drivers for understanding new career models are managerial changes, such as the network firm, flat hierarchies, new forms of work organisation and business process reengineering. In the second approach, other drivers are privileged: increasing flexibility of the labour market, evolution of skills and training, job creation or destruction, security or precariousness. Changes in individual attitudes towards work play an important part in both approaches.

8.1.1 Changing organisations, changing careers

Although several theories deal either with the individual or with the collective dimension of careers, within the boundaries of specific disciplines (psychology, economics of human capital, management, *etc.*), other approaches aim at combining both dimensions in a cross-disciplinary perspective.

Among these attempts, the concept of *career anchor* (Schein, 1978/1990; Cadin *et al.*, 2003) is defined as a combination of three components: self-perceived talents and abilities, which are constructed through professional success; evolving individual motivations and needs; self-perceived values and attitudes resulting from interactions with organisational cultures. Eight types of career anchors are proposed by Schein: security/stability; autonomy/independence; lifestyle; technical/functional competence; general managerial competence; entrepreneurial creativity; service or dedication to a cause; pure challenge. Each individual builds up his or her career with reference to one or more career anchors, but career anchors only become structured after some initial work experience. Beyond the classical distinction between the 'objective' career (which is defined by organisational policies and societal concepts) and the 'subjective' career (which is the self-perceived path of one's work life), career anchors may remain strong and stable along a worker's life, even if drastic changes occur in the objective or the subjective career.

Revisiting his own concept in the light of organisational changes during the 1990s, Schein comments on some important evolutions in the content and structure of career anchors (Schein, 1996). The lifestyle anchor has become increasingly important, most often associated with another anchor. The autonomy anchor is aligned, for the moment, with most organisational policies, promising employability instead of security. Although it is easy to predict a growing role in knowledge-based careers, the anchor of technical/functional competence is deeply challenged by the accelerated rhythms of updating knowledge and skills. Dedication to a cause has also become an emerging anchor, which is partly linked to the expansion of social and personal services, partly to a growing need for self-realisation through work. Nevertheless, none of the eight anchors is disappearing.

The hypothesis of the permanence of anchors despite organisational turbulence is at the core of this theory.

Other career theories are based on the opposition between organisational careers, which are defined by organisational or professional rules and models, and 'new' careers, in which the individual takes the initiative. The concept of *protean career* (Hall & Moss, 1998; Guerrero, 2001) is defined by six features:

- the career is managed by the individual, not by the enterprise;
- the career is defined as a series of experiences (in work, education and training), transitions, and identity changes throughout the working life;
- personal development relies on continued learning, and on the capacity to develop relational networks and to improve job content;
- the components of professional success are learning capacity (instead of know-how), employability (instead of job security) and professional fulfilment;
- in return, the enterprise is committed to offer jobs with responsibilities, access to information sources, and opportunities for personal development;
- the final goal is psychological success.

According to some authors, the expansion of protean careers and the decline of organisational careers result from convergent changes in both the organisation of the economy and the evolving expectations of individuals. The protean career is not seen as a path towards better positions, but as script written by each individual in 'weak environments' (Alvarez, 2000). Other authors, without denying the emergence of protean careers, emphasise that such careers are concentrated in some categories of qualified professionals or knowledge-intensive sectors, and that non-traditional patterns of organisational careers are also emerging (Dany, 2003).

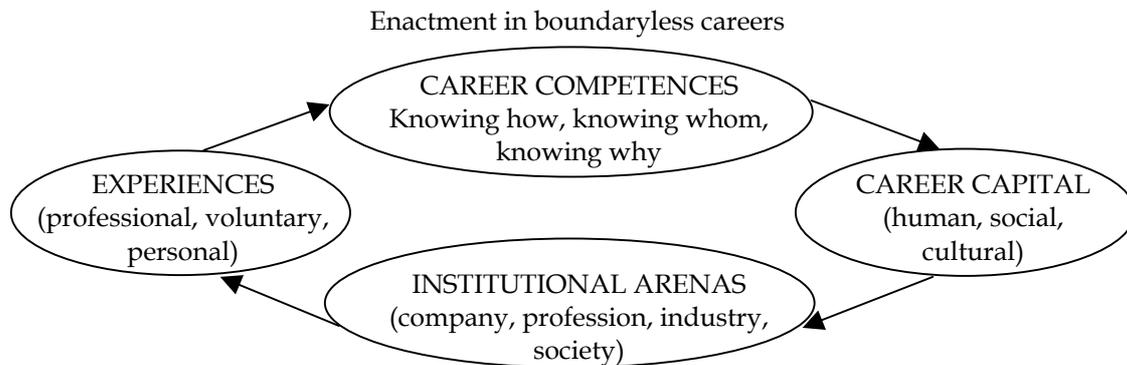
A key component of new career models is the growing role of *psychological contracts* (Rousseau, 1995; Cadin *et al.*, 2003). The psychological contract relies on the beliefs of employees concerning their reciprocal relationships with their employers; these beliefs are used as foundations of social relations in order to reduce uncertainties (Guerrero, 2001). The psychological contract has a prospective connotation and reflects the expectations towards work contents and work relations; it makes it possible to explain employees' loyalty and organisational involvement. Two kinds of psychological contract are mentioned in the literature: transactional and the relational contracts. The relational contract is a long-term compromise, exchanging loyalty, performance and involvement for career progression, training opportunities and material and non-material advantages; that can be re-evaluated along time. The transactional contract is a short-term 'calculated commitment', including specific and negotiable obligations, merit remuneration or performance-related wages, encouragement of professional mobility and development of personal competences. The shift from relational contracts to transactional contracts is considered by several authors to be in line with employability, project work, networking and other current organisational changes (Miles & Snow, in Arthur & Rousseau, 1996; Galunic & Anderson, 2000; Guerrero *et al.*, 2004).

A step further is made with the concept of the *boundaryless career* (Arthur & Rousseau, 1996) or *nomadic career*, which is considered by several authors as a new paradigm in career theory (Cadin *et al.*, 2003). Boundaryless careers are characterised by a weak link with

the company and a strong emphasis on autonomy and empowerment. They are shaped by several (voluntary or involuntary) changes of employer within the same profession or through changing or evolving professional profiles. The concept of boundaryless career relies on several other concepts (Arthur *et al.*, 1999):

- *weak environments*: in opposition to strong environments (unambiguous, intelligible, predictable), weak environments are characterised by instability, unpredictability and 'self-designing' organisations. Boundaryless careers are both a consequence of organisational changes and a condition of success of relevant 'self-designing organisational forms' in weak environments (Weick, 1995);
- *competences*: three types of competence are at the core of the concept of boundaryless careers: knowing how (knowledge and know-how accumulated through professional experience or other experiences); knowing whom (business relationships, personal relationships, social networks, contacts); knowing why (individual identity and motivation, work culture, sense making, career anchors);
- *learning*: experiences in the professional or personal areas are systematically interpreted as a process of accumulation and learning, building up the three forms of 'knowing';
- *enactment*: although careers are an individual process of sense making (knowing why), the development of boundaryless careers also transforms organisations and specific labour markets, through its action in institutional arenas. The enactment process, which is described in Figure 8.1, not only occurs at the individual level, but also within professional groups or in emerging industries (Cadin *et al.*, 2003).

Figure 8.1 The development scheme of boundaryless careers ('enactment process') is summarised in the next figure



Sources: According to Tremblay, 2003: 6; Cadin *et al.*, 2003: 62

As boundaryless careers are often presented as 'the' new career model of the emerging knowledge-based society, a specific section of this chapter is devoted to the discussion of arguments favourable or unfavourable to this hypothesis (paragraph 8.2.2).

Finally, not all career theories or typologies are based on the opposition between 'traditional' and 'new' careers. For instance, the concept of *career fields* (Iellatchitch, May-

rhofer & Meyer, 2003) is claimed by its authors to cover both traditional and new careers. They identify four career types:

- *company world*: an organisational career, characterised by a long-term relationship with an organisation, where the hierarchical position is the key resource;
- *free floating professionalism*: specialised professionals who regard organisations as their clients, for limited duration; key resources are knowledge, level of expertise and reputation;
- *self-employment*: an autonomous career outside organisations, for independent professionals or entrepreneurs;
- *chronic flexibility*: a career that includes frequent changes of job, either within an organisation or between organisations, or from being an employee to self-employment and *vice versa*, or between different work statuses. There is no specialised professional expertise, but rather polyvalent skills; the key resource is the ability to adapt to changing occupational environments.

Each type of career is identified as a 'field' according to Bourdieu's theory (*i.e.* a field of forces), whereby individuals are competing to access specific capital and acquire better positions, knowing or discovering the rules of the game in the field. Each of the four fields can be characterised by two tensions: actors' coupling and actors' configuration (cf. Figure 8.2). Tight coupling means that actors are closely intertwined in their decisions, whilst loose coupling means that the decisions of an actor have slight influence on others. A stable configuration of actors means that their roles and relationships are evolving slowly, whilst an unstable configuration indicates frequent or unpredictable changes.

Figure 8.2 Career fields

		Actors' configuration	
		Stable	Unstable
Actors' coupling	Tight	COMPANY WORLD	FREE FLOATING PROFESSIONALISM
	Loose	SELF-EMPLOYMENT	CHRONIC FLEXIBILITY

Source: Guerrero, Cerdin & Roger, 2004: 127

Such a map of career fields can be useful to carry out qualitative analysis of empirical material (Iellatchitch *et al.*, 2003).

8.2 The debate on boundaryless careers

Some transversal questions cross the debate on boundaryless careers. Are they typical of the knowledge-based society? Is there a gender bias? To what extent are they premonitory of future wider trends?

Several authors establish an explicit link between the development of boundaryless careers and organisational changes in the knowledge-based economy. Among new forms of work organisation, project work is identified as a powerful incentive for boundaryless careers (Guerrero, 2001; Tremblay, 2003; Valgaeren, 2005). Project work concentrates several favourable features of boundaryless careers: commitments are linked to projects, not to organisations; knowledge is a key resource; work experience is based on accumulation and learning; and networks and communities of practices play an important part. Project work allows individuals to build their own 'network of mobility' and 'map of employability' (Tremblay, 2003). Nevertheless, boundaryless careers are not essential to project work, and organisational careers are quite compatible with work organisation based on projects.

Other organisational features support the emergence of boundaryless careers. Such careers are less sensitive to job relocation, they are compatible with moving work locations and the changing geography of economic activities. ICT-intensive environments allow for accurate and transparent access to the labour market and to efficient self-training (Guerrero, 2001).

The model of the boundaryless career appears to be in line with organisational patterns linked to the restructuring of global value chains, because the occupational identity and career trajectory in the case of boundaryless careers are constituted to a much greater extent upon the opinion, acknowledgement, recognition and development of the individual person as such in the peer group and within the frame of the same profession, rather than in the particular economic organisation and through the possibilities offered by the organisation.

The concept of boundaryless or nomadic career needs differentiation in relation to how much control individuals have over the various stages, at least, when this is applied to nomadic careers in general. It could be interpreted as a concept referring to the need to organise one's career with more or less control over the different elements, thus also being able to grasp 'nomadic behaviour out of necessity'. It might be interesting to differentiate between different types of workers, forced to cope with the challenges or opportunities of a boundaryless career, which can have in a way positive or negative implications for the individuals. Differentiation has also to be introduced as regards the features of the organisation of the labour market in transitional economies, for instance in the New Member States. Hybridisation of career patterns may also result from the need of employees to work part-time as self-employed or micro-entrepreneurs.⁷²

Gender and ethnicity are important variables to take into account in the discussion of boundaryless careers, and, furthermore, in the individual dimension of changing career patterns.

72 Thanks to Linda Nierling and Martin Bechmann (ITAS-FZK), Csaba Makó, Péter Csizmadia and Miklós Illésy (ISB) and Rumiana Stoilova (IS) for their observations on these aspects of the debate on boundaryless careers.

As regards the gender issue, the key question is whether women are favoured or disadvantaged by the expansion of boundaryless careers (Valenduc *et al.*, 2004). For some authors, such careers present opportunities for women. In network organisations, characterised by the importance of group work, project work, co-operation and distributed information, relational competences (knowing whom) become advantages. Women have more frequently than men a mixed skills background, including both technical skills and communication skills. According to Bender *et al.* (2001), women would be better than men at developing trust in work relations, which constitutes a potential advantage in boundaryless careers. Another possible advantage for women could be their greater experience of discontinuity in work. Women's professional trajectories are often made up of discontinuities, mainly due to family events, while the professional trajectories of men are more linear. This experience gives women psychological and social resources to face nomadic careers. On the other hand, other sources raise a series of factors disadvantaging women: the problem of geographical mobility, which obliges women more often than men to interrupt their careers; disruptions of careers, which distances women from professional networks and erodes their competences; and the problem of time investment, which is necessary to develop professional networks (Bailly *et al.*, 2000).

Ethnicity is a less studied variable as the focus is set on individual careers. This is partly due to the specific features of the empirical basis of most of studies of boundaryless careers. Recent studies carried out in the USA however consider ethnicity as a factor shaping career paths (Tomaskovic-Devey *et al.*, 2005; Fouad, 2005; Royster, 2003).⁷³

Furthermore, the very research question is probably not to pinpoint convergences between boundaryless careers and new knowledge-based jobs. It is to consider to what extent the currently observable boundaryless careers (or other forms of protean careers) are premonitory of wider changes in careers and professional trajectories. This raises the question of the empirical basis of studies of boundaryless careers.

Most empirical research on boundaryless careers has been conducted in ICT-intensive, knowledge-intensive or creative industries: software services and multimedia, advertising, business services, games and movies, electronic maintenance, electric utilities, financial services, *etc.* Other studies have focused on particular professions, such as consultants, executives, R&D personnel, itinerant sales personnel, *etc.* Some cross-country comparisons are also available, for instance between France and New-Zealand (Cadin *et al.*, 2003) or Europe and North America (Bailly *et al.*, 2000; Dany, 2003). These studies underline the strong influence of national contexts and 'locally-shaped' variables on the enactment process described in Figure 8.1. However, the general trends and enabling factors for the development of boundaryless careers are assessed as quite similar.

Nevertheless, several authors criticise the relevance and impact of boundaryless careers beyond the privileged empirical field of knowledge-based industries. Three categories of critical arguments can be distinguished:

- there is a statistical paradox to be solved: although empirical evidence of boundaryless careers does exist where they are studied (mainly through qualitative research), labour statistics do not deliver clear-cut figures. As far as the indicator 'inter-company mobility' is concerned, statistics do not reveal any recent and significant increase in the spe-

73 Thanks to Ursula Huws (WLRI) for having drawn our attention to this point.

cific mobility of professionals or executives, either in Europe or in the US. Conversely, some studies show that inter-company mobility is higher and increasing for low-skilled workers (Gautié, 2003; Valcourt & Tolbert, 2003);

- a series of studies emphasise the renewal of the model of organisational careers and its increasing attractiveness for the same target public as boundaryless careers. The organisational model is also incorporating new values and new forms of career capital based on knowledge and networks. Weak environments evolve towards stabilisation by defining new rules, more flexible and customised than in the past. New organisational rules are not only perceived as constraints, but also as resources for individuals. There is no empirical evidence that renewed organisational careers are less appreciated by individuals than boundaryless careers (Storey, 2000; Valcourt & Tolbert, 2003);
- other arguments underline a possible confusion about ‘nomadic’ trajectories, concerning, on the one hand, voluntary commitments in boundaryless careers, and on the other hand, frequent changes of jobs and employers resulting from the increasing flexibility of the labour market. Examples such as interim workers, or unemployed people experimenting with a series of transitional jobs, do not fit the model of the boundaryless career, although they are obviously nomadic workers (Dany, in Guerrero *et al.*, 2004).

8.3 Diversification of professional trajectories

When moving from the focus on careers to the focus on trajectories, the labour market replaces the organisation as the core research object and as the empirical field. From the methodological point of view, studies of professional trajectories often rely on medium-term longitudinal surveys,⁷⁴ or on specific mobility surveys. However, longitudinal surveys are not so frequent in labour market studies (Gautié, 2003).

The current context of increasingly flexible labour markets and company restructuring creates a polarisation effect between, on the one hand, linear trajectories within one profession and/or one company, often assimilated to the Fordist model, and on the other hand, various types of ‘broken line’ trajectories: discontinuous, transitional or reoriented trajectories.

- *discontinuity*: it leads to frequently interrupted careers, either for unemployment reasons, or because of (voluntary or constrained) individual choices, or because of illness or other accidental events, with difficulties in updating skills or entering/re-entering the labour market. Work discontinuity and private life are often closely connected;
- *transition*: such trajectories are shaped by insertion difficulties in the labour market, leading to long periods of uncertainty or precariousness, or to an accumulation of temporary solutions, for instance interim or fixed-term contracts. Such trajectories depend strongly on the evolution of employment policies and the transitional labour market;
- *reorientation*: such trajectories are characterised by changes of skills and job profiles, due to (voluntary or constrained) conversion or retraining, entailing professional mobility and other consequences on work status, work-life balance, *etc.*

74 Example: in France, the CEREQ ‘Generation 98’ survey followed a sample of 7,600 young people during six years, from their exit of the education system in 1998 until 2003 (Dupray, 2005). See also the STILE papers on mobility in the eEconomy (Ekeland, 2005; Stimpson & Tielens, 2005).

Nowadays, trajectories in the labour market can be characterised by several features, according to a set of convergent French studies (Gautié, 2003; Germe, Monchartre & Pottier, 2003; Dupray, 2005; Méda & Minault, 2005):

- *multiplications of transitions*: there is a significant increase in the number of transitions, either from employment to employment (eventually between different types of work contracts), or from employment to unemployment or vice versa; for example, in France, 17 per cent of the active population experienced at least one transition during the year 2001. Unemployment is at the core of this trend in multiplication of transitions and makes them more risky. Transitions are not only frequent at the beginning of professional trajectories, but also later. Voluntary transitions from job to job are also increasingly frequent (Amossé, 2003);
- *emergence of 'transition phases'*, linking several transitions and leading to semi-structured 'transitional periods', frequently supported by public employment policies, for example: the insertion process from education to work; the insertion process into unemployment; the re-insertion process after job loss due to industrial restructuring;
- *diversification of trajectories*, due to several factors: multiplication of transitions, intertwined constraints on professional and family life, the influence of lifelong training, differentiated wage progression or geographical mobility. Trajectories of high-skilled employees and executives are less diversified and more linear than those of low-skilled employees; mobility within companies is generally linked to progression, whilst external mobility allows for 'catching up' in the labour market (Dupray, 2005);
- *persistence of linear trajectories* in specific professional pathways, mainly: the skilled production worker (technician - foreman - lower management); the administrative clerical worker; the specialised craft worker (from wage-earner to independent craftsman and sometimes entrepreneur).

The growth of interim work (temporary work for an agency) is an indicator of the diversification of professional trajectories. Interim work is not only a signal of increasingly flexible labour markets; it also reveals new trends and attitudes towards work. Three types of trajectory can be identified in interim work (Faure-Guichard, 2000): *insertion interim*, in the form of atypical jobs at the beginning of a career, in a process of job seeking; *transition interim*, resulting from imposed or voluntary reorientation; *professional interim*, as a structured behaviour on the labour market of specialised professions (either manual or intellectual) or as a way to conduct an adventurous career.

Many studies, including several European projects,⁷⁵ have focused on the transition phase of young adults from education to the labour market, for two reasons: to understand youth unemployment and to consider whether the beginning of a trajectory is a predictor of the future trajectory. In a comparative study of the UK and Germany, Evans and Heinz (1995) suggested a correspondence between four types of transition from education to work and five types of beginning professional trajectories (Figure 8.3).

This table reveals two main findings: on the one hand, a polarisation between difficult transitions leading to stagnant or downward trajectories, and successful transitions lead-

75 For example, CATEWE (Comparative analysis of transitions from education to work in Europe); Misleading trajectories (Evaluation of unintended effects of labour market integration policies for young adults in Europe).

ing to progressive career patterns; and on the other hand, the importance of 'upward drift career patterns', moving out the predicted trajectory outcome, for any type of transition.

Figure 8.3 Transitions to work and early professional trajectories

		<i>Transition from education to work</i>			
		Academic transition through higher education	Education or vocational training leading to skilled employment	Other forms of education or training leading to semi-skilled jobs	Early experience of unskilled jobs, unemployment or remedial schemes
Beginning professional trajectory	Progressive trajectory, institutionally predictable	X	X		
	Upward drift trajectory, moving out the predictable path, through new training or by taking risks	X	X	X	X
	Stagnant trajectory: transition to work but without clear future direction or goal			X	X
	Downward or damaged trajectory, vicious circle leading to unemployment or marginalisation			X	X
	Repaired or interrupted trajectory, not achieved immediately	X	X		

Source: According to Evans & Heinz, 1995

The final question in this section is to consider how and to what extent the diversification of trajectories is linked to restructuring in the knowledge-based economy, beyond the implicit hypothesis of increasingly flexible labour markets. There are numerous partial answers to this question, for example: studies of professional mobility in the ICT sector (Stimpson & Tielens, 2005), studies of the career trajectories of knowledge workers (Tomlinson & Miles, 1999), studies of trajectories in ICT occupations (Vendramin, 2004; Valgaeren, 2005). These studies confirm the diversification of professional trajectories, although some of them also underline long-term economic risks linked to exacerbated external mobility. However, this particular 'ICT insight' is obviously not sufficient, insofar as knowledge-based cannot be reduced to ICT-intensiveness.

8.4 Occupational identities in the knowledge based society

The relationship between personal identity and paid work has been a source of concern to nearly all those engaged in theorising about modern work organisation and behaviour (Du Gay, 1996). The increased interest in social identity theory reflects a growing realisation that work behaviour is to an important extent determined by people's membership of social groups, and hence that work-related issues can often be best understood with reference to intra-group processes and inter-group relations (Ellemers *et al.*, 2003). As a fundamental human category, work is represented not only as an occupation, but also as a stable, consistent source of self-identity. Many social scientists consider work to be the crucial source of meaning in people's lives.

Without going through all the debates on the diverse concepts of work-related identity (mainly, professional identity, occupational identity and work identity), it is necessary to explain why in this chapter and in the framework of WORKS we will refer to the concept of 'occupational identity'. Professional identity first refers to what is called in French 'identité de métier'; this refers to the characteristics of specific professional groups, but without a strong focus on work contexts or interrelations with organisational change. Work identity (in French 'identité au travail') is a broader concept that encompasses all dimensions of a social identity that have to do with work. Occupational identity is the aspect of work-related identity that allows the best focus on the interrelations between changes in work contexts and organisations and the part of a social identity that is shaped by these concrete work experiences. We know that this distinction is debatable; however from the perspective of WORKS' objectives, it is the one that allows the more focused research approach.

8.4.1 The components of occupational identities

Through a comparison of three different occupational groups, Becker (1971), quoted by Dorte (2000), suggests four major elements of work identification. All these four elements have to face major changes in work, organisation and labour markets:

- *public attitudes and social position in the larger society*: occupational identity is linked to the pleasure and pain of work, as well as the imagined responses of the public. According to Fine (1996), workers evaluate their satisfaction both internally and externally, and need both internal and external recognition. Occupational identity also contains an implicit reference to the person's position in a larger society;
- *commitment to work or specific tasks*: the elements of attachment, or lack of it, to a specific set of tasks and ways of handling them, and the feeling of capability to engage in such activities, also play an important part in identification with one's work. Workers are most likely to feel identified with some specific kinds of tasks. There may be a feeling that only some sharply limited set of work tasks, carried out in a particular way, is proper, with all others being excluded. This could in fact be the most important dimension of identification with one's work for many workers;
- *commitment to a workplace or a specific organisation*: an occupational identity tends to specify the kinds of organisations, and positions within them, it is desirable or likely that one will work for or continue working for. How individual workers look upon their work also interrelates strongly with their commitment to a workplace or a specific

organisation. For an organisation to function efficiently and for workers to contain alienation, participants must feel that they belong and that the organisation matters;

- *occupational title and ideology*: an important part of a person's work-based identity depends on the relationship to his or her occupational title. These names carry a great deal of symbolic meaning, which tends to be incorporated into the identity. They specify an area of endeavour belonging to those bearing the name and locate this area in relation to similar kinds of activity in a broader field. The title, with its implications, may thus be an object of attachment or avoidance. The symbolic meaning of an occupational title is also in many ways influenced by cultural and historical aspects of an occupation, and occupational cultures might therefore be a crucial element in how workers identify themselves with their work.

The theories of social identity have already demonstrated that the formation of identity is an integration of two forms of identity: on the one hand socially generated and on the other hand individually evolved. Organised work has a deep impact on mental structures and collective habits of actors from the industrial or clerical world. There is a double component in the identity (Watson, 2002; Dubar, 1996): a self-identity component (an individual's notion of who that person is) and a social identity component (the notion others have of who the person is). In an organisational context, those who perform similar work will develop a sense of occupational identity (Kelliher & Desombre, 2005). Van Knippenberg and Ellemers (2003) suggests that the work group provides the basis for shared social identity at work. For professions, occupational identity is shaped by the socialisation process of formalised training and qualification, often regulated by a professional association.

That institutional structures are shaping workers' identities is the key assumption of many social scientists who analyse the construction of work identities. Among them, Sainsaulieu (1977 & 1995) and Dubar (1996 & 2000) are key references in the French literature. Through his work, Sainsaulieu (1977) has introduced a cultural dimension into the sociology of work. He defines work identity as the way different groups at work identify themselves as regards peers, superiors and others groups. Work identity is built upon specific collective representations. Occupational identity is constructed by a community of workers in the light of the responses of others and workplace interaction (Abbott, 1988). Identity is a relational process of self-investment (investment in sustainable relations, with a reciprocal recognition of partners) embedded in the social and relational experiment with power. The theoretical framework developed by Sainsaulieu emphasises the specific link between individual power position and work identities. He develops an interactionist perspective.

Dubar (1996 & 2000), who published with Tripier (1998) the main reference in the French literature in the field of the sociology of professions, expands the analysis of Sainsaulieu into a more general concept of social identity. He also recognises the importance of power relations in the constitution of an identity. In diverse identification spaces, individuals need to be 'recognised and valorised'. For Dubar, social identity strongly depends on the recognition or non-recognition of knowledge, competences, and self-images. The construction of an identity is a transaction between on the one hand, individuals with identification desires and on the other hand, institutions that give status, categories, and diverse forms of recognition. Abbott (1988) suggests that occupations are a means of placing oneself and being placed by others in a social system. The transformation of occu-

pational identities has a social impact that goes well beyond the world of work. There is also a relationship between occupational identity, class and mobility. Although it was not possible to include these questions in this chapter because of the constraints of space, such issues will be included in the empirical approach.

8.5 A typology from the Fordist era

In the Fordist era, characterised by sustained economic growth and a relatively low level of unemployment, Sainsaulieu (1977) identifies four models for identity formation at work. Dif (2001) summarises these four models:

- the *fusion* or community-based model applies to large groups of low qualified workers. They have close relationships. For them, power is unreachable and the group is valorised as a refuge and a protection. Relationships between members of the group are more founded on affection, solidarity and co-operation than conflict. These groups need a hierarchical authority for guidance and mediation in case of problems;
- by contrast, in the *negotiation* model of work identities, occupation or hierarchical position make access to power possible. This model is specific to professional employees and executives, attached to their profession and autonomy. Relationships are characterised by affective and cognitive richness and differences are accepted. Negotiation and democratic debate are used to solve any problem. Those in this category are opposed to any imposed hierarchical authority; they prefer 'leaders' who come out of their groups;
- the *affinities* model concerns groups of individuals looking for a rise in their social position. They develop selective affinities with some colleagues, to the detriment of other groups perceived as threatening. The affinities identity is changing all the time because of the high socio-professional mobility of its members. It includes self-directed learners (technicians and executives). Relationships in these groups are affective and selective. Authority is only accepted as a project promoter. The group leaders are seen as obstructions to personal socio-professional promotion;
- the *retreat* model concerns those for who work is economically needed or a support for a project external to work (family, leisure, ...). It also includes excluded employees (or those on the margin of exclusion) such as non-qualified or low qualified workers, employees near retirement and other categories of employees who are marginalised for different reasons (status, ethnic origins, educational background, ...). Within these atomised identities where leadership is not looked for, a strong hierarchical authority is needed for co-ordination.

This typology is rooted in a specific era. We can observe now a new understanding of the 'organised world'. Among new phenomena, we can notice protest against all hierarchical order, extension of 'retreat' and increased self-investment in areas outside work. At the level of the organisation, expert competences are jeopardised by the acceleration of technological change. The high level of rationalisation has led to a decline in progression by merit. The political recognition of trade unions has supported a new distribution and balance of powers. The decline of the Fordist economy and the advent of the new economy have accompanied important structural changes in work identities. Skills transformations, mobility, flexibility, technologies, training trajectories, organisational changes and global-

isation have all deeply disrupted occupational identities. Some social scientists analyse these changes as a crisis of occupational identities, others as transformations.

More generally, during the last two decades, work identity has lost its exclusive position in the formation of social identity. Social scientists have brought up the significance of developing a broad identity. An occupational identity is just one of a number of smaller identities that make up the overall identity of an individual. In this way, Lahire (1998) has developed the concept of plural identity. Beck (1992) and Bauman (1998) in their analysis of postmodernism have also pointed that modern citizens derive their identity from consumption rather than production.

8.5.1 Changes in work and the transformation of the Fordist typology

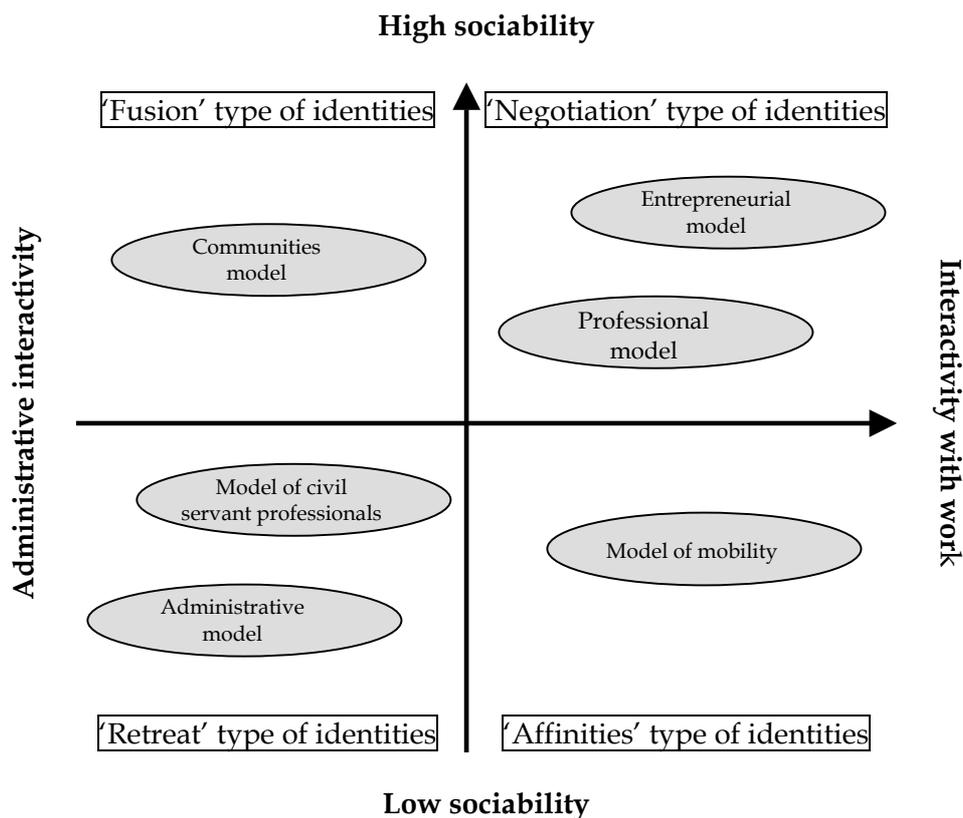
Twenty years after they were first developed, Sainsaulieu *et al.* have reviewed their models (Francfort *et al.*, 1997; Dubar, 1996 & 1998). They have adapted them taking into account two types of interactivity: sociability (*i.e.* relational sociability) and the mode of interactivity with work (through the established rules and regulations within the organisation). They observe (Dif, 2001: 152-153):

- 'the decline of the *'fusion' type of identity* and its development into a *community form of identity* whose members are highly attached to colleagues, their formally established professional status and working conditions within the organisation. It concerns all categories of employees who have accumulated a long working experience within public and private organisations belonging basically to the traditional activity sectors, which are undergoing important organisational and structural changes, as is the case in the steel and car industries, banking and transport sectors. As a result, these communities, which are traditionally based on a high level of collective solidarity and relational interactivity, are breaking down into micro groups and classes;
- as for the *'retreat' identity*, this is developing in two ways. The first development is simply an extension of the same 'retreat' type of identity to what Sainsaulieu has called *'the administrative model'* to include a new category of employees made up of individuals destabilised by technological change and the threat of exclusion. They use the routine of the established administrative rules and regulations as means of protection against change and any potential risk of exclusion. Halfway between the original 'retreat' model and its extension to the administrative model, the second development consists of the emergence of a completely new category of employees in a direct link with clients and more active in counselling within the developing public sector. They call themselves *'civil servant professionals'* so the model is termed. *'civil servant professional identity'*;
- the adaptation of the *'negotiators' model'* of vocational identity to include two more or less related developments characterised by a high level of both relational and work-based interactivity. The first development takes into consideration the emergence of what Sainsaulieu calls *'the professionals'* in fields closely linked to the development of new technologies *i.e.*, the *'professional model'*. Those in this category are highly attached to comradeship values based on a job well done, autonomy, apprenticeship, trustworthiness and solidarity between members of the profession. This can be interpreted as an indicator of *'reprofessionalisation'* of industrial work. The second development, within the general framework of the *'negotiators' model* of identity formation, concerns the

emergence of a new dynamic category of working individuals (managers, executives, salespeople, ...) who possess the competences which allow them to invest in change, in collective mobilisation and to be, at the same time, highly integrated within the organisation as a whole. Sainsaulieu baptised this new form of vocational identity the '*entrepreneurial model*' or simply the '*corporate identity*' model;

- finally, the '*affinities model*' of vocational identities has developed since the 70s into what Sainsaulieu called the '*model of mobility*' of identity formation, based on a combination of a high level of interactivity with work and low sociability. As a result of an increased scarcity of job promotional opportunities due to the development of flexibility-based modes of human resource management within companies with flat ter organisational structures, a new generation of dynamic and 'mobile' workers (specialised technicians, executives, young graduates) has emerged during the last three decades. They are more inclined to secure their socio-professional promotion through project-based personal strategies founded on occupational flexibility-mobility. Their relational network investment is primarily oriented towards the achievement of their personal career projects than those of the group or the organisation.'

Figure 8.4 Sainsaulieu's forms of vocational identities and their models



Source: Dif, 2001: 153

The typology of cultural attitudes in the work of Sainsaulieu has been developed by Dubar (1996), taking training schemes into account. Dubar explains the individual's work

identity formation as a process of double transactions: biographical (identity for oneself) and relational transactions (interactivity with the members of a specific space or identification with its specific rules and ethics). He confirms the same evolutionary four forms of work identities. He also includes the identity of exclusion to cover those who became excluded because their competences are rapidly becoming outdated. Dubar's 'blockage identity' refers to craft workers or executives whose progression is blocked because their knowledge and competences, built on experience, are in competition with the certified qualifications of new entrants. The 'promotional' identity characterises those who link their personal success with the success of the enterprise. The identity of independence concerns young professionals eager for training who have few links with their enterprise but who define themselves through personal projects.

Figure 8.5 Forms of work identities according to Dubar's double transaction

Forms of identities		Relational transaction	
		Recognition	Non-recognition
Biographical transaction	Continuity	<p style="text-align: center;"><u>Corporate identity</u></p> <p style="text-align: center;">(Promotional identity)</p> <p><i>Equivalent to Sainsaulieu's 'negotiators' or 'entrepreneurial' model of identity</i></p> <ul style="list-style-type: none"> - Diversity of training and employment strategies - Active and adapted workers - Internal promotion 	<p style="text-align: center;"><u>Categorical identity</u></p> <p style="text-align: center;">(Blockage identity)</p> <p><i>Equivalent to Sainsaulieu's 'fusion' or community model of identity</i></p> <ul style="list-style-type: none"> - Instrumentalisation of work - Passive but adapted workers - Blockage
	Discontinuity	<p style="text-align: center;"><u>Network identity</u></p> <p style="text-align: center;">(Identity of independence)</p> <p><i>Equivalent to Sainsaulieu's identity of 'affinities & mobility'</i></p> <ul style="list-style-type: none"> - Certification to start with - Active but non adapted employees - External mobility 	<p style="text-align: center;"><u>Outside work identity</u></p> <p style="text-align: center;">(Identity of exclusion)</p> <p><i>Equivalent to Sainsaulieu's 'identity of retreat'</i></p> <ul style="list-style-type: none"> - No professional future - Passive and non adapted workers - Threat of exclusion

Source: Dif, 2001: 154

Going back to the terminology of Weber and Dubar (2000) analyses this transformation of collective identities as the expression of a shift from a community relationship to society relationship. Community forms are based on the belief in existing collectives named communities and considered as systems of places and names pre-allocated to individuals from one generation to another. Society forms suppose the existence of multiple collectives, variable and short-lived, to which individuals stick for limited periods and which provide them with identification resources.

8.5.2 The effects of organisational changes

There are obvious relationships between organisation and identity. Therefore changes in organisations, from globalisation to functional flexibility, will have to take into account the role played by occupational identities and the outcomes on them. 'One of the most significant and robust empirical findings derived from social identity research is the discovery that heightened organisational identification generally leads to improved task performance and organisational citizenship behaviours' (Ellemers *et al.*, 2003: 17). Group commitment is stronger only for those who identify strongly with the group.

Ellemers (2003) quoted an influential analysis in psychosociology by Albert and Whetten (1985) that considers organisational culture and organisational identity as closely related concepts, with the term culture mainly referring to the content of important organisational values (defining the system), and identity to the strength of commitment of individual workers to that culture. On the basis of her analysis of the relation between social identity and organisational changes, Ellemers (2003: 198) suggests three hypotheses:

- 'those members of an organisation who identify most strongly with the present culture are most likely to feel threatened by impending organisational change;
- such identity threat is an important source of resistance to change, at least as important as other more instrumental considerations; and
- to the extent that the change process addresses identity concerns, this may alleviate feelings of threat and hence reduce (or even eliminate) resistance tendencies.'

Uhalde (2005) analyses the specific dimensions of work identities in modernisation crises. He observes that modernisation can threaten work identities but at the same time it can also reveal their resistance capacities. In modernisation crises he observes that professionals (in the sense of qualified workers) do not adopt the 'retreat' model identified by Sainsaulieu or the blocked identity of Dubar. They operate a distinction between work itself and the organisation, between themselves and the system. The organisation is perceived as something autonomous from work itself. In doing so, they preserve continuity in their identity, even if they do not agree with the modernisation process. The resistance of workers to modernisation and continuity in identity is supported by a relative organisational power and continuity in the recognition by the client, and also by the 'cultural heritage' of enterprises that have a strong professional or organisational culture. Uhalde considers that such dynamics generate relatively sustainable systems but are based on structural weaknesses.

Kelliher and Desombre (2005) examine the impact of introducing functional flexibility on employees' perceptions of their occupational identities. They studied the implementation of functional flexibility in two different healthcare environments, one involving pro-

fessional and one involving non-professional workers. Both situations were part of a wider national modernisation process in the health sector. In neither of the two cases did they find that the implementation of functional flexibility had a major impact on workers notions of occupational identity. Their findings seem also to imply that it may be easier to implement flexibility, which crosses occupational boundaries *within* professions, rather than *between* different professions. Their analysis also demonstrates the importance of the context in shaping the responses of employees, both from the point of view of personal and of social identities. They quoted Kahn (1999) who has studied the same sector and who notes the significance of gender identity in relation to work. She reports evidence of male workers resisting the implementation of functional flexibility where they perceived the new tasks they were asked to take on as 'female work'.

Some authors⁷⁶ stress the importance of subjective factors and particularly attitudes towards work in explaining differences between workers. They highlight a substantial difference between those who have a job which meets their expectations (target trajectories) and those who have an unsatisfactory job and are currently seeking a better one (trajectories with transition expectations) (Fullin, 2004). The latter manage to construct their own professional identities despite employment instability. The former, on the contrary, try not to identify themselves with the job, which is often low-skilled. In this sense employment instability can represent a resource in the process of identity definition as it allows them not to identify with the job and to look ahead. In other words, instability is used instrumentally. However, when future prospects are too vague or when the waiting period is too long, the individuals struggle to use instability in such a way and to keep their distance from the job; this leads to frustration. These are the circumstances in which high 'human costs' of flexibility are manifest.

In Germany too, the debate concerning recognition and work is also relatively young with regard to identity and work.⁷⁷ The systemisation of the term 'recognition' is mainly influenced by the thoughts of Honneth (1994). He distinguishes three types of recognition which are fundamental for individuals: love, rights and solidarity. The recognition of work belongs to the type 'solidarity', which encompasses individuals' contributions to societal aims. These contributions form the basis for the self-assessment of the individual's abilities and achievements and are inseparably connected with identity. Two approaches have been developed by Voswinkel (2002). He distinguishes two modes of recognition, 'appreciation' (*Würdigung*) and 'admiration' (*Bewunderung*). Appreciation means the valuation of work in the context of social affiliation such as traditional institutions like unions and works councils give by recognising the individual's membership as a worker. Admiration, by contrast, marks the recognition which is given for extraordinary achievements, success or originality. His assumption is that recognition in work in terms of admiration becomes more and more important when the relevance of recognition in terms of appreciation diminishes. He analyses this development critically: the loss of the recognition of 'normal achievements' can result in discouragement and the inability to guarantee recognition in the long-term. This is exemplified by a study conducted by Holtgrewe (2000) dealing with the experiences of recognition and disregard caused as a result of or-

⁷⁶ We are grateful to Giovanna Altieri, Cristina Oteri and Marcello Padaci (IRES) for drawing our attention to this point.

⁷⁷ We are grateful to Linda Nierling and Martin Bechmann (ITAS-FZK) for drawing our attention to this point.

ganisational change. She found a strong correlation between organisational transformation and the disarrangement of recognition. The onus is on the individuals themselves to reconstitute their recognition in work. Individuals are obviously offended and pained by such experiences.

Another field of research on occupational identity concerns the phenomenon of globalisation. Hannerz (1990) and other social scientists have over the last decade argued that the process of globalisation has influenced peoples' lives and identities. According to Hannerz, there are cosmopolitans and there are locals in the world. When describing occupational cultures, he especially highlights transnational occupational cultures like those of bureaucrats, politicians, intellectuals, diplomats, journalists. His arguments for this are firstly that these occupational groups quite often are tied to transnational job markets, secondly that they shift their bases around the world for longer periods of their working lives and therefore become involved with a larger range of different cultures. And thirdly that they interact with people of different national and cultural backgrounds on rather specialised issues and therefore share collectively-held understandings. Dorte (2000), in a study of sailors in international trade, demonstrates however that sailors from different nations see their work and identify themselves with their work differently. 'How they look upon their work and work situation seems to be constructed with reference to values, traditions and public attitudes in their home country more than to their workplace, the global setting they are working in or the work itself. Being in the world, interacting with people from alien cultures and acting in transnational markets does not necessarily mean being cosmopolitans. On the contrary, it illustrates that despite a seeming global working environment it might be constituted of local people'.

If most social scientists agree that there is currently a transformation (for some, a crisis) in occupational identities, their conclusions are not always convergent. Whilst there are many high quality studies of specific occupations, and sometimes on specific aspects of occupational identities, there are few general theories.

8.5.3 An enlarged spectrum of occupational identities

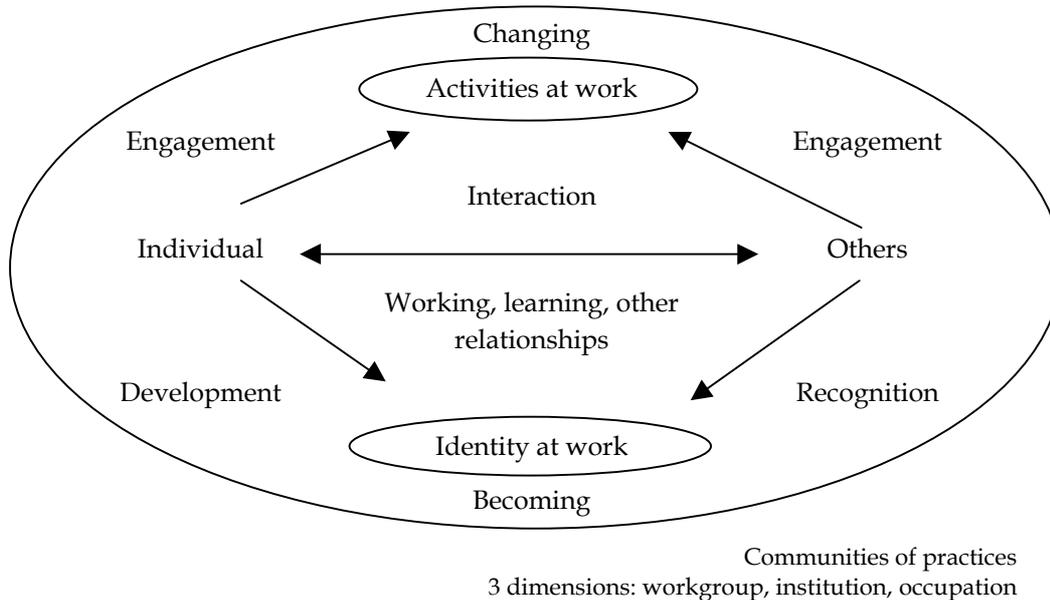
A European project, FAME, funded under the 5th Framework Programme, analyses how factors like flexibility and mobility are leading to a corrosion of vocational identity. The project distinguishes three dominant modes of 'strategic action' taken by employees in forming their work-related identities. At one extreme, there are classical types of occupational identities and at the other extreme flexible and transitional forms of work identity. Between these two extremes the project identified a continuum of various forms of work identities (Laske, 2001):

- 'in all of the occupational groups investigated, employees were found with an affiliation towards classical types of occupational identities with a high level of identification either with the occupation, the employer, the product or their daily work tasks. For this group of employees, changes at work present a great challenge, particularly for those who do not have the means or personal resources to adjust flexibly to new demands. In this case, employees typically develop a 'retreat' strategy by holding on to traditional forms of identification with work aimed at conserving their current work status and job profile as much as possible. This group of employees was largely resistant to demands

for greater flexibility with little or no inclination towards learning, career development or changing the work setting or employer;

- at the other extreme, highly dynamic and pro-active employees were identified, with flexible and transitional forms of work identity, who were able to anticipate and internalise the requirements for continuous adjustment and changes at work. This group were highly flexible and mobile, often combining the desired mix of technical and hybrid social skills. This group characteristically uses flexibility and mobility as instruments to actively develop their career plans and professional development. Their work identity is highly individualised, primarily based on their personal skills, capacity for continuous learning and a project-oriented work attitude. Flexible and transient work identities were typically found among the higher qualified and the lower qualified who were holding temporary, short-term employment contracts;
- between these two extremes the project identified a continuum of various forms of work identity that can be characterised as different kinds of 'adjustment', 're-definition' or 'cross-border' strategies. These generally represent a more conditional form of adaptation - the individual may remain in an occupation and/or with a particular employer -, but recognises that this represents a compromise rather than an ideal situation. Typically, factors from outside work (family commitments, personal networks, attachment to a particular location) may 'hold' an individual in place. The individual may still seek to satisfy the expectations (of the employer, colleagues and customers, patients or clients) about how they should perform their role, but they typically have some reservations about their work or employer. However, employees may remain in the same job for a considerable period of time, but may (internally or externally) move on if the 'holding' circumstances or external conditions change.'

In the context of lifelong learning, it is also important to point out the dynamic dimension of occupational identities. This point is not always integrated in the work of social scientists. Some analyses describe occupational identities as static configurations. This seems inadequate in working environments that required increased knowledge. Brown (1996) proposes a model that tries to integrate the dynamic dimension of occupational identities. His purpose was to help vocational education and training professionals to understand that the process of helping others become more highly-skilled is essentially a dynamic process.

Figure 8.6 Brown's dynamic model of occupational identities

Brown suggests that what is essential in this approach to knowledge development and occupational identity is the importance of the social dimension of becoming skilled (an individual learns, works and interacts with others) and to recognise the individual as a significant actor in the construction of his or her identity. This approach also recognises the existence of general and particular 'communities of practice' associated with particular occupations or organisations, and acknowledges that these can operate at different levels. Brown argues that one major distinction between young people becoming skilled was the extent to which they saw themselves as active in constructing their own identity, and in how they perceived their developing occupational identity.

8.6 Wider social impact

Changes in career trajectories and occupational identities also lead to changes in the forms of professional integration and changes in the social bond in work.

Some scientists argue that social differentiation can lead to a retreat of collective life. Paugam (2000), on the basis of his typology of social integration, analyses the link with collective attitudes. His hypothesis is that a weak professional integration is not compatible with a collective attitude and engagement and that it leads to a retreat of collective life. On the basis of the four type of integration that he has analysed, he observes different attitudes towards collective life:

- in the case of an *assured integration* (positive relation to employment and work), individuals are not opposed to collective life in the enterprise; they have a positive attitude;
- an *uncertain integration* (negative relation to employment and positive relation to work), generates frustration that can lead to some distancing from collective action and a search for individual solutions to reinforce a professional situation;

- with a *laborious (arduous) integration* (a positive relation to employment and a negative relation to work), there is no disengagement from collective life in enterprise. Highly dissatisfied, these workers are strongly attached to the traditional demands of trade unions, particularly those concerning wages. Many of these workers have been socialised into the world of opposition by participating in conflicts. Dissatisfaction, in their case, is not connected to employment insecurity. This constitutes favourable conditions for collective action. However it does mean that they have the required means to be able to organise themselves. Within new organisational forms, the new forms of management tend to weaken collective action;
- in the case of a *disqualified integration* (negative relation to employment and to work), individuals are more stand-offish as regards collective life in the enterprise. They expect the trade unions to help them to retain their job but they do not trust the workers' representatives to defend their interests.

In an article that examines the interrelations between self-identities and organisational change, with particular reference to the experience of work, Webb (2004) compares two contrasting perspectives on selfhood: the reflexive self (Giddens, 1991) and the corroded self (Sennett, 1998). Her key question is whether contemporary organisations sustain a reflexive self or if they contribute to the corrosion of character. As a starting point, she considers that both perspectives are not incompatible and can be seen as contrasting faces of contemporary life, but that people regard contemporary economic processes as having different personal and social consequences.

Giddens suggests that new forms of organisation, rather than eroding meaning, offer a greater degree of choice about self-identity, and enhance reflexivity. Giddens acknowledges the threat of personal meaninglessness associated with rapidly changing environments, but suggests that organisations overall provide the social and economic resources which enable people to improve their management of the existential dilemmas and uncertainties generated.

Sennett suggests that new economy forms are corrosive of character and social relations. For him, emerging organisational forms are instrumental in producing renewed private troubles, and the further breakdown of a secure, or authentic sense of self. Short termism is seen as incompatible with the construction of a social identity. Sennett describes the experience of the new economy as a succession of jobs without durable commitment.

Mainly using examples from British research, Webb demonstrates that both accounts offer relevant insights into the interplay between selfhood and organisations, but that each overstates its case. She concludes that 'Giddens offers a persuasive account of the choice and voluntarism characterising self-identity for at least a proportion of the population. His account of the 'project of the self', however, contributes to an ideology of the flexible, commodified self, and an overly inflated sense of the potential for individualised self-growth. Sennett overemphasises the extent of change in organisation and employment relations (...), but points to the damaging effects of an ideology of individualism, to which Giddens' model of the self as project potentially contributes. This article argues that short-termism is not the most damaging element of contemporary organisation practices. Instead, increased instrumentalism on the part of employers results in the experience of increased responsibility without meaningful discretion and authority. The gap between employers' promises to empower people at work and the experience of greater burdens

and uncertain prospects has negative consequences for trust and morale. In conclusion, it is suggested that character is not necessarily undermined by such dynamics: encountering the limits of self-determination, reflexivity and individualism provides the material for a critique of new economy forms (...).'

If the traditional reference points of workers' identities are declining, new forms of social bond at work are emerging, notably through co-operation in networks and projects. Vendramin (2004) develops the hypothesis that social bonds, solidarity and collective consciousness at work are not disappearing but that the forms and temporalities of the social bond within work are changing. They are closer to a logic of networks, organised around projects with individual involvement, rather than to the logic of community that is at the core of the trade-union institution. An approach to the social bond through the paradigm of the subject can help to understand how social life is evolving in the field of work.

8.7 Conclusions and research hypotheses

This review of the literature raises some conclusions about career trajectories and occupational identities that can be questioned in the perspective of changes in work and the restructuring of the value chain. Here, we list these conclusions and suggest some hypotheses that can be explored in the empirical work. These hypotheses will be translated into research questions in the empirical phase.

Boundaryless versus organisational careers. The literature overview does not make it possible to take for granted that organisational careers are either disappearing or becoming anachronistic in new patterns of work organisation and restructuring, although the boundaryless concept seems compatible with value chain restructuring. Empirical data collection has to consider both boundaryless and organisational careers and to investigate the various rationales underlying them.

Individual careers, institutional and contextual factors. Factors of differentiation of career patterns do not only include individual and organisational aspects, but also the roles, policies or strategies of institutions and agents on the labour market. Such roles and policies are often undermined in the individual approach. The key issue here is to understand how they interact with the individual choices.

Complementary insights from the perspective of the individual career and the perspective of the trajectory on the labour market. From the career point of view, subjective factors, including attitudes towards work, are put forward to explain differentiations among workers. Institutional factors are not neglected, but integrated in the enactment process. Not all trajectories on the labour market are implicitly considered as 'careers', but mainly those that are 'target trajectories' (Fullin, 2004). From the labour market point of view: the multiplication of transitions and diversification of trajectories encompass a wide range of situations, mainly shaped by the increasing flexibility of work contracts and work status. Transitions are also shaped by public policies (re-insertion of the unemployed, conversion after restructuring, re-entry into the labour market, etc.). Boundaryless trajectories also include constrained mobility or precariousness, not only 'voluntary' nomadic pathways.

Careers and equal opportunities. Gender and ethnicity are key issues for equal career opportunities. In order to be efficiently dealt with in empirical investigation, the subject should be targeted to the scope of the WORKS project, for instance: to what extent do globalisation and/or restructuring reinforce career discriminations according to gender or

ethnicity, to what extent do they allow for new practices of 'diversity management', or to what extent do they undermine legal or negotiated provisions for equal opportunities at work?

There are *diverse components in occupational identities*; two important components are: *recognition* (of knowledge, competences, ...); *commitment* to work or tasks and/or to an organisation. Changes in work and the restructuring of the value chain modify these components. Restructuring modifies the parameters and contexts of individual recognition. Which knowledge, competences, authority, ... are recognised, and by whom? How do changes in recognition affect individuals? In the restructuring of the value chain, do the business functions become the area of mutual recognition. Commitment can be more important to work or tasks than to organisation? Might recognition come from peers and the clients more than from the organisation?. In this sense, are occupational identities less sensitive to restructuring and organisational changes? Is identification more based on work and functions than on organisations or sectors?

Occupational identities are on the one hand, *individually generated* and on the other hand, *socially generated*. It is a transaction between identification desires and institutions that gives status and diverse forms of recognition. In the knowledge-based society, it is supposed that the institutions of work (organisations, training operators, ...) play a weaker role and that workers have more resources and desire to build their occupational identities. However, there is empirical evidence that demonstrates huge inequalities in this field, with many workers more and more dependent on institutions to access positive occupational identities (as opposed to retreat or blocked identities).

Flexibility, instability and reorganisation have an *ambivalent impact* on occupational identities. Some are blocked whilst others are promoted. The effects will depend on a combination of various factors: socio-economic factors (level of qualification, ...), cultural factors (strong/weak enterprise culture, ...) and subjective factors (attitudes to work). The transformation in occupational identities cannot be explained in a 'mechanical' way: all workers with a similar profile will not react in the same way to restructuring.

The transformation of occupational identities expresses *the shift from community relationship to society relationship* (decrease of the fusion type, increase of the negotiation type). Social forms of occupational identities are not less compatible with collective life. Social bonds, solidarity and collective consciousness in work are not disappearing but the forms and temporalities of the social bonds within work are changing. They are closer to a logic of networks, organised around projects, with individual involvements rather than to the logic of community that is at the core of the trade-union institution.

Despite globalisation and international work, *occupational identities are locally constructed*. Local cultures and values remain central in the construction of occupational identities.

Knowledge plays a dynamic role in the transformation of occupational identities. In this dynamic role, the interactions with others are crucial, both for the learning process and the recognition in a new identity. Organisations can more or less support such learning and identification processes.

A social identity is a *combination of diverse identities*. Occupational identity interacts with other identities (outside work) that constitute a self-identity. Gender identity plays a role in this combination as does ethnic identity. The importance of the occupational identity within a social identity will vary among individuals. Some authors assume that occupational identity does not have the same central place in a social identity as in earlier times.

The impact of restructuring and the threats to occupational identity will depend on the role played by occupational identity within a social identity.

The nature of the recognition expected from work is changing, from *appreciation* to *admiration*. New organisational models favour the second type of recognition.

Finally, those members of an organisation who identify more strongly with the organisation are more likely to feel threatened by organisational change. Such *identity threat* is an important source of resistance to change.

9 Changes in work and quality of life

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9.1 Introduction: the relationship between quality of work and quality of life

Quality of work and quality of life are now at the crux of the debate on the construction of a new European economic and social model targeted at more and better jobs.

On the one hand, there is general consensus among experts on the close link between working conditions and characteristics and the quality of life. For millions of men and women, work in the modern society has represented the primary source of income as well as the main access route to active social participation; it has been the privileged means for the promotion and construction of citizenship, it has allowed entry to the 'club of social recognition'. As highlighted by Dahrendorf (1988), work plays a central role in people's lives, not only because it gives access to *provisions* (material or immaterial goods and resources that can be purchased) and in many European countries even *entitlements* (citizenship rights conferring legitimate access to benefits/services through legal means available in society) but also because it is still a fundamental element in the construction of identity as well as a way of achieving satisfaction.

The European Summit held in Stockholm in March 2001 once again stressed that the essential requisite for good quality of life is quality of work, establishing that the promotion of quality of work and employment means:

- employment and career security (employment status, income, social protection, workers' rights);
- maintenance and promotion of the health and wellbeing of workers (health problems, exposure to risks and work organisation);
- skills development (qualifications, training, career prospects);
- reconciliation between work and private life (working and leisure time, social services).

On the other hand, quality of work and quality of life are two multidimensional concepts that have kept economists and sociologists debating since 1970. In general there is a consensus that the concept of 'quality of life' includes a variety of dimensions of individuals' wellbeing, but the different approaches used have led researchers to alternate between 'macro' and 'micro' perspectives, sometimes highlighting objective indicators and sometimes subjective ones because there is no single, shared definition of quality of work and quality of life and there are also a variety of measurement problems.

In the economics literature there are mainly macro indicators, such as average per capita income, employment and unemployment rates and inequality indices (such as the Gini index). Furthermore, most economists do not agree on the use of 'subjective' indicators given the difficulty in interpreting qualitative variables (Lloyd & Auld, 2002).

In the most recent report of the European Foundation for the Improvement of Living and Working Conditions (2004), the necessity for a micro perspective approach is stressed, in which individuals' living conditions and perceptions are key aspects. In this context the macroscopic features linked to the socio-economic situation are important to place individuals in their reference context but are not sufficient to identify the objectives of individuals and their expectations. At the same time, individual perceptions and opinions are easier to understand if linked to objective living conditions. Recent attempts to measure the quality of life have gone in this direction.⁷⁸ Even in this chapter we have assumed an integrative approach between objective and subjective dimensions: to analyse the quality of life it is not only necessary to take income and material conditions into account but interrelations between the various subjective living dimensions must also be considered.

This chapter focuses on the relationship between work and quality of life. In particular, the main reflections will be illustrated by reference to the effects of changes occurring in the labour market on individuals' quality of life. An attempt will be made to answer the following questions:

- How do the new working patterns of different occupational groups affect the quality of life in the short- and the long-term taking into account national institutional contexts?
- In what specific ways are changes in work organisations introducing health and safety problems and which social groups and occupations are particularly affected by them?
- In what ways do changes in working time structures impact on the quality of life?

9.2 Changes in the labour market, unstable jobs and quality of life

In the flexible society (or service or knowledge society) work is undergoing profound changes, a real 'metamorphosis of work' (Gorz, 1988) affecting its contents and contractual forms as well as the modalities, spaces and times of its execution. First of all, employment relationships have changed; new contractual arrangements have emerged and are becoming widespread. In all Western countries an increasing and significant number of workers perform their job without the traditional open-ended contract. In other words, they have employment relationships that are generally - but not correctly - termed 'atypical'. To assess the effects of these new forms of employment in terms of quality of life, it is necessary to examine their qualitative importance, their socio-economic impacts, rather than their quantitative dimension.

Interpretations of such changes are not univocal. There are contrasting opinions in the literature, both optimist and pessimistic, predicting either the prospect of continuous improvement or negative trends.

⁷⁸ Of the various contributions, we can mention Forward (2003) who proposed the following categorisation: physical - health status; psychical - self mastery, self-efficacy, love, satisfaction, happiness, morale, self-esteem, perceived control over life, social comparisons, expectations of life, beliefs, aspirations; social private - social network, social support, level of income, education, job; social public - community, climate, social security, quality of housing, pollution, aesthetic surroundings, traffic, transport, incidence of crime, equality, equity. More recently Hees (2005) identified five dimensions: material well-being, physical well-being, emotional well-being, development & activity, social well-being.

Most of the economic literature deals with the issue from a macro perspective in an attempt to understand the effects of the diffusion of unstable jobs on the improvement in employment opportunities for various segments of the population. Some try to pinpoint the consequences of an increase in atypical employment relationships for employment trends. It is asserted that greater flexibility in employment relationships can make the market more fluid leading to an increase in jobs. However, effects on employment are linked to the institutional characteristics of each country, namely the welfare system, labour market and economic policies.

In the Italian situation, for example, it has been noted that 'the literature on the 'transition to post-Fordism' tends (somewhat irritatingly) to lament the loss of stability, security and predictability of the old model of social regulation. In fact the 'new jobs' are a prerogative of those who [...] were the excluded from the labour market: young people and women. These individuals enter the labour market the hard way, through the back door. A door that should not be [...] casually left wide open yet it would be counterproductive to attempt to close it' (Barbieri & Mingione, 2003: 16).

Of the positive effects highlighted, there is also the possibility that through the use of non-standard jobs there is a reduction in hidden or irregular work because it satisfies the enterprises need for flexibility (Salvati, 1988). On the other hand, some studies claim that non standard jobs cannot reduce unemployment. The 'deregulation' and 'flexibilisation' of the labour market would not have any significant effects on unemployment; at most it could modify the structure and produce greater inequality in income distribution (OECD, 1999; Esping Andersen, 1999; De Grip, Hoevenberg & Willems, 1999; Regini, 1998).

Some of the literature also examines the consequences of unstable jobs on living conditions: on the strategies of individuals, on their expectations, on the definition of their social identity and on the type of emotional tensions they have to cope with. The starting point is the observation of work paths: they become fragmented, lose uniformity and linearity, taking the shape of chunks of work interspersed with periods of hyperemployment, underemployment but also unemployment. Work discontinuity is thus experienced by workers on temporary contracts. Discontinuity which has become a feature of the present modernisation phase (Giddens, 1990). Freedom and insecurity are key concepts for interpreting current behaviours and their impact on individuals and on their quality of life. For many people, changes in employment relationships bring about the inherent potentiality of a positive change, an increase in freedom, greater self-awareness and satisfaction (Habermas, 1987; Laurent, 1993): freedom intended as the power of individuals to live a life that they can fully appreciate, and to increase the choices available to them (Sen, 1999).

From this viewpoint, changes in employment relationships are collocated within the historical process of individualisation, intended as the individual's emancipation process from obligatory forms of belonging to the traditional society (Paci, 2005; Barbier & Nadel, 2000). Yet some authors stress how the rise in unstable jobs is creating risks and uncertainties. Zygmunt Bauman (2001) states that we are indeed free in the present modernisation phase, something our ancestors could only dream of, however this greater freedom comes at a high cost: insecurity. The 'dimension of emancipation' seems to give way, in other words, to the 'dimension of disillusionment'. It is a 'risky freedom': autonomy, emancipation and liberation are accompanied by an increase in risks, uncertainties and even anomie (Beck, 1986). The effects of insecurity on people's lives have been analysed in many empirical studies which have shown that the impact on individuals is not exclu-

sively economic, namely related to the loss of income continuity; it can also profoundly modify their plans, wellbeing, societal relations, community life and even their character (Sennet, 1999).

In such a situation, people who have unstable jobs earn money but at times not continuously⁷⁹ as well as experiencing a deficit of rights and pension/welfare protection. These individuals have limited 'empowerment,' intended as the power to purchase goods and resources to attain social wellbeing and more generally freedom to pursue objectives considered important (Sen, 1992). In such a situation the individuals involved in forms of atypical work risk precipitating or remaining in situations of precariousness and social vulnerability (Ranci, 2002), with the risk of not being able to freely plan their own career and existential course (Bauman, 2000).

Many studies examine the consequences of work continuity or discontinuity for the individual's career. Work paths characterised by the frenetic alternation of jobs 'do not allow any significant professional experience to be accumulated and transferred from one employer to another' (Gallino, 200: 42). Frequent changes in company, position, task and contract structures a 'DIY biography' (Beck, 1999). And this can provoke dissatisfaction, frustration and disorientation. Furthermore, such situations 'seems to prelude making a sustained narrative out of one's labours, and so a career' (Sennett, 1998: 122) and therefore a professional and social identity cannot be constructed.

There are also less pessimistic analyses that perceive the possibility of 'fluid' individual identities that adapt to changes (Bauman, 2000) and so in these situations unstable jobs do not represent an obstacle. It has also been noted that the worsening of employment relationships has been accompanied by an improvement in work content (Accornero, 1997; Paci, 2005), offering workers greater possibilities for job satisfaction and self-fulfilment. However even these authors warn of excess risks especially for particular groups of workers: the less educated with less social capital and networks, women who are trying to get back into the labour market after a period of inactivity and in general 'older' job-seekers; but also young people who are not able to construct a coherent career path and a strong occupational position. An individual, whether male or female, from any social class or geographical area can be exposed to the risk of insecurity and discontinuity (Saraceno, 2005). From the inquiry promoted by the European Commission on 'precariousness and social exclusion' (Gallie & Paugam 2003), it emerged that low-skilled workers are more exposed not so much to job loss but to the inability to find another job in the case of dismissal. The low level or complete lack of skills (training) is added to the low quality of work performed (Laffi, 1998; Paugam, 2000; Fullin, 2004).

In many interpretations, the consequences of changes in employment relationships on individuals' quality of life is related to the characteristics of welfare systems. Family-based systems, like those found in Southern European countries, provoke the reproduction of the effects illustrated above, as they leave precarious workers without any forms of social protection, contrary to what may happen in more universalistic systems as in Northern European countries. As noted by Esping-Andersen (1999), welfare systems are undergoing modification after exogenous shocks, following globalisation processes and changes underway in the economic and technological-productive structure. According to

⁷⁹ Many studies show that workers with unstable jobs usually have low wages inappropriate to the work performed and responsibilities held (Altieri & Oteri, 2003; Kvasnicka & Werwartz, 2002; Bellmann, 2004).

some, such a transition phase is characterised by insufficient coverage from risks as new social protection forms have still not been developed. Others speak of a more structural trend, the 'de-collectivisation' of protection and a reduction in general regulations (Dore, 2004; Barbieri & Mingione, 2003; Regini, 2000), and of 'social property' - a package of protection and rights to support the worker - (Castel & Haroche, 2002; Castel, 2003). These authors warn of the risks of the individualisation of social protection: for example unemployment, impossibility of working due to illness, childbirth, *etc.* which become individual problems to be faced without making use of social protection tools (Rosanvallon, 1995). Beck (1986) predicts 'new forms of guilt attribution': life events that used to be considered 'the luck of the draw' are more frequently perceived as personal failures.

9.3 Changes in working conditions

By working conditions we mean the conditions under which an employee works. It is a feature of how work and the work process have been organised, and as such should not be considered a feature of individual judgement (Christis, 1998 in Oeij & Wiezer, 2002). However, when they speak of working conditions, people generally speak of some specific characteristics of work, supposed to have some consequences on health or wellbeing. Because the relationship between some aspects of work and their consequences is generally not obvious, the definition of 'working conditions' is the result of a complex social process, involving many actors, including scholars, physicians, unionists, labour inspectors and so on (Gollac & Volkoff, 2002).⁸⁰

There are two major aspects of working conditions: contractual affiliation and work environment. Both aspects of working conditions tend to have a direct effect on health and safety.

By contractual affiliation to work we refer to the contractual arrangement under which work is undertaken. This includes the number of working hours, where and when work should be conducted, the pay and salary system, the bargaining system, what (if any) form of unionisation exists, rights to parental leave, intellectual property rights and other obligations and rights between employer and employee. Contractual affiliation to work is regulated both by local law and by a work contract between the parties. This aspect of the contract is known as the legal and formal contract between the employer and employee. In the literature emphasis is also placed on the informal, social and psychological contract that takes place between employers and employees. In relation to working conditions however, we will be focusing primarily on the legal forms of contractual affiliation because they form important elements of the working condition. The other aspect of working condition is the work environment by which we mean the physical, organisational and psycho-social aspects of the workplace. It is within the complexity of this concept that an overview of the working conditions of Europe will be summarised.

Flexibility is widespread in all aspects of work: working time (round-the-clock and part-time work), work organisation (multiskilling, teamwork and empowerment) and employment status (an increase in the number of employees working under non-permanent contracts). It is important to point out, however, that there are great national

⁸⁰ We are grateful to Michel Gollac, Danièle Guillemot and Antoine Valeyre (CEE) for drawing our attention to this point.

variations within the EU with regard to some of the factors relevant to working conditions. Likewise there are variations between the fifteen EU Member States (EU-15) and the New Member States in that the nature of work in the New Member States is more industrially oriented rather than customer driven and that the New Member States report worse working conditions, poorer health, less satisfaction with health services and lower job security (European Foundation, 2004).

A survey undertaken by the European Foundation for the Improvement of Living and Working Conditions (2002) summarises the following trends in working conditions for the EU-15.

Working time: more women than men work part-time (32 per cent versus 6 per cent), but here too we find big variations from country to country. For example there are significant differences in the distribution of part-time employment within Europe-15 on the one hand⁸¹ and between these and the new candidate countries on the other. Part-time employment is a minor tendency among the ex-communist countries. The share of part-time employment in Hungary is 4.0 per cent; in Bulgaria it is 1.9 per cent with a lower difference between genders (Eurostat, 2005: 5). Whereas in Hungary 2.3 per cent of men are employed part-time versus 6.1 per cent of woman; for Bulgaria the values are 1.6 per cent for men and 2.3 per cent for women.⁸²

People who are self-employed work longer working hours on the average; 46 hours a week compared to employees who work around 36.5 hours. Round-the-clock work is also prevalent, with more than one out of two workers working at least one Saturday per month and one in four working one Sunday per month. Shift work is also the norm for 20 per cent of workers, and 19 per cent report that they work at least one night per month. Almost one fifth of all workers (19 per cent) claim that working time flexibility collides with family and social commitments.

Repetitive work: repetitive work is still widespread in European workplaces. There has been only a slight decline over the last decade. There is also no reported difference between the genders. Those who do report repetitive tasks are more prone to developing musculoskeletal disorders.

Intensity at work: work has been shown to be getting more and more intensive over the last years, with over 50 per cent of workers claiming to work at high speed or to tight deadlines. Likewise, more than two in five workers claim that they do not manage to finish their work in time. There are several forms of work intensity, corresponding to different ways in which firms define their productivity (Valeyre, 2004). Work intensity has increased, partly because of constant readjustments, project-oriented work, individual contracts, and result-based salaries. New information and communication technologies make possible the building of more complex organisations (Gollac, Greenan & Hamon-Chollet, 2001) and there is a strong link between information technologies and work intensity (Green, 2004b). Sometimes, work intensification is only the acceleration of pace, everything else remaining equal (Prunier-Poulmaire, 2000; Gorgeu & Mathieu, 2001; Flichy &

⁸¹ There are considerable differences between Mediterranean and North-European countries. For example in 2003 there were only 8.3 per cent part-time workers in Italy, 3.1 per cent men and 17.5 per cent women, but there are very different rates in Great Britain (25.0 per cent of total workers, 9.6 per cent of men, 43.9 per cent of women) or in Holland (13.3 per cent, 22.3 per cent and 74.3 per cent). We are grateful to Csaba Makó (ISB) for drawing our attention to this point.

⁸² We are grateful to Rumiana Stoilova (IS) for drawing our attention to this point.

Zarifian, 2002). But, very often, intensification is a more complex phenomenon. When the management sets targets ignoring how work is actually done, this leads to work intensification. The increasing complexity of organisations (Gollac & Volkoff, 1996) and the high speed of organisational change (de Coninck, 2003) are also causes of intensification. And there is a vicious circle: preparing oneself for future work is made impossible by the high intensity of present work and being unprepared for this future work is a cause of further higher intensity (Gollac & Volkoff, 2001). People agree to work harder because they are afraid of unemployment (Burchell, Ladipo & Wilkinson, 2002; Askénazy, 2005).⁸³

Control over work (work autonomy): one third of workers claim that they have little or no control over their work while only three out of five workers are able to decide when to take holidays. There are however differences in control over tasks between different groups of workers. For example, plant and machine operators and sales and service workers have experienced a sharp decline in their control over work. At a sectoral level, transport and communication workers are similarly affected. There are also gender differences in this regard, with men having more influence than women over their working time and employees on permanent contracts having more influence than those with fixed-term or temporary agency contracts. Furthermore, occupational groups with a high level of professional skills have most control over their working time.

Gender segregation: gender segregation and inequalities are still prevalent at the workplace. Men and women do not tend to occupy the same type of jobs. Men are more numerous in clerical, sales, professional and managerial positions and when in the same occupations as women, they tend to have more senior positions. Gender inequalities are also evident in other aspects of work, with women earning less than men and having less control over their time. Women also experience family workloads to be heavier because of housework and child care.

Harassment, violence and intimidation: Unfortunately this remains a feature of the workplace with 4 to 15 *per cent* of workers in different EU countries reporting that they are subjected to intimidation and harassment. There seems to be some underreporting taking place especially in countries that have not put this topic on the public agenda. Likewise it is important to look into the extent to which the prevalence is due to the increasing number of women working in frontline positions in the service sector and the development of a 24-hour society.

Temporary workers: temporary work is becoming a more usual employment characteristic. In 2000 20 *per cent* of employees were on fixed-term employment contracts and studies show that they are more exposed to a higher level of work intensity and physical hazards compared to permanent workers.

In order to understand these changes under which people work, several working life researchers has used the terms 'boundless' or 'boundaryless'. Workplaces have become boundless in relation to where and when the employees work, their work conditions - and also the organisation that employees are employed by. Businesses have extended their service hours, and adopted technology that makes it possible for employees to work almost whenever and wherever they (or their employers) want, or rather, according to client supply and consumer preferences. The situation puts the individual under immense pressure to define his or her own boundaries. A study undertaken by Aronsson (2002),

⁸³ We are grateful to Michel Gollac, Danièle Guillemot and Antoine Valeyre (CEE) for drawing our attention to this point.

found that some employees handled the problem of defining boundaries without problems and in general benefit from the new work life situation. However, many experience great stress due to the amount of work, and of being individually responsible (*ibid.*). Employees are also stressed by having the work tempo controlled by customers, by fluid networks that must always be maintained, by the massive amount of information to handle, and by the quick changes and pressures towards constantly developing their skills and competences. Several researchers claim that as a result each individual worker is far more alone in defending herself, than was the case before (Aronsson, 2002; Olsen, 2003). The result could be long-term sickness absenteeism, which has become one of the greatest challenges of today's society. Along the same lines, Olsen (2003) emphasises the importance of distinguishing between flexibility for the workers and for the company. He claims that the human ability to adapt to new conditions is currently being overcharged, and that the human reaction to this is resistance.

Csonka (2003) studied an aspect of work conditions that can be referred to as 'the developing work', characterised by broader and more varied work tasks, greater challenges and extended autonomy for employees. However she found that this type of work was less widespread than is commonly assumed. Work conditions such as these were often used as a 'reward' for officials or managers in companies guided by more traditional management philosophies. She claims that in spite of all the attention directed towards new flexible work forms, there is little evidence of this development. This could possibly be because factors that enhance flexibility, also restrain it, for example customer orientation (fulfilling customers' special demands), new technology (that needs to be learned), and internationalisation (decisions made far from production units). A similar argument could be deployed when it comes to the spatial flexibility and 'placelessness' of new jobs. A study conducted by Aronsson (2002) on workers with home offices showed that the freedom of working in one's own home gradually diminished as more and more control mechanisms on the part of the company were introduced. This study concluded that this illustrates that flexibility often happens on the conditions of only one part: the company.

Gunnarsson (2001) who also studied flexible workers, or 'nomads', as she calls them claimed that the challenge for organisations or companies is the ever-changing balance between organisational stability and organisational flexibility. The flexible 'nomads' depend on the stability, presence and accessibility of other types of workers (such as secretaries, managers, assistants, *etc.*). These workers are what Gunnarsson calls 'grounded' and raise the problem of the individualisation of workers, making it, she claims, difficult for researchers to study workers as a group.

Another crucial aspect of today's working condition is so-called *temporal flexibility*, that is: flexible working hours. Temporal flexibility implies that it is to some extent up to the individual worker to organise her own work day, and make sure the work is done in the right manner and at the right time. Such arrangements give the employee great responsibilities and put her under pressure to be her own manager. In some jobs, the employee also has a choice between working from the office or at home. The employee, then, is under great pressure when it comes to defining boundaries. Several researchers (*e.g.* Hochschild, 1997) have studied the trend towards employees spending more and more time at work, and less and less time at home. Sørensen (2000), for example, has conducted a study of workers in the IT sector and found that for some of them work has become 'a new home'. She introduces the concept of 'honey trap jobs' to describe these jobs that are

so exciting and interesting for the employees that they get trapped with their work and let it absorb all their time.

The organisation of parents' time at work and at home, and how they adapt to each other becomes an interesting topic in this respect. In a study undertaken by Abrahamsen and Storvik (2002) they insist that both parents work time must be considered in order to understand a worker's experience of work-family conflict. Their research has showed that the experience of a conflict between work time and family time has a gender dimension. For men the number of hours worked seem to be less decisive for the experience of balance between home and work. For women, the majority experience the conflicting demands of work and family as very unsatisfactory. As a consequence of the development already described there is an increase in the demand for so-called atypical terms of employment, and the question of temporary contracts become an important issue.

Work intensification has a dramatic impact on working conditions. Targets, compulsory procedures, tools, environment are constraints for the worker. Under these constraints, the worker optimises his or her way of doing, in order to protect his or her physical and mental health (Montmollin, 1986). Emergency increases the constraints. It may force the worker to work in the fastest way, which is not, in general, adapted to the physiological and psychological characteristics of every individual (Leplat & Cuny, 1984). Econometric studies show that, everything else being equal, work intensity is associated with physical and psychological pains and with occupational hazards (Askénazy, Caroli & Marcus, 2003; Boisard *et al.*, 2003). Defective organisations, which control complexity poorly (de Coninck, 2004), are particularly pernicious (Gollac, 2005). Some people are able to afford high work intensity, but other people cannot: so high intensity is a cause of polarisation: some people experience a high level of wellbeing at work, while other people experience severe psychological pains (Baudelot *et al.*, 2003). The global balance is negative (Green, 2004a).⁸⁴

In Italy an approach to studying the quality of work was recently put forward which proposes the overturning of the traditional dichotomy which counterpoises the individual to the organisation to highlight the importance of the worker's perceptions in dynamically interacting with working contexts. It is the concept of 'organisational wellbeing' considered in an integrated way, namely related to enterprises and workers and as a factor of competitiveness (Avallone & Bonaretti, 2003). In short, Avallone proposes a concept of wellbeing as a result of the dynamic relationship between workers and work organisation in relation to cultural variables as well as socio-economic factors, and factors related to processes and organisational practices.⁸⁵

⁸⁴ We are grateful to Michel Gollac, Danièle Guillemot and Antoine Valeyre (CEE) for drawing our attention to this point.

⁸⁵ Under organisational well-being the following dimensions are included: healthy, comfortable and relaxing working environment; strategic direction which sets explicit and clear objectives in coherence with operative practices; recognition and exploitation of skills and contributions of employees creates new potentialities; Adoption of participated and informed procedures; adoption of actions and best technologies available to prevent occupational accidents and risks; quality of communication and frank and collaborative working style; problem-solving attitude; equality in pay, promotion and career advancement; motivating workers' sense of social utility; aperture to external environment and technological and cultural innovation; involvement in work and organisation; attention to interpersonal relations and relational environment. We are grateful to Elena Battaglini for drawing our attention to this point.

9.4 The consequences of changes in work on health and safety

According to a survey on working conditions undertaken in 2000 (Paoli & Merlie, 2001) the general picture is that worker's perceptions of their health and safety and of risk has shown an improvement over the last fifteen years. However this has coexisted with a worsening of important aspects of working conditions such as: intensification of work, prevalence of repetitive movements, high-speed work, work pace determined by others, and flexible employment practises as well as continued exposure to physical hazards at the workplace, causing continuing health problems for workers. In addition to these factors, several researchers have identified organisational change processes as possible health risks (Saksvik, 1996; Landsbergis, Cahill & Schnall, 1999; Wichert, 2002; Westerlund *et al.*, 2004). It seems that the content of the change process (expansion, restructuring, lay-offs and downsizing or other factors) are of less importance than how the process is carried out, in determining the health risks.

The most prevalent health problems are musculoskeletal disorders, stress and work-related sick leave and these work-related health problems are worsening compared to 1995. The above-mentioned survey, which was undertaken among 21,500 workers across all EU Member States, presented the following figures: backache (33 *per cent*), stress (28 *per cent*), muscular pains in the neck and shoulders (23 *per cent*) and overall fatigue (23 *per cent*) (Paoli & Merlie, 2001). It was concluded from these results that there is a strong correlation between a high level of work intensity, repetitive work and the above-mentioned health problems at work (Boisard *et al.*, 2003).

It was long presumed that with technological development, as well as the growing proportion of the work force being employed in the service and knowledge-production sectors, working life would result in less risk of encountering 'traditional' physical hazards, such as exposure to dangerous chemicals, and work tasks demanding great physical effort. In a way this is true, but this is also very much dependent on the type of technology in use at work. For example a survey showed that the use of new technologies (use of a computer) results in fewer physical health problems such as allergies/asthma, while the use of machine technology produces more musculoskeletal health problems and allergies/asthma. Likewise workers using machine technology tend to be less satisfied with their working conditions (European Foundation, 2001). However as Jefferys, Mispelblom Beyer and Thørnquist (2001) noted, we do not know enough for example about the consequences of spending long days in front of the computer screen whilst at the same time the use of computers is rising continuously. A survey of technology and working condition, showed that a little over one third of workers report no use of technology in their work situation, while a third use computers and the rest use only machine technologies or machine technologies combined with computers (European Foundation, 2002). However, the authors also pointed out that the use of technology by service workers is as yet not as well documented. Likewise, there is great national and regional variation within the Member States, for example the Netherlands having a very high use of computer technology by employed workers compared with Portugal, and the northern European countries having more workers using computers than the southern European countries (*ibid.*, 2002).

This 2000 European Foundation survey results also showed that exposure to physical risk factors such as noise, vibrations, dangerous substances, heat, cold and heavy lifting remains prevalent. The survey found that the proportion of workers exposed to some of these physical risk factors at least 25 *per cent* of the time, remains high. Furthermore the

survey indicated that it is mostly male workers who are exposed to these physical risk exposures, but that painful and tiring positions are common for both sexes. Likewise, non-permanent employees, in other words those recruited from temporary agencies and who are on fixed-term contracts, are more exposed to heavy loads and painful positions than employees on indefinite contracts.

The general picture with regard to health and safety is that there is no research showing that there are fewer health problems among workers, but rather, new health problems seem to be replacing some of the old ones. For example, one of the great challenges related to health and work environment today is the growth of psycho-social problems, such as stress and burn-out. As opposed to health problems of a more physical/chemical/medical kind, the 'new' health problems make it complicated for work life researchers to identify risky workplaces (Aronsson & Sjögren, 1994). Van Otter (2003) presented figures showing that during the 1990s there was a huge increase in health problems such as tiredness, sleeplessness, anxiety, aching shoulders, and difficulties in taking one's mind off work. The psycho-social pressure experienced by employees has therefore been the focus of many studies on health, safety and environment in work life. However, some scholars argue that new health problems at work are adding to old ones, not replacing them. They stress the point that new forms of organisation, and especially work intensification, lead to both physical and psychological constraints (Askenazy, 2004). In addition, very serious health problems, like work-related cancers, not well known and probably underestimated (Thébaud-Mony, 2003). The impact of new technologies and new forms of organisations on cancers needs further investigation.⁸⁶

Development within working life have also caused changes in the gender-related dispersion of health problems. For example, according to Sørensen (1998), there are now more women than men who work in physically demanding jobs in Norway. One might thus expect that health problems related to physical effort will become more common among women than men. Furthermore, health problems in general are more common among those who are temporarily employed than among those who hold permanent jobs, and there is a larger proportion of women holding temporary employment (Aronsson, Gustafsson & Dallner, 2000).

An increase in health problems arising from work-family conflict is another more recent development of today's work life. Work-family conflict occurs when the pressures from the work and family domain are incompatible, in the sense that having to attend to one set of demands prevents one from being able to attend the other set. There exists a lot of research in this area, clearly demonstrating the negative health impact of work-family conflict (Greenhaus & Beutell, 1985; Barling, 1992; Frone, 2003; Hammer *et al.*, 2004). This is also a gendered issue. Torn between demands of jobs and children, from the statistics on womens' participation in work life, it would seem that woman try to solve the conflict by reducing their participation in work life, through part-time or temporary work, or simply withdrawing from work for a period. Further, while much research has been done on the problems faced by parents, less has been done on the problems faced by those who need to take care of elderly relatives. In an aging Europe this is a problem that is likely to increase in the future, and in some countries this is a relatively large problem. In a survey

⁸⁶ We are grateful to Michel Gollac, Danièle Guillemot and Antoine Valeyre (CEE) for drawing our attention to this point.

undertaken in Norway, for instance, 23 per cent of the work force had elderly relatives they were responsible for and needed to take care of (Torvatn & Molden, 2001).

Work-related stress, according to the European Agency for Safety and Health at Work, is experienced when the demands at the workplace are greater than the employee is able to handle or control. Stress can be related to the pressure of always having to be flexible and creative, acquire new skills and competences, show good social and organisational skills, motivation, commitment and engagement (Barker, 1933). Stress is, for example, very common in project-oriented, team-based work. This form of work can be characterised as 'social engineering' (*ibid.*), because there is a strong focus on the social and organisational connections involved in carrying out the work. The members of the team often attribute stress to their fellow team members and thus stress can become a shared experience. Whereas before it was the manager who put pressure on the employees, today it is often one's own colleagues who constitute the main stress factor. According to Barker (*ibid.*) this is because there has been a shift from vertical to horizontal control.

Strain and health problems can also be caused by emotional exhaustion provoked by customer service work. Most of these jobs entail a great deal of so-called emotional work, that is, work that requires that the employee manifests or suppresses emotional expressions or experiences as part of the work performance (Sørensen, 1998). This implies a blurring of the borders between private feelings and professional efforts. The pressure this puts on the employees' private inner sphere can cause great stress.

Two clear trends seem to mark the development within the service and knowledge-production sector: standardisation, resulting in so-called 'McJobs' and tailor-made services, resulting in jobs requiring higher qualifications. Where tailor-made services are offered, a great deal of responsibility is delegated to the so-called front-line workers (those employees who deal with the customers face to face). Consequently, the importance of personal capital, such as knowledge, competence and co-operational skills has increased (Dahl-Jørgensen & Saksvik, 2005). This is a trend in both private and public sectors. The new responsibility is experienced differently by both customers and employees. According to Forseth (2002), working with customers can be experienced as both a strain and a reward. The reward is related to the immediate positive feedback that customers may give. The strain can be related to the fact that the customer to a great extent controls the work tempo, the work task, *etc.* Typically, promotion implies a move away from customers and into so-called 'backstage' jobs (*ibid.*). Due to the gender divisions still persisting, this means there are more women working in the front-line, and more men in the protected 'backstage'.

A burn-out is not to be confused with stress, rather it is characterised by emotional exhaustion, depersonalisation, experience of poorer performance, and cynicism. A number of researchers (see for example Roness & Mathiesen, 2002) have approached burn-outs as a social, organisational and individual problem. One of the most disturbing aspects of burn-out, is that it occurs more and more often among young employees. However it should be noted that burn-out is not limited to, nor necessarily most prevalent, in the work force. A Swedish national study on burn-out found that burn-outs were more prevalent among unemployed than employed people (Hallsten, Bellagh & Gustavson, 2002). However, some are critical of the type of attention burn-outs have received in the public debate where it appears as a 'middle-class and upper-class problem' (Wahl, 2002). The fact that the working class have experienced the same changes when it comes to demands in work life, somehow seem to be invisible in the debate.

Studies also indicate that high-strained work situations will only increase in the future which will imply that more workers will be experiencing a worsening of health issues such as stress, musculoskeletal problems, burn-out and low job satisfaction (European Foundation, 2001 & 2002). High-strain jobs which are creating health problems can be found, for example, among skilled blue-collar workers, in the transport sector, in catering and in metal manufacturing. This strain is felt among the younger workers, and equally among male and female workers (Dhondt, 1998, in European Foundation, 2002).

There is hence a strong correlation between work organisation and health outcomes (Landsbergis *et al.*, 1999). Work autonomy is on the increase, fuelled both by the popularity of new forms of organisation like project or team-based work, as well as by the demands of an increasingly educated work force that does not accept traditional forms of control over their work. However work intensification, when it occurs, tends to reduce real job latitude, even if formal autonomy is increased (see earlier). As pointed out earlier, several of this new forms of work organisation are in themselves creating more stress. For example, one study showed that workplaces that combine organisational change such as teamwork, just-in-time production, total quality management and computerisation will not only achieve high productivity, but also an increase in the number of occupational injuries and illnesses (Askenazy, in European Foundation, 2002). Team-based organisations create powerful norms of productivity, enforced by the team members (Barker, 1993) but the increase in autonomy is not sufficient to compensate for the increase in work intensity. The role of autonomy and control in occupational health is more complicated and weaker (de Jonge & Kompier, 1997; Eriksen & Ursin, 1991; Troup & Dewe, 2002) than what was stipulated in the well known job demand-control model of Karasek (1979), where increase in autonomy should supposedly counter the negative effects of increased demands. Instead of reducing strain it seems that autonomy in some cases adds to the strain created by the increase in demands. Work rating may cause a very high pressure (Balazs & Faguer, 1996). More generally, people become more responsible for the results of their work (Hamon-Cholet, 2004). As a consequence, people who cannot meet the demands of their jobs experience increased culpability and mental pain (Baudelot *et al.*, 2003).⁸⁷

A useful distinction in this respect is between 'work strain', that is stress related to the labour process itself, and 'employment strain', that is stress resulting from a precarious employment situation. In a study undertaken on the relationship of health and the organisation of precarious employment, Wayne *et al.* (2003) showed that workers in precarious employment report poorer overall health than other workers, and higher levels of stress than workers in standard working relationships. They also face higher level of uncertainty regarding access to work, the terms and conditions of work and future earnings.

The increase of long-term sickness absenteeism noted in several countries is claimed to be related primarily to deteriorated working conditions, especially when it comes to increased work pressure and reduced control of the work on the part of the worker (Wikman & Marklund, 2003). Saksvik (1996) for example studied health problems and long-term sickness absenteeism caused by work environment. He claims that downsizing and dismissals, as well as the limited influence employees have on their work environment are important causes of sickness absenteeism. The growth in long-term sickness absen-

⁸⁷ We are grateful to Michel Gollac, Danièle Guillemot and Antoine Valeyre (CEE) for drawing our attention to this point.

teeism has occupied the attention of many Nordic researchers. They have particularly focused on those groups of people that become marginalised from the new work life, through unemployment and sick leave. Aronsson (2002) notes that there is a clear bipartite division in work life between those who have a steady job and those who are excluded due to sickness absenteeism, unemployment and early retirement. This last group constitutes an estimated one fifth of the entire work force, and the situation is therefore sometimes referred to as the '20 per cent community'.

9.5 The necessity for work-life balance

The flexible society, in contrast with the industrial society, is a society constantly active where work, shopping, cultural, leisure, sports activities, *etc.* are possible 24 hours a day. Today, workers are required to be increasingly more flexible in terms of working time. The effects of this on the individual's quality of life can be positive or negative. Although these requirements mainly reflect the needs of enterprises (and meet with resistance and opposition from the unions) they can also respond to some of the workers' requirements if activated in specific forms and measures. If on the one hand, it is positive that some services (public services but also cultural and leisure services) are organised in such a way as to be more accessible to everyone, on the other hand, the workers involved in the provision of such services have to put up with the effects of this 'de-standardisation' of working hours or 'de-synchronisation of times' (Accornero, 2004). This has also an effect on the community in terms of social relations (Accornero, 2004; Gallino, 2002). As Accornero notes, 'in the past the concentration of hours could facilitate relations and consolidate solidarity yet penalise less linear lives and less uniform needs; today the dispersion of hours can hinder relations and undermine solidarity but also reward original requirements and the role of chance' (Accornero, 2004: 1079).

Many studies reveal how the effects of the de-standardisation of working hours are not equally distributed among the various sections of the population. These processes produce a range of 'working hour packages' - often associated with differing contractual protection standards - which are segmented according to social category, gender and ethnic group. Some groups of people tend to have excessively long working hours whilst for others they are too short, preventing them from earning a decent income. Yet others have antisocial hours. For example, the weaker segments of the population tend to have short or antisocial hours.

Despite current social developments and the new demand for greater work-life balance, today these extreme types of 'working hour packages' are predominant, leading to an increase in gender and age inequality (Paci, 2005). For example, in Italy, as more generally in all Mediterranean countries, adult men display a hyper-participation in work but with great marginality in other spheres of life: their working time, including overtime, has remained above 40 hours a week and many adult men have a second job. By contrast, in all European countries, albeit with some differences, women hold the great majority of part-time jobs.

A number of research studies have demonstrated that women, whether in paid work or not, have less time availability than men (Altieri, 2004). They are burdened with most of the domestic and care work (Alteri & Oteri, 2003). The part-time arrangement has allowed women to work because it offers the potential to achieve a good balance between on the

one hand generating some income and professional continuity and making it possible to remain in the labour market whilst on the other hand being still able to take responsibility for family care work. Many studies have highlighted the relationship between the percentage of part-time jobs and the growth in female labour market participation. However, even the use of this arrangement can expose the individuals involved to several risks: the possibility of balancing work and private life depends on the norms in force in the various countries; and in particular whether it is recognised as a regular form of employment with basic social protection coverage, as well as not penalising the part-timer by impeding career prospects and the chance to do more gratifying work (Hemerijck, 2002). These risks have been demonstrated in several empirical research studies. The part-time arrangement can achieve work-life balance only under certain conditions: specifically, when there is no obligation to work inconvenient shifts or hours that change from one week to another requiring continual organisational changes to reconcile paid work with care work (Saraceno, 2005). Some studies have highlighted that gender (being a woman), and social status (whether one is married, or a mother) reduce future occupational opportunities of part-time workers compared with those on a full-time basis (Istat, 2002; Ministry of Labour, 2000). It is not the part-time arrangement itself which reduces opportunities but the reasons behind it: the need to reconcile work and family responsibilities.

Studies on the 24 hour society have highlighted several ways in which work can invade an individual's private life. One of these is hyper-employment which produces psychophysical problems especially as it reduces the possibility of participating in other spheres of life which are just as important as work for the individual's wellbeing (Paci, 2005). This is particularly prevalent among so-called 'professionals' or 'knowledge workers' who, either because of restraints resulting from formalised flexible forms of organisation (for example in the case of the 'deskless job') or because of necessity, have to work from home, on the train or in airport departure lounges. There is thus the risk that work becomes 'a time without confines' and at the same time 'a non place' (Gallino, 2002). Conversely, to achieve a good quality of life, work should be done in a time and place completely different from free time as from other moments of private life (Paci, 2005).

In conclusion, it should be noted that the EU is presently promoting policies on work-life balance that constitute an essential element of an overall strategy aimed at creating new wellbeing and new employment. From this perspective, work-life balance is defined as 'an individual's attempt to find suitable time arrangements and time options that allow the best possible co-ordination of requirements of work with time requirements for personal life. The work-life balance reflects social change, such as the rise of dual-career families, single parenthood and the extension of care to cover older family members, but also the need to maintain employability in a more uncertain labour market' (European Foundation, 2003: 55).

9.6 Conclusions and research hypotheses

The quality of life - in its multiple dimensions - is thus highly influenced by the quality of work, its characteristics in terms of wages, working time, contents, continuity/discontinuity of employment relationship, *etc.* This is why changes underway in most capitalist countries should be carefully observed: they are taking shape as sources of

change in people's living conditions as a whole; inducing transformations in opportunities, expectations, identities, character and personalities.

As demonstrated by many sources of literature, changes in working modalities and times have on the one hand a 'liberating' potential for individuals, yet, on the other bring risks both at the individual and collective levels. A first risk concerns the threat to social integration or social cohesion. This is a common, primary asset, the continuation of the classic problem of social order, in sociological terms. It concerns the stability of relations between individuals, the harmony and cohabitation among the various sectors and groups in society.

A second risk is the social exclusion of particular groups within the population. In particular, weaker individuals (older workers, single parent families, women going back to work, immigrants, workers dismissed from production industry, those with a low educational level, people with disabilities) risk paying the higher 'human cost' (Gallino, 2001) without having had the chance to seize the 'opportunities' that the post-modern society could offer if regulated and well-managed.

Faced with such risks, a lot of literature has focused on the importance of labour market regulation and social protection systems and on the necessity for policies for their re-inforcement and extension. As stated by Castel (2003), regulation and protection systems constitute social property, the only one capable of ensuring that everyone has the opportunity to participate in processes of social organisation; the only one capable of transforming rights of access to societal resources into a widespread, collective property.

Such policies are of the utmost importance. However, to increase individual and collective wellbeing, it is increasingly important that they should be integrated with policies on time organisation and balance. If this could be achieved, such policies could contribute considerably to the improvement of people's living conditions. As we have seen, quality of work comprises quality of time, which presupposes time less colonised by work giving the individual the possibility to engage in other activities. Different time distribution and reduction of work would create space for heteronomous activities; restricted working times could enlarge (or construct) a space for the accomplishment of complex and independent projects for self-fulfilment and a space for positive individualisation potentialities. In other words, a new balance between working and private life could be reached capable of increasing individual and collective wellbeing.

Stemming from this recognition, some interrogatives/research hypotheses can be identified for further examination:

- Which mechanisms can encourage a new division and distribution of care and market work between the genders and generations and thus led to the redefinition of social models towards more balanced solutions to increase quality of life of all individuals?
- What are the main factors that contribute to the definition of positive results or, conversely, negative results of discontinuous and atypical work paths?
- How can a greater work-life balance trigger the activation of virtuous mechanisms of growth in consumption and as a consequence work demand? And what could be the effects in terms of active citizenship and re-appropriation of social ties?
- Which forms of new organisation can be more inclusive, thus opening the labour market for more marginal groups (elderly, ethnic minorities, the disabled, *etc.*), enhancing the quality of life for these groups and their participation in the society?

- How should we understand and research issues related to work-life balance from a global value chain perspective?
- Which forms of new organisation can encourage more worker autonomy without increasing demands, stress and resulting musculoskeletal disorders?
- In what ways do changes in working time structures impact on health and safety problems? Which particular social groups are affected by them?

10 Knowledge societies (plural): the rise of new knowledge types and the global division of labour

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10.1 Introduction

In this chapter, we argue that there is no such thing as *the* knowledge society. Like many others authors, we claim that the fundamental transformations of our time can be typified as the end of the national 'industrial society' and the move towards some kind of global society. Since this society is characterised by a global division of labour, these transformations do not necessarily produce a convergence of national and regional social and economic structures. In Section 2 of this chapter, we argue that in industrial society two types of knowledge were dominant: 'technical knowledge' and 'social knowledge'. Industrial society was based on and aimed at the 'homogenisation' of subjects, but at the same time 'produced' at least two 'diversifying' processes: reflexivisation and globalisation. In Section 3, we claim that the growing diversity of individual and group identities produced by these processes calls for the development and application of a new type of knowledge: 'cultural knowledge'. In Section 4, we analyse the consequences of the increased significance of cultural knowledge in the economic sphere by using the Marxian concepts 'technical' and 'social division of labour'. Finally, in Section 5 we conceptualise the different types of knowledge society that are the result of the global division of labour.

10.2 Industrial society and the development of techno-social knowledge

Max Weber, and more recently Ulrich Beck have claimed that the central quest of industrial society was the control of nature and social life. The control was to be made possible by what Weber (1922/1968) calls the 'disenchantment of the world'. With the concept of disenchantment, Weber refers to human contemplation as well as social action. By analysing nature and social life in a scientific way, *knowledge* could be accumulated and subsequently applied in several control strategies. In the sphere of nature, the quest for control became manifest in the mechanised production of goods and services, in the social sphere in the development of the nation state and its instruments (welfare state, state bureaucracy, *etc.*). Thus, the development and application of knowledge is not unique for our current 'knowledge society'. Some authors (Bell, 1973; Giddens, 1994a) even argue that *all* human societies in history were at least partly founded on the development and application of knowledge. Why then do we label our current society a 'knowledge society'?

In order to be able to answer this question, we first have to distinguish two ideal types of knowledge that were dominant in industrial society: 'technical knowledge' and 'social knowledge'. Technical knowledge concerns the knowledge of (the functioning of) non-

human objects, of what Beck (1992) and Giddens (1990 & 1994a) call 'nature'. The scientific disciplines that are concerned with these objects are the natural sciences, and the application of this type of knowledge is at the foundation of the industrial production. Social knowledge is the knowledge of (the functioning of) social 'groups'. The term group refers to a collective of individuals who (1) interact and communicate, and (2) share a certain set of values and norms. The latter means that a 'group' to a certain extent is culturally homogeneous. The scientific disciplines that are concerned with groups are the social sciences, and the application of this type of knowledge is at the foundation of, for instance, the nation state.

On the basis of these two types of knowledge, another ideal type of knowledge can be discerned, a type that is at the intersection of technical and social knowledge: 'techno-social knowledge'. *Techno-social knowledge* concerns the knowledge of the interaction between non-human objects and groups. Examples of this knowledge type are Taylorism and Fordism. Both Taylorism and Fordism were developed at the beginning of the 20th Century and try to formulate an answer to the question how in the mechanical production of goods, machines ('nature') and workers ('group') could efficiently be geared to one another. One could claim that techno-social knowledge was at the core of industrial society, since the central institutions of industrial society - capitalism, bureaucracy, nation state (Weber, 1968) - eventually could not function, and the quest for control could not succeed, without the integration of nature and social life.

Though especially at the beginning of the modernisation process the central institutions of industrial society were confronted with populations that originated from local communities that culturally differed substantially, the institutions in principle were directed at subjects ('citizens', 'classes', 'sexes', *etc.*) that were to a certain extent culturally homogeneous. Moreover, according to some authors the institutions exerted a strong homogenising influence on their subjects: the institutions 'rationalised' (Weber, 1968), 'disciplined' (Foucault, 1977), and 'normalised' (De Swaan, 1989) social life in industrial society in such a way that the cultural diversity inside the nation state, the factory, bureaucracy, *etc.* disappeared, or at least was pushed into the background.

10.3 Technology, knowledge and information as diversifying forces

The homogenising project of industrial society was however never completed. Even more than that: though the central institutions of industrial society aimed at wiping out cultural differences, in at least two ways they evoked a further 'diversification' of their subjects. To a certain extent, behind both of these diversifying processes is technological innovation and a spread of knowledge.

The *first diversifying process* caused by the institutions of industrial society is 'globalisation'. In the past few decades, the development of capitalism gradually evoked a further scaling-up of the industrial production. A prerequisite for this process is, what Harvey (1989) calls 'time-space compression'. This concept refers to the increased mobility and internationalisation of capital. In the process of capitalist modernisation, the pace of the economic process is gradually speeded-up by the removal of spatial barriers through the application of new technologies. By these innovations the 'spatial rigidities' of Fordist production, in which capital was held to be loyal to a place, were removed and time was

so to speak 'compressed', making it much easier and quicker to move information and capital from one place of earth to the other.

In practice, two main drivers of time-space compression can be identified. The first is the technological development of transportation. By the invention of the train, the ocean steamer, the airplane and the automobile, and a gradual extension and of the railroads and highway network in the 19th and 20th Century, more and more local economies on earth could be absorbed in the global economic process. In the West, the consequences of the technological innovations were first felt in the 1960s and 1970s, when 'traditional' industrial sectors like textile and shipbuilding were swept away by new manufacturers from East Asia. The second main driver behind time-space compression was the technological development of communication. Inventions like the telegraph, the telephone, radio, television and the Internet made possible a further integration of the global economy, not only by facilitating the competition between producers from all over the globe, but more recently also by providing the information necessary for companies to transferred the production to that country or region that can produce at the lowest comparative costs. Thus, by the end of 1970s, globalisation aroused a first 'wave' of change towards what we now call a 'knowledge society'. In the West, this first wave was characterised by a rapid 'informatisation', the flexibilisation of the work organisation, and the outsourcing of several business functions to developing countries, mainly in East Asia (see also Section 5).

But technological innovation not only causes globalisation and integration on the side of the producers. By absorbing local economies from all over the globe in the economic process, more and more cultural communities become part of the capitalist system as well. In the initial phase of globalisation, the members of these communities only served as producers for a still rather homogeneous Western consumer market, but in the last few decades they have more and more become customers on the global market themselves. For the producers this development has enormous effects. As a consequence of globalisation, the potential market for their products has expanded dramatically, but at the same time the homogeneity and transparency of consumer demand, which was so typical for the Fordist era, gradually disappears, since their clientele is no longer culturally homogeneous.

The latter development was further intensified by a *second diversifying process* that, at least up to now, is very typical for the 'developed' Western countries: 'reflexivisation'. Giddens argues that reflexivisation is the outcome of large-scale processes, which were also in effect in industrial society, but have come to maturity in the last few decades. One of these processes is the enormous spreading of knowledge. According to Giddens, in traditional local society the production and development of knowledge had been monopolised by the so-called 'guardians of truth', mostly priests. Their task and privilege was to integrate past, present and future in a coherent system of knowledge of the natural environment, the meaning of the community and the assigned tasks of the individual members. The knowledge system was presented to community members as 'traditions', ritual guidelines for all aspects of social life that were sacred and unquestionable, and were to be followed by the members in a thoughtless way (Giddens, 1994a).

In the process of modernisation, the monopoly of these 'guardians' was slowly but surely dissolved. Nation states forced local communities to open up, while national governments introduced compulsory education with the objective of fostering economic development and thus actively stimulated the spreading of knowledge. Though the

application of knowledge in industrial society was no longer the monopoly of privileged elites, the *evaluation* of knowledge as truth remained the domain of 'higher' institutions like modern science and state bureaucracies. These institutions inherited the 'aura of authority' the knowledge-producing elites in traditional societies once possessed (Giddens, 1994a: 56-109, 86-87). As a consequence of a second large-scale process, the disintegration of social ties, traditional forms of authority disappear and individuals finally start to think for themselves. Our current 'post-traditional' world, Giddens claims, 'is a world of clever people', who actively *reflect* on their actions and those of others, and no longer take prefabricated rational knowledge for granted (1994b: 7; 1990; 1994a). Thus, reflexivisation is also interpreted by Giddens as a process of 'individualisation'. The growing knowledge of nature and social life, he suggests, enables individuals to exceed social structures and culture and make their own choices (1994b: 6; Hoogenboom & Ossewaarde, 2005).⁸⁸

To sum up, by time-space compression more and more cultural communities are gradually integrated into one single economic system. Though without completely removing the cultural differences between these communities, globalisation poses the challenge of surmounting cultural differences in the exchange of goods and services. This economic challenge is also felt in the production of commodities, since the simultaneous scaling-up of transportation and the mass media also removes the spatial rigidities of people to physically and virtually move across vast distances, creating one single (partly virtual) production system.

The processes of reflexivisation and globalisation that were produced by the central institutions of industrial society gradually undermine the homogeneity these institutions were based on and aimed at, and aroused a second 'wave' of change towards a 'knowledge society'. Whereas the first wave of change was characterised by informatisation and flexibilisation, the second wave can be typified as 'cultural fragmentation'. While in industrial society, the pursuit of collective objectives (welfare, security, *etc.*) was facilitated by a set of values and norms, that was shared by all members of the community, in the current society values and norms are fragmented, and the pursuit of certain objectives has become highly complicated by a growing diversity of subjects. Since the homogeneity of industrial society gradually disappears, new types of knowledge are needed to bridge different individual and group identities.

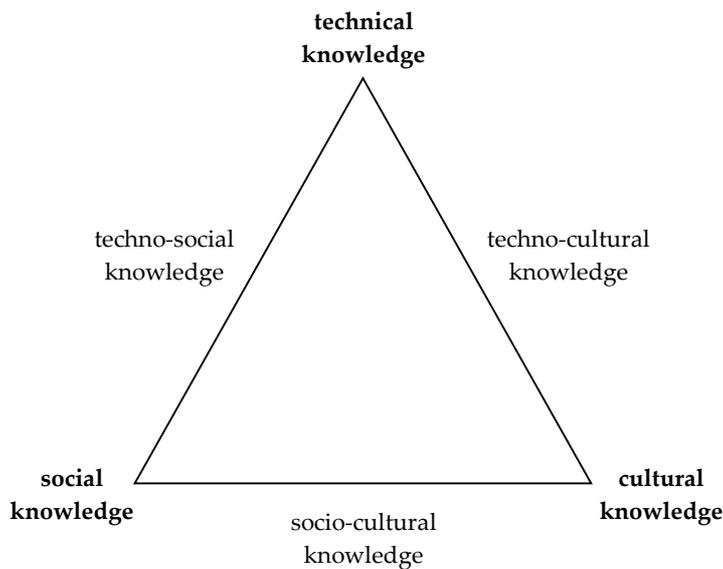
10.4 The rise of cultural knowledge types

In our society, as a consequence of the diversification of subject identities a third type of knowledge becomes more significant: 'cultural knowledge' (Figure 10.1). *Cultural knowledge* refers to the knowledge of identities different from the own identity. From the fact that in knowledge society diversity comes from two sources (reflexivisation and globalisation), it can be concluded that in theory cultural knowledge can take two forms. The first form consists in the knowledge of *individual* identities in a society that is characterised by reflexive individuals. The obtainment of this form of cultural knowledge

⁸⁸ Beck and Beck-Gernsheim (2002) however stress that individualisation is not something that is freely chosen but that is imposed on the subject by the institutions of industrial society. In our current Western society, they claim, individual choice is an inescapable fate.

requires certain psychological capacities like empathy (cf. Giddens, 1992). In our current society, this type of knowledge is required on all levels of economic life, especially on the level where the producer meets the customer 'in the flesh', for instance in the department store. The second form of cultural knowledge concerns the knowledge of other *group* identities, that is the norms and values of other culturally homogeneous groups. The obtainment of this form of cultural knowledge requires certain anthropological capacities. In the economic process, we can observe the need for this type of knowledge in the appointment of cultural anthropologists in multinational business companies.

Figure 10.1 Idealtypes of knowledge



The increased significance of cultural knowledge goes hand in hand with the increased significance of two further types of knowledge: 'socio-cultural knowledge' and 'techno-cultural knowledge'. *Socio-cultural knowledge* refers to the knowledge of the ways in which differences between individual and group identities can be bridged. This type of knowledge somewhat resembles Castells' concept of 'hypertext'. In his analysis of the 'network society', Castells claims that as a consequence of the annihilation of time and space in our time, symbolic interaction loses its reference to experience and 'culture' becomes individualised. 'Thus, because there are few common codes', Castells (2000: 21) argues, that 'there is systemic misunderstanding. It is this induced cacophony that is celebrated as postmodernity. However, there is one common language, the language of the hypertext. Cultural expressions left out of the hypertext are purely individual experiences. The hypertext is the vehicle of communication, thus the provider of shared cultural codes.'

The question however remains if in reality a single, non-cultural hypertext, as it is conceptualised by Castells, is imaginable. In fact, Castells not only presupposes a universality that (maybe apart from mathematics) is hardly feasible, he also suggests that the existence of plural *hypertexts* is not possible. In our interpretation, socio-cultural knowledge is not necessarily universal, but only serves the goal of bridging the misunderstanding between *some* individual or group identities on a given moment in a given context. Thus, socio-

cultural knowledge requires the capacity of constant (re-)interpretation of identities and is an endless search for the ways in which these identities can communicate. In international business, workers assigned to the task of ‘intercultural management’ are supposed to exhibit this type of knowledge.

Finally, *techno-cultural knowledge* concerns the knowledge of the ways in which non-human things (‘nature’) can be tuned to more than one individual or group identity, and vice versa. The word ‘techno’ in the concept might seem to be a little bit misleading, since the sheer workings of a certain technology *itself* can in most cases not be adapted to a specific individual or group identity. By techno-cultural knowledge is, however, meant the knowledge that is necessary to apply a given technology in such away that it can produce different mental and/or physical products for individuals or groups with divergent identities. An example is the ‘Smart’ car, which to a certain extend can be adapted to the individual desires of the modern reflexive customer, or the ‘hallal burger’ McDonalds offers in Islamic countries.

10.5 Cultural knowledge types and the division of labour

We can analyse the consequences of the increased significance of cultural, socio-cultural and techno-cultural knowledge in the economic process by applying the Marxist distinction between the ‘social division of labour’ (*Teilung der Arbeit*) and the ‘technical division of labour’ (*Verteilung der Arbeit*). The technical division of labour refers to the splitting up of tasks in the production process into smaller parts that are performed by a single individual or a single collective of individuals. In the production of a certain good or service within a single business company, the technical division of labour results in a ‘materialisation’ of business functions:⁸⁹ the emergence of separate offices and/or departments responsible for the performance of one or a series of related business functions. If the performance of a certain business function becomes more complicated and the costs rise, a process of specialisation is likely to set in. Separate business companies or completely new sectors will emerge that concentrate on the performance of a certain business function or a series of related business functions and that gradually take over the performance of that function from non-specialised companies: *social division of*

⁸⁹ WORKS glossary: ‘The term ‘business function’ was developed in order to provide a unit of analysis more stable than that of the occupation or sector for analysing the development of global value chains. Business functions are defined generically in order to show the relationship of any particular business process to the overall process of producing goods and services. Typical business functions include research and development, design, production, marketing, financial processing, customer services, logistics management, human resource management, training and data processing. These are generic, in the sense that they apply across many different industries. The increasing standardisation of business processes accompanying the introduction of information and communication technologies (business process re-engineering) makes it easier to separate the performance of business functions into separate units and either relocate them geographically (in-house relocation) or outsource them to another company or both (offshore outsourcing). Many business functions (but not all) may be described as business services.’

labour. Through the social division of labour, new commodities and value chains⁹⁰ emerge. According to classical sociologists like Smith, Marx and Durkheim, this division of labour type was one of the main engines behind the process of modernisation and the rise of industrial society.

In the production of many goods and services, reflexivisation and globalisation 'create' new business functions. The production of commodities, management, marketing, sale, *etc.* in an increasing degree require the development and application of cultural, socio-cultural and techno-cultural knowledge. If the complexity of the required knowledge is low, the application simple, and thus the costs relatively low, business companies can create their own in-house facilities in the form of specialised offices and/or units: technical division of labour. However, if the required knowledge becomes more complex and the costs rise, the business functions that require these types of knowledge are, like in the early phases of the modernising process, gradually 'outsourced'⁹¹ to new specialised companies: social division of labour. Here, it might be fruitful to make a distinction between two types of outsourcing: 'technical outsourcing' and 'social outsourcing'. *Technical outsourcing* concerns all kinds of outsourcing; *social outsourcing* or 'offshore outsourcing'⁹² refers to technical outsourcing that implies the transfer of business functions to 'oversees' regions.

Thus, the increased significance of cultural, techno-cultural and socio-cultural knowledge generates changes in the economic structure on three levels. Here, we will only analyse a few of these change briefly.

On the *micro level*, the level of the business company, the technical division of labour induces fundamental changes in work organisations and individual job descriptions. Since the development and application of the cultural knowledge types are transferred to specialised offices or units, not only new jobs are created, but existing jobs change too. And since the cultural knowledge types imply a continuing re-interpretation of identities and an endless search for the ways in which these identities can communicate, all positions responsible for the development and application of the cultural knowledge

⁹⁰ WORKS glossary: 'The value chain describes each step in the process required to produce a final product or service. The word 'value' in the phrase 'value chain' refers to added value. Each step in the value chain involves receiving inputs, processing them, and then passing them on to the next unit in the chain, with value being added in the process. Separate units of the value chain may be within the same company (in-house) or in different ones (outsourced). Similarly they may be on the same site, or in another location. The term 'value chain' was originally coined to describe the increasingly complex division of labour in the manufacture of goods but it is now increasingly applicable to services, both public and private. The standardisation of many business processes combined with the digitisation of information and the development of high-capacity telecommunications networks has made possible for telemediated work to be outsourced and/or relocated, leading to the introduction of an international division of labour in information-processing work.'

⁹¹ WORKS glossary: 'Outsourcing refers to the purchasing of intermediate inputs by companies and governments from an external supplier as opposed to producing them internally (or in-house). Another term for outsourcing is subcontracting. It represents a recent tendency of large companies to move away from customary vertical integration, and focus their production on perfecting their 'core competences'.'

⁹² WORKS glossary: 'The acquisition of intermediate inputs by companies and governments from locations outside the consuming country. Demarcation of offshore outsourcing from offshoring and foreign direct investment depends on demarcation of what is intermediate input, what is a final good or service and where this good or service is sold. Can be expressed in terms of employment; turnover; wages paid; geographical location; ownership of organisation.'

types require a large amount of flexibility and lifelong learning (more on the micro level and the organisation of work in Section 6 and 7).

On the *meso level*, the level of the 'national' or 'regional economy' (as far as these can still be discerned in a global economy), technical outsourcing produces a social division of labour and severe changes in the economic structure. This implies the emergence of new economic sectors specialised in the performance of business functions related to the development and application of the cultural knowledge types. The new social division of labour affects all spheres (social, cultural and political) of life, and in the economic sphere generates the emergence of new value chains.

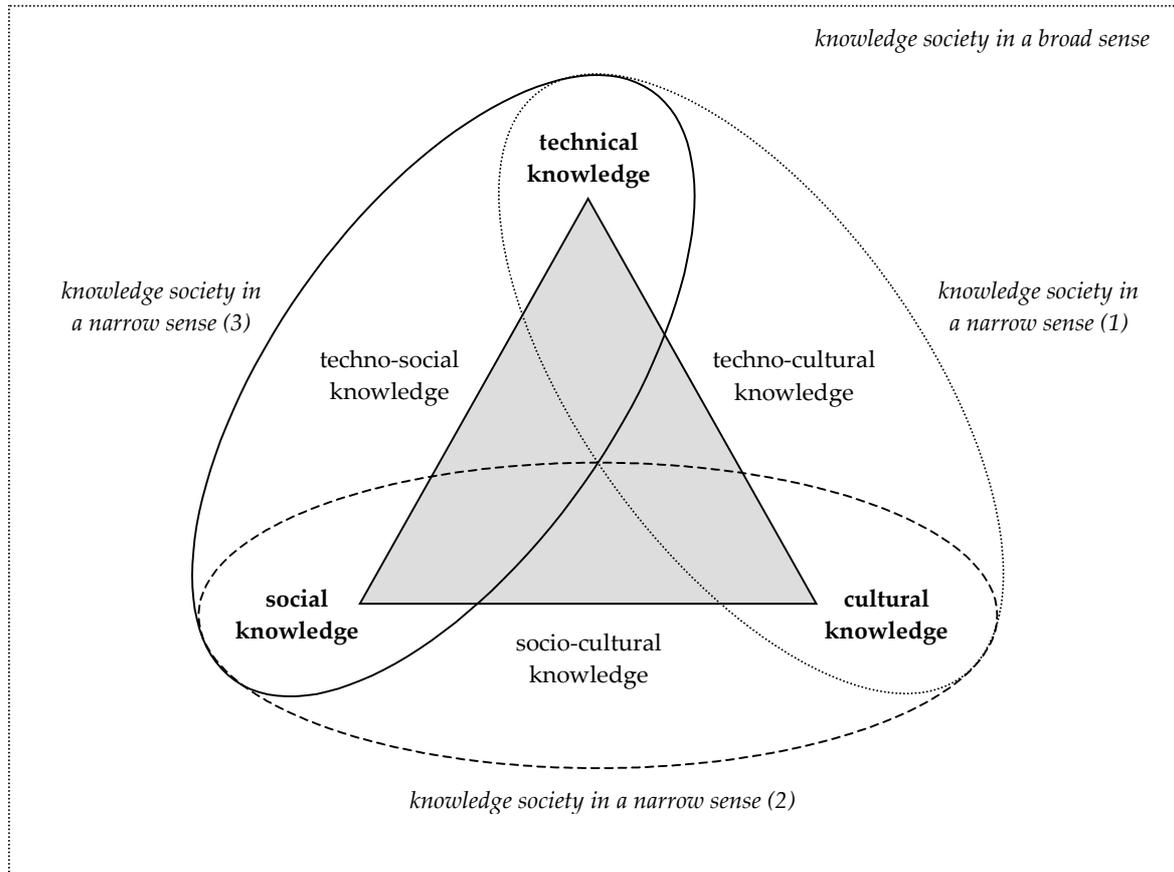
Finally, on the *macro level*, the level of the global economy, social outsourcing induces a global division of labour and the emergence of new global value chains. In the process, not only the social and economic structures of the outsourcing 'regions' are transformed, but also the social and economic life in the regions that take over the outsourced business functions. The new global division of labour facilitates, maybe even enforces, the development of 'mono-knowledge economies', specialised in the development and/or application of a specific knowledge type.

10.6 Conceptualising knowledge societies (plural)

The increased significance of cultural, socio-cultural en techno-cultural knowledge has turned industrial society into a 'knowledge society'. From the analysis in Section 3, 4 and 5, we can however conclude that there has to be made a distinction between different types of knowledge societies. First, we have to distinguish between the 'knowledge society in a broad sense' and the 'knowledge society in a narrow sense' (Figure 10.2).

The knowledge society *in a broad sense* refers to the global society as a whole. The knowledge society *in a narrow sense*, concerns a part of global society that has specialised in the development and/or application of a specific knowledge type. Second, since we have discerned three main types of knowledge, we have to distinguish between three types of the knowledge society in a narrow sense (see Figure 10.2 and Table 10.1).

Figure 10.2 Knowledge types and knowledge societies



10.6.1 Knowledge society in a broad sense

Of the four knowledge society types we have discerned, the knowledge society in the broad sense is the most difficult to conceptualise, since it is composed of at least three types of knowledge society in the narrow sense. The global knowledge society might however be called a *knowledge society*, since one of its main organising principles is the division of labour on the basis of knowledge. Ideally, a business function is transferred to and performed in that country or region that can produce at the lowest comparative costs and is specialised in the production and/or application of a certain knowledge type that is required for the performance of the business function. This social division of labour is made possible by the application of new communication and transport technologies.

10.6.2 Knowledge society in a narrow sense (1): techno-cultural knowledge society

The techno-cultural knowledge society might be characterised as the ‘real’ successor of industrial society. To a certain extent, this society type is the materialisation of Ritzers (1993) ‘McDonalised’: the ability to efficiently apply the knowledge of ‘nature’ is combined with the capacity to gear this application to the variety of individual and group identities on the global market. Also in the organisation of the production, the techno-

cultural knowledge society shows a Janus face. On the one hand, the inclination of industrial society to efficiency is recognisable in the continuous quest for a further technical division of labour and the perfection of the Fordism model. On the other hand, the techno-cultural knowledge society is characterised by high-qualified and culture-sensitive capacities, necessary for the continuing adaptation to new consumers' demands.

The hero of the techno-cultural knowledge society is Sennett's (1998) 'flexible man'. His or her restlessness, ability to adapt to constantly changing circumstances, and lack of commitment to any community makes this knowledge society the most dynamic of the three types. Under these circumstances, 'communities' are mostly temporary and not really able to impose the necessary 'solidarity' (Durkheim, 1947) on its 'members'. This lack of binding force is however compensated by the invisible disciplinary power of the 'social structures' of the techno-cultural knowledge society as a whole (Foucault, 1977). In terms of social stratification, this society type is a true 'meritocracy', furnishing those with a minimum of knowledge of the technological hypertext and an antenna for superficial cultural similarities with status and wealth.

10.6.3 Knowledge society in a narrow sense (2): socio-cultural knowledge society

The second type of the knowledge society in a narrow sense might be characterised as the service society (Bell, 1973; Touraine, 1974) *par excellence*. At a first glance, it seems that this knowledge society is 'beyond' the production of real goods. At the core of this society type is the production of intangible things - communication channels, images, emotions - making it very difficult to discern highly valuable commodities from hot air. The dominant social stratum in this knowledge society type somewhat resembles Florida's (2002) 'creative class': consultants, artists, musicians, architects, journalists, social scientists, and the like.⁹³ The most valuable tool of this stratum is its 'cultural capital' (Bourdieu, 1984), that is: a thorough understanding of cultural meanings and differences, but also the presence of the right 'habitus'.

As Bourdieu knew, the acquisition of cultural capital is much more difficult and time-intensive than the obtainment of economic and even social capital. Accordingly, in this knowledge society type the rat race for economic success and social recognition already starts in the cradle, giving the offspring of the culturally gifted a head start. In order to keep up, also in adult life a permanent training is required, not only through formal education, but through virtually all activities performed during the waking hours of the day. Consequently, in the socio-cultural knowledge society the boundaries between work and private life have been completely blurred. Maybe this is why this knowledge society type is easily mistaken for a 'post-materialist society' (Inglehart, 1977). Formally, the working week is relatively short, but in practise work goes on during lunch and dinner, the evening visits to the movies and the theatre, and even during vacations to distant places.

In terms of social stratification, the socio-cultural knowledge society is a hybrid, in which status position, economic position and power position tend to fuse. Since social, cultural and economic life are hardly separable, cultural capital is easily convertible into social and economic capital, and vice versa - maybe in this knowledge society it is not

⁹³ Florida does however not make, as we do, a distinction between what might be called a 'socio-cultural' and a 'techno-cultural' creative class.

even sensible to make a distinction between the three capital types. As a consequence, in the socio-cultural knowledge society there is a sharp dichotomy in the economy, in politics as well as in cultural life between the 'haves' and 'have-nots', and hardly any jobs for those who lack a minimum amount of cultural knowledge.

10.6.4 Knowledge society in a narrow sense (3): techno-social knowledge society

Finally, the techno-social knowledge society is specialised in the development and application of the knowledge types required for the production of mass consumer goods. This is the reason why this type of knowledge society might also be called the 'new industrial society'. With its concentration on large-scale industrial production and its Fordist organisation of the production process, it highly resembles the industrial society of the early phases of the modernising process in the West. Initially, in the first wave of change (see Section 3), this society type was the result of the process of social outsourcing of business functions that require low-skills and had become too expensive in the other knowledge society types. In the second wave of change (see Section 3), the phase of cultural fragmentation, the techno-social knowledge society however develops into a mature knowledge society in its own right. Since the development and application of techno-social knowledge have become too expensive and, to a certain extent, unnecessary in the other knowledge society types (as they have specialised in the development and application of the other knowledge types), this knowledge society type can eventually outstrip the other two in the development of new efficient and cheap techno-social organisation forms. This is why this society type might be called the *new* industrial society. However, compared to the other knowledge society types, the techno-social type can hardly be labelled a *knowledge* society, since its labour market is characterised by a low demand for high-skilled and a high demand for low-skilled (and low-paid) workers. The latter are working in highly rationalised production processes, and are subject to alienation and exploitation.

10.6.5 Geographical distribution

For us, the inhabitants of the early 21st Century with still one foot in industrial society, it is tempting to identify the three knowledge society types with specific regions on the globe. The American West Coast and Japan with their successful high-tech sectors would for instance be perfect examples of the techno-cultural knowledge society, North Western Europe with its creative industries of the socio-cultural variant, and the new industrial areas in China and India of the techno-social type. For many Westerners, it might even be reassuring to divide the world in a capitalist 'centre' of luxury, culture and safety, and a 'periphery' of poverty and exploitation (Wallerstein, 1974 & 1980). But with the nearing death of distance (Cairncross, 1997) and the ever growing mobility of labour, the new industrial society is already on their doorsteps - and in the coming decades it will probably even enter their homes.

10.7 Knowledge society types and the organisation of work

For the organisation of work, the emergence of three different knowledge society types has far-reaching consequences. Unlike many authors, we do not think that it is fruitful to characterise the society we are about to enter as a 'post-industrial' (Bell, 1973; Touraine, 1974), 'post-Fordist' (Piore & Sabel, 1984), 'disorganised' (Offe, 1984 & 1985; Lash & Ury, 1987), 'network' (Castells, 1989) or 'service society,' or as any other type of society that can be typified with one single adjective. Neither will it be characterised by a single type of work organisation. The notion of a global division of labour implies that the organisation of work in the knowledge society types will not necessarily be the same, but will in each of the societies be geared to the specific requirements of the production and application of different knowledge types. In Table 10.1, some of the characteristics of the three knowledge society types and of the connected organisations of work are summarised.

Table 10.1 Types of knowledge societies (KS) and work organisation

	Techno-cultural KS <i>KS in narrow sense (1)</i>	Socio-cultural KS <i>KS in narrow sense (2)</i>	Techno-social KS <i>KS in narrow sense (3)</i>
<i>Dominant knowledge type</i>	Technical Techno-cultural Cultural	Social Socio-cultural Cultural	Technical Techno-social Social
<i>Products and services</i>	Techno-social goods: computers, software fast food, bio-technology Techno-social services: banking, web services	Socio-cultural goods: multiculti food, pop music, movies Socio-cultural services: consultancy, advertisement, diplomacy, tourism	Mass goods: cars, clothing, toys Raw materials: oil, mining products, meat, grain
<i>Work organisation</i>	Neo-Fordism Re-skilling and deskilling; Lifelong learning Re-integration of certain business functions that require high skills; further splitting-up of business functions that require low skills: alienation Flexibility, mobility and insecurity; exploitation, poverty and insecurity Dichotomy between high- skilled and low-skilled workers	Networks and self-employment Re-skilling Lifelong learning Re-integration of certain high-skilled business functions Flexibility, mobility and insecurity Dichotomy between high-skilled and low-skilled workers; few jobs for low-skilled workers	Post-Taylorism Deskilling Further splitting-up of business functions that require low skills: alienation Exploitation, poverty and insecurity Few jobs for high-skilled workers

As has been mentioned in Section 6, the *techno-cultural knowledge society* combines the efficient application of technology with the capacity to gear this application to the variety of identities on the global market. This combination requires a flexibilisation of the 'traditional' Fordist organisation. The result might be called 'neo-Fordism' (Gottfried,

1995): a capital-intensive and very flexible organisation with nevertheless a high degree of technical division of labour.

Conversely, the development and application of knowledge in the socio-cultural knowledge society hardly requires large capital investments. Knowledge is produced and used in small and ad hoc 'organisations' and in networks, and certain high-skilled business functions that were split up in the industrial era, are re-integrated. A high percentage of the working force is not even working in organisation at all, but is self-employed.

Finally, work in the *techno-social knowledge society* is characterised by extreme degrees of technical division of labour. The quest of the 'old' industrial society to efficiently tune technology to the capacities of workers and vice versa is in the new one intensified. New 'neo-Taylorist' techniques are developed in order to produce faster and cheaper in a extremely competitive environment. The result is a further deskilling and alienation of workers.

11 Conclusions, hypotheses and research questions

EDITED BY URSULA HUWS (WLRI)

11.1 Introduction

The foregoing chapters throw up a very large number of interesting conclusions which can contribute to the formation of research hypotheses which can in turn be used to generate research questions to guide the empirical research of the WORKS project.

In this chapter, for each topic addressed in the literature review, we summarise the main conclusions drawn by the authors of the preceding chapters, outline the hypotheses that can be derived for our research and selectively draw on these hypotheses to propose research questions that can be feasibly addressed in the WORKS empirical research. Because of the interrelationships between these topics, there is inevitably some overlap between these questions. In a next step, we synthesise these research questions still further and rearrange them according to the feasibility with which they can be addressed within the four types of research scheduled to be carried out within the framework of the project: quantitative research (at the organisational level); quantitative research (at the individual level); qualitative research (at the organisational level); and qualitative research (at the individual level).

This chapter represents the results of an intensive collaborative process between the WORKS partners, also drawing in insights from external experts invited to participate in WORKS workshops on policy perspectives (held in Lisbon in December, 2005) and on quantitative research on changes in work organisation (held in Leuven in February, 2006). The final research questions for the qualitative research were fine-tuned at a workshop held in London in March 2006 and subsequently agreed by the Scientific Board of WORKS.

11.2 Global value chain restructuring

One of the central challenges facing the WORKS project is how to understand the relationship between changes taking place at the level of the global economy and changes taking place at the workplace level. It can be concluded that the latter cannot be simplistically read off from the former. In other words the changes taking place at a global level both shape and are shaped by the practices of actors at a local level, with both being mediated by a range of institutions operating at international, national, regional and local levels.

It can be concluded from the literature review that the concept of the global value chain is useful for providing a window into this relationship making it possible to examine these mutual interactions. A particular advantage of this concept is that it makes it possible to overcome the (often spurious) legal and spatial distinctions implicit in more traditional concepts like those of the 'enterprise' or 'establishment' that sometimes obscure

continuities and impede comparisons. However care must be taken to avoid confusing the roles of the concept of the global value chain as *explanans* and as *explanandum*.⁹⁴ In other words, hypotheses and research questions must be carefully formulated to allow for the direction of causality to be questioned and care taken to avoid choosing cases that presume the outcome.⁹⁵

It is also important to choose cases that make it possible to compare the effects of differing national institutional settings. This implies a selection of cases in different countries that are closely comparable in other respects. Here, the concept of the business function becomes highly relevant. The increasingly generic ways in which business functions are carried out within sectors suggests that selecting the same business function within the same sector provides a unit of analysis that will maximise such international comparability.

In order to examine the *restructuring* of value chains and changes in skills and knowledge, some other selection criteria are implied: the need to bridge at least one link in a value chain in order to expose the roles of intermediaries and the changes (including the changes in workers' skills and knowledge) taking place at either side of the contractual/spatial divide, thus making it possible to investigate hypotheses about both deskilling and reskilling as well as about the restructuring process itself.

At a macro level, research into the interrelationship of global restructuring and restructuring at the workplace level is impeded by the lack of clear definitions of business function which could enable these changes to be tracked statistically, whether these changes involve spatial relocation or result from contractual externalisation (outsourcing). However it is likely that some clues can be gained through examining shifts in employment between sectors and countries and regions by occupation.

11.3 Institutional shaping

There are, of course, many institutions that play a role in shaping and reshaping work organisation. One important research issue is how changes in work are dealt with - through negotiation or through co-operation or some combination of the two? How effective are policies at the workplace level in achieving the goals for quality of work life and worker protection for which they were designed? When examining this issue, different national and sectoral traditions must also be taken into account. Can we expect divergences in the ability to regulate changes in work according to different types of production regimes, different types of industrial relations models, different levels of coherence between institutional frameworks in a given national context? A central task in WORKS is to examine what effect policy initiatives at different levels actually have on work life and work experience. Especially relevant in this regard is the role of institutions in their determination, implementation and enforcement of policy.

It is in actual working practices at the workplace that the effects of policy initiatives at various levels - international, European, national, regional, sectoral and company - will become visible. Here we can examine whether European guidelines and directives are being enforced and how their implementation is carried out in diverse settings and across

⁹⁴ Thanks to Willem Trommel (University of Twente) for drawing our attention to this point.

⁹⁵ Thanks to Pamela Meil (ISF) for this point.

diverse institutional contexts. Certainly existing studies have showed that there are major challenges for existing institutions and forms of social dialogue to deal with current trends in restructuring and changes at work. There has been some evidence for strategies of renewal in which institutions are finding new ways to achieve collective responses to ever more flexible workplaces. There is also evidence that policy paths vary by nation, regime type, and also by sector. Yet, an increase in market-driven orientations across European economies is also apparent and this creates obstacles for the governance potential of traditional institutions for social dialogue, and thus for the attainment of high levels of quality of work.

There are a number of topics which could be addressed which are relevant to WORKS and in which policy and institutional shifts play an important role, among them the demand for skills and qualifications, work equality and gender, and flexible forms of work organisation. What effect do policy orientations have on the quality of work life? And how do these impact different groups of workers?

Another important question for social policy and social dialogue today is determining what quality of working life is and whether this definition has changed from in the past. New job characteristics linked to project-based work, for instance, demand high levels of responsibility and work intensity without corresponding levels of compensation or authority. On the other hand, they also contain high levels of autonomy and interesting job content. Who should take responsibility for meeting the increasing demands for qualification, lifelong learning, and rising competency requirements on the job? Should they be seen as a purely individual responsibility, or one shared with companies, or the societal institutions of training and education?. The question for policy is how well institutions can maximise opportunities and minimise risk in these circumstances.

Some, but not all of these questions can be addressed effectively in case study research. Questions about national differences in institutional approaches are better addressed by other means, such as comparative analysis of quantitative data sets available at a European level.

11.4 Organisational restructuring

The popular assumption of a transition from Taylorist to post-Taylorist work organisation has turned out to be only of limited value as a general research hypothesis: In view of the complex developments in today's workplaces such generalisations are not valid. There are not only clear counter-tendencies, but change processes are also much more complex. Furthermore, the majority of jobs today are in the service sector for which the terms and concepts that were developed for manufacturing work are often not directly applicable; a number of jobs have never been organised in a 'Taylorist' way and, consequently, it is misleading to denote the distance from the 'model' as a change. Finally, such an approach leads observers to overestimate the gains for workers because often each deviation from the Taylorist model is, at least implicitly, assumed to constitute an improvement in working conditions.

Recent debates clearly show that in order to be able to investigate current changes a comprehensive concept of work organisation is required. This concept should make it possible to analytically span the work-life boundary taking into account the erosion of boundaries between work and private life and the domestic division of labour. The con-

cept should also include more actors than just management and labour, in particular in contexts of 'multiple employers' and in view of the often decisive role of customers. The research needs to adequately address the complexity and ambiguity of increased 'autonomy' in work which cannot simply be used as an indicator for improved working conditions. In this context, the impacts of corporate governance and market relations are crucial for understanding new forms of control and their outcomes. By the same token, the blurring of organisational boundaries through outsourcing and subcontracting makes it necessary to widen the analysis of work organisation by taking into account the relations between units and companies along the value chain.

The review of the literature showed us that the relative autonomy of workers, which is necessary in knowledge work because the result cannot be determined beforehand, should not lead us to assume that direct control by superiors and bureaucratic forms of control do not play a role. Rather, the question is how these are combined with indirect forms of control through target setting, 'marketisation' and the influence of customers. We should also consider how all this relates to the workers' occupational aspirations and orientation towards professional standards. It must also be recognised that control may be exercised tacitly and informally, for instance through gendered or racialised practices at the workplace. While control is certainly at the core of any research on work organisation it is, however, too complex an issue to be explored comprehensively in the WORKS project. The main empirical focus therefore should be on workloads and deadlines: 'How are they determined?', 'What influence do workers have?'

In addition, there should be a focus on change brought about by the restructuring of value chains. One important research question following from the above then is whether increasing standardisation of tasks and workflows and strengthening of bureaucratic control can be seen as a *result* of outsourcing and restructuring of value chains (whilst bearing in mind that it could also be a contributory *cause*, for the reason that the more standard the task, the easier it is to relocate or outsource it). This also relates to strategies of knowledge management that rely heavily on IT databases. The consequences for skill needs, skill formation and occupational identities need to be explored in relation to their meanings both for organisations and individuals. To adequately address the consequences for gender relations it is not only necessary to consider the shift in skill needs but also how different skills are valued and how horizontal and vertical sex segregation is being reproduced. In practical terms, this will involve ensuring that the numbers of men and women in different occupational, hierarchical and contractual categories (both before and after restructuring) should be recorded so that the relevant analyses can be carried out.

To include the employment relationship into the analysis of work organisation is crucial for investigating changing strategies for reaching flexibility. Questions on autonomy and control as well as skill formation need to be linked with the analysis of labour contracts as organisational variables. In this context, the analysis should not only describe changes in employment relationships but also shed light on the effects of outsourcing and other forms of external flexibility on the working conditions of the core work force, e.g. by increasing pressures for temporal flexibility and for reducing labour costs. We need to investigate the constraints companies face in their strategies to reach flexibility with reference to the various institutional contexts.

Finally, the empirical research needs to address the spatial and temporal dimensions of work organisation as well as their changes in the process of restructuring. Management

control, forms of co-operation, acquisition of skills, sharing of knowledge, *etc.* do have obvious spatial aspects. The main question is how, in the process of a restructuring of value chains, the spatial dimension impacts on organisational choices and on their outcomes in terms of performance and working conditions. Working hours and time use are at the core of quality of work issues. Thus it is necessary to explore how they are affected by value chain restructuring, *e.g.* by changing the temporal aspect of workflows and by redistributing the burdens of flexibility. This not only relates to the different positions of units or companies in the value chain, but also to relations between occupational groups and between men and women.

11.5 Labour market - skill supply

One aspect of institutional shaping that is particularly relevant for the WORKS research is that of skill supply. Not only does the availability of skills influence locational decisions by companies, but the particular ways in which they are formed seem to play a role in shaping specific forms of work organisation at a local level.

National institutions still play a decisive role in the process of skill supply, even if different globalisation mechanisms place increasing pressure on them. In this context the understanding of the development of formal welfare regimes is not sufficient to explain workplace practices. Informality creates a series of challenges for labour market regulation in large regions of Europe which has to be taken into account in the envisaged research on work restructuring.

The changing role of education and the knowledge, skills and values that are required on the labour market should be examined at the level of actual practice in the workplace in the organisation; it cannot be taken for granted that education and training policies could be fully in compliance with labour market needs. In the context of labour market equilibrium debate we may ask about the phenomena of 'overeducation'/'overqualification' from the point of view of the 'degree of fit' between individual skills and job description as well as to what extent growing flexibility and insecurity affect the choices of individuals with respect to their labour market trajectories, their qualification processes, their 'employability moves', *etc.*?

In the context of training and skill formation, apprenticeship schemes might serve as a linking section between skills acquired during the initial education and skills and qualification required for a particular workplace. More precisely, through apprenticeship practices the mismatches between the education supply and employers' demands for certain skills can be removed or at least diminished. From this perspective it is interesting to ask what is the duration of the apprenticeship, what kinds (paid, non-paid, *etc.*) of apprenticeship practices are used, whether the apprenticeship is sufficient for overcoming the (eventual) mismatch between the educational qualification and the job description of the particular workplace and what is the potential for the apprentice, after completing the training, to receive a contract and 'regular' work within the company.

The relationship between the availability of skills and organisational strategies is also important. To what extent do companies adopt flexibilisation strategies in order to meet the challenges of the changing technological and competitive environment? To what extent do flexible recruitment strategies of non-graduates lead to more or less on-the-job

training? What is the balance between on-the-job and off-the-job training within a particular company?

It would also be possible to use such information as a way to address broader hypotheses relating to individualisation: to what extent are the employees willing to take responsibility for their own careers and occupational training and to what extent do they rely primarily on the employer's ability or willingness to provide them? In this respect several questions could be raised. Do the different occupational groups have different capacities for employability - depending on the duration of unemployment period (where relevant), the duration of the employment period, the type of contract (*e.g.* temporary *versus* permanent), the wage, the hierarchical position, *etc.*? What 'movement capital' (knowledge, skills and expertise) is most important in order to reach a high level of employability? To what extent does the company rely on (but not reward) unrecognised skills (such as 'emotional competence') which are more likely to be held by women than men, and to what extent do such skills lead to improved employment prospects? What is the 'training history' (activities that persons have undertaken, the length of the training and the content of the training, *etc.*) of the employee? What has been the contribution of the firm to the employability (and training history more precisely) of the employees in the frame of restructured global value chains? Such questions could not feasibly be addressed in organisational case studies but are more appropriate for the individual biographical interviews planned as part of the occupational case study research.

It would also be interesting to investigate changes in dialogue practices relating to training at the company level in the context of the recomposition of global value chains. We consider that even if a number of agreements exist at European level, and that questions of vocational training are the subject of negotiation in many sectors at national level, the impact of the outcomes of the bargaining are still limited in many countries. Furthermore, it is important to investigate the impact of the new institutional measures adopted at the initiative of the social partners and implemented in the practices of companies operating in global value chains. In the frame of restructuring of global value chains, the training issue is a crucial aspect of collective bargaining. So it is vital to investigate changes of dialogue practices at the company level in the context of recomposition of global value chains. The question here is how the bargaining could stimulate the training practices aimed at different occupational and socio-professional groups.

Whilst questions relating to organisational strategies and collective bargaining can be feasibly addressed in organisational case studies, many of the questions raised here relating to individual training and career histories (including experiences of apprenticeships and employer-provided on-the-job and off-the-job training) can most appropriately be addressed by means of the biographical interviews planned to be carried out in the context of the WORKS occupational case studies.

Broader questions, especially those involving international comparisons of skills supply are most feasibly addressed by means of secondary analysis of quantitative data sets. Such questions might include, for instance, the relationship between qualifications and occupational status, which could be analysed to provide comparative information on over or under qualification in the sectors selected for study.

11.6 Changing use of knowledge and communication

The review of the literature on changing uses of knowledge and communication produced a number of broad conclusions:

- coming from the tradition of the industrial society the characterisation of knowledge-based societies is grounded in new production patterns taking place within global value chains. The (technical) possibility of the digitisation and codification of many types of products as well as the decentralisation of working processes have led to a new concept of knowledge. This knowledge relies on specific technological and cognitive conditions, which are strongly connected with a reorganisation of working structures;
- the knowledge-based concepts mainly rely on acquaintance with, elaboration, distribution and moderation of immaterial data, databases and information. The computer can be considered as the symbolic tool for these activities. This means that specific competences are required (formal qualification, social skills, networking capabilities, *etc.*);
- the distinction between knowledge management and social capital has been influenced strongly by knowledge as a 'new organisational concept'. One hypothesis is that the knowledge-based concept as a management concept focuses mainly on the individual level. This means that the continuous improvement of individual skills (social skills, increasing qualification, flexibility, *etc.*) should be adapted to market demands. The role of 'learning organisations' as the counterpart of this process remains somewhat unclear and open;
- networking, decentralisation, internal and external flexibility and new career trajectories can be considered as reactions to new market demands. Therefore 'knowledge management' as an organisational concept has become an important issue in the restructuring processes of work. These changes have created new social and political insecurities.

Hypotheses related to the WORKS project can be examined under three headings:

11.6.1 Relations between the practice of knowledge use and labour relations regulations

Combinations and degrees of knowledge/skill used in the business functions/sector (*e.g.* explicit *versus* implicit) may influence the bargaining position of employees with their employers/managers in the organisation investigated. Individual or collective representatives of the occupational groups who are using non-coded or tacit knowledge may strengthen their power position in the bargaining over working and employment conditions. For this 'core' group of employees the use of official actors (*e.g.* trade unions) and institutions (*e.g.* collective bargaining) may be less attractive in comparison with informal bargaining and consent. The group of employees who have such key positions in the use and development of tacit knowledge may prefer the individualisation of their negotiations with their employers.

11.6.2 Relations between the forms of co-ordination of tasks and the types of knowledge processed and used

In the case of a project-based work organisation or a network-type co-operation which aims to use, share and develop products and services based on non-coded or formalised knowledge and requires the deep involvement of the customer (clients, suppliers, *etc.*) we may presuppose the creation new co-ordination roles. For example, the importance of special roles such as knowledge brokers and project leaders is increasing in the case of products or services which are based on diffused knowledge.

11.6.3 How to measure the role and importance of 'trust regulations' as a special mechanism in the use and mobilisation of both coded and non coded knowledge

In our view, the various dimensions of trust relations should be identified through reference-testing of the members of networks surveyed in the organisational or occupational case studies in relation to their professional and moral reputations. In addition, it is necessary to describe the testing mechanisms used by the network members to monitor these reputations over time. Another interesting question is the extent to which trust relations are gendered.⁹⁶ Finally, we have to note that the operationalisation of these hypotheses will be rather different in the case of the quantitative and qualitative research tools used.

11.7 Changing skill requirements

To the extent that ICTs make it possible to bridge the boundaries between organisations, to steer and monitor global production processes, to connect different firms, teams and workers globally on a permanent basis, a new illusion is created: the illusion that collaboration and fine-tuning between mutually interdependent activities can be organised seamlessly over distance. The role of informalities in a team, the importance of spontaneous communication and random contacts, and the role of 'sharing' time, space and tools for mutual learning are often neglected. Despite several experiments and new organisational models, it can probably never be expected that integrated information systems, networks and interactive media can fully take over the key role of face to face human interaction and communication for performing work systems nor its significance for individual and organisational learning.

Although it is often assumed that networked organisations have the capacity both to tap into existing skills and experience and to generate new skills and forms of knowledge transfer, such win-win, 'high-trust' situations can be regarded as rather exceptional and dependent on the combination of favourable circumstances.

Based on this literature review, we can formulate some possible research hypotheses and questions for the next steps of the WORKS project:

⁹⁶ Ewa Gunnarsson (NIWL) comments that 'trust regulation could be conceptualised as a 'moral glue' and as such a resistance to change. It could also be related from a gender perspective to male bonding and the reproduction of homosociality in the way of efficiency'.

11.7.1 Work organisation

Here the objective is: analysing (new) forms of work organisation, the division of work, and workplace design at the establishment level.

The first level of impact of corporate restructuring is on the work organisation of the business function under investigation in the individual firm. The work organisation can be described as the distribution of the 'task pool' of an organisation over the work force (once the technical infrastructure of production processes has been implemented). These tasks can be (a) assigned internally, (b) provided by employees belonging to the firm but not operating on the premises (eWork), (c) provided by third parties operating on the firm's premises (on-site subcontracting) or (d) supplied from outside (suppliers). The main hypotheses are:

1. the research on work organisations can no longer be limited to task structures and social relations within establishments and workplaces. The firm has become a multi-employer environment and employment is managed across organisational boundaries. With respect to control and co-ordination this implies not only hierarchical forms but also market forms of management, including a pertinent role of the customer (customer-orientation);
2. other models of co-ordination than the bureaucratic vertically integrated firm increase risks related both to the quality and the quantity of performance at the level of the value chain. To reduce these risks, the relationships between the organisations and between the employees involved, are increasingly dependent on legal contracts (outsourcing contracts, due diligence, service level agreements, *etc.*) explicit procedures and performance monitoring (whether electronically or not).

Some of the research questions that arise are:

1. under what conditions are jobs routinised and Taylorised, leading to deskilling? Conversely, under what conditions do they require autonomy and decision-making, which implies the use of more knowledge and skills? What is the role of ICTs and of organisational change in these processes?;
2. how is knowledge work organised in the new corporate environment and in a context of the growing codification and commodification possibilities related to the widespread use of ICT? The complexity and uncertainty of (high-skilled) knowledge work has always implied the need for a form of work organisation with a high degree of autonomy, self-organisation and discretion, and delegation of responsibilities. These jobs require autonomy and opportunities for learning and intensive interaction and collaboration with others (inside and beyond the firm) in view of problem-solving and in view of the 'spiral of knowledge creation (tacit-codified). The new organisational environment, both stretching across the traditional boundaries of organisations and bringing different employers and customers into the firm, raises the question to what extent this autonomy is counterbalanced with the internalisation of market principles into work processes and into the individual: tight financial control, formalisation and (self-)rationalisation, increasing centralisation of control, leading to more pressure and stress;
3. the 'paradox of proximity': what is the balance between the need for informal learning, the development of communities of practice and organisational learning on the one

- hand, and formalisation, centralisation and control resulting from the need to work over (legal and spatial) distance on the other?;
4. the gender division of labour: how are these changes gender-biased?

11.7.2 Internal labour market and skills and qualification issues at the level of the firm/business function

Here, the objective is: analysing the impact of organisational changes on internal labour market structure, personnel policies with a focus on skill and qualification issues (inflow, throughflow and outflow policies, learning and skill policies)

In the context of a blurring of organisational boundaries, longstanding principles associated with the classical model of the internal labour market structure seem to be overturned, leading to a differentiation of policies with respect to qualification issues at the level of the internal labour market. Intra-firm skills development policy measures *versus* externalised skills provision is a core issue in this part of the research. The main hypotheses are:

1. the logics behind corporate restructuring will to an important extent determine the effects on skills and skills provision policies. Firms that seek the secure (and relatively long-term) availability of scarce skills on the market will develop different relations with these employees than when the externalisation of part of the low-skilled work to cheaper labour markets is involved. What is the precise role and importance of in-house skills provision and development *versus* skills acquisition on the external labour market in restructured organisations?;
2. it can be assumed that the blurring of boundaries of organisations will reinforce the deterioration of internal skill development mechanisms. On the other hand, the emergence and growth of intermediary service suppliers might give birth to new internal labour market structures, providing employees with new learning opportunities and more horizontal and vertical mobility opportunities or on the contrary with more standardised and divided work processes and tasks;
3. networking beyond the initial company can provide learning opportunities because employees gain access to networks of experts, new information and knowledge. On the other hand, the risks inherent in networks often result in a significant increase in performance monitoring;
4. increased performance monitoring and control systems (such as scripts and procedures) accompanying new forms of networked organisation supported by ICTs, limit the opportunities employees have to exercise and develop technical or professional skills;
5. there is a growing shift to social and relational forms of knowledge and a shift from technical to social collaboration structures;
6. what is the relative importance of soft and generic skills *versus* technical and professional skills for the occupations under investigation? How can these soft skills be described? To what extent are soft competences linked to skilled work under increased monitoring and formalisation of procedures?

11.8 New career trajectories

This review of the literature raises some conclusions about career trajectories and occupational identities that can be questioned in the perspective of changes in work and the restructuring of value chains. Here, we list these conclusions and suggest some hypotheses that can be explored in the empirical work.

11.8.1 Boundaryless *versus* organisational careers

The literature overview leads to the conclusion that it is not possible to take it for granted that organisational careers are either disappearing or becoming anachronistic in new patterns of work organisation and restructuring, although the boundaryless concept seems compatible with value chain restructuring. Empirical data collection has to consider both boundaryless and organisational careers and to investigate the various rationales underlying them.

11.8.2 Individual careers, institutional and contextual factors

Factors of differentiation of career patterns do not only include individual and organisational aspects, but also the roles, policies or strategies of institutions and agents on the labour market. Such roles and policies are often undermined in the individual approach. The key issue here is to understand how they interact with individual choices.

11.8.3 Complementary insights from the perspective of the individual career and the perspective of the trajectory on the labour market

From the career point of view, subjective factors, including attitudes towards work, are put forward to explain differentiations among workers. Institutional factors are not neglected, but integrated in the enactment process. Not all trajectories on the labour market are implicitly considered as 'careers', but mainly those that are 'target trajectories'. From the labour market point of view, the multiplication of transitions and diversification of trajectories encompass a wide range of situations, mainly shaped by the increasing flexibility of work contracts and work status. Transitions are also shaped by public policies (re-insertion of the unemployed, conversion after re-structuring, re-entry into the labour market, *etc.*). Boundaryless trajectories do not only consist of 'voluntary' nomadic pathways but also include constrained mobility or precariousness.

11.8.4 Careers and equal opportunities

Gender and ethnicity are key issues for equality of career opportunities. In order to be efficiently dealt with in empirical investigation, this broad subject should be refocused and targeted to the scope of the WORKS project, for instance by asking: to what extent globalisation and/or restructuring reinforce patterns of career discrimination according to gender or ethnicity, to what extent they allow for new practices of 'diversity management', or to what extent they undermine legal or negotiated provisions for equal opportunities at work.

11.8.5 Occupational identities

There are diverse components in occupational identities. Two of the most important of these are: recognition (of knowledge, competences, *etc.*); and commitment (to work or tasks and/or to an organisation). Changes in work and the restructuring of the value chain modify these components. Restructuring modifies both the parameters and contexts of individual recognition. This raises several questions: Which knowledge, competences and forms of authority are recognised, and by whom? How do changes in recognition affect individuals? In the restructuring of the value chain, do the business functions become the area of mutual recognition? Can commitment to work or tasks be more important than commitment to the organisation? Might recognition come from peers and clients more than from the organisation? In this sense, are occupational identities less sensitive to restructuring and organisational changes? Is identification more based on work and functions than on organisations or sectors?

Occupational identities are on the one hand individually generated and on the other hand socially generated. It is a transaction between identification desires and institutions that gives status and diverse forms of recognition. In the knowledge-based society, it is supposed that the institutions of work (organisations, training providers, *etc.*) play a weaker role and that workers have more resources and desire to build their occupational identities. However, there is empirical evidence that demonstrates huge inequalities in this field, with many workers more and more dependent on institutions to access positive occupational identities (as opposed to 'retreat' or 'blocked' identities).

Flexibility, instability and reorganisation have an ambivalent impact on occupational identities. Some are blocked whilst others are promoted. The effects will depend on a combination of a range of factors: socio-economic factors (such as level of qualification), cultural factors (such as whether the enterprise culture is strong or weak) and subjective factors (such as attitudes to work). The transformation in occupational identities cannot be explained in a 'mechanical' way: all workers with a similar profile will not react in the same way to restructuring.

The transformation of occupational identities expresses the shift from a community relationship to a society relationship (a decrease of the fusion type of relationship, and an increase of the negotiation type). Social forms of occupational identities are not less compatible with collective life. Social bonds, solidarity and collective consciousness in work are not disappearing but the forms and temporalities of the social bonds within work are changing. They may be closer to a logic of networks, organised around projects, with individual involvements rather than to the logic of community that is at the core of the trade-union institution.

Despite globalisation and international work, occupational identities are locally constructed. Local cultures and values remain central in the construction of occupational identities.

Knowledge plays a dynamic role in the transformation of occupational identities. In this dynamic role, the interactions with others are crucial, both for the learning process and the recognition in a new identity. Organisations can support such learning and identification processes to a greater or lesser extent.

A social identity is a combination of diverse identities. Occupational identity interacts with other identities (outside work) that constitute a self-identity. Gender identity plays a role in this combination as does ethnic identity. The importance of the occupational iden-

tity within a social identity will vary between individuals. Some authors assume that occupational identity does not have the same central place in a social identity as in earlier times. The impact of restructuring and the threats to occupational identity will depend on the role played by occupational identity within a social identity.

The nature of the recognition expected from work is changing, from appreciation to admiration. New organisational models favour the second type of recognition.

Finally, those members of an organisation who identify more strongly with the organisation are more likely to feel threatened by organisational change. Such identity threat is an important source of resistance to change.

Most of the questions raised in this section are most appropriately addressed by means of the individual biographical interviews planned to take place in the context of the WORKS occupational case studies. However there may also be some additional information that can usefully be provided by a secondary analysis of quantitative data, for instance information on job or occupational mobility and on the prevalence of practices (such as team working) which might serve as proxy indicators for project-based work.

11.8.6 Impact on the quality of life

The quality of life - in its multiple dimensions - is highly influenced by the quality of work, its characteristics in terms of wages, working time, contents, continuity/discontinuity of employment relationship, *etc.* This is why the changes in work organisation underway in most capitalist countries should be carefully observed: they are taking shape as sources of change in people's living conditions as a whole, inducing transformations in opportunities, expectations, identities, character and personalities.

As demonstrated by many sources of literature, changes in working modalities and times have on the one hand a 'liberating' potential for individuals, yet on the other bring risks both at the individual and collective levels. A first risk concerns the threat to social integration or social cohesion. This is a common, primary asset, the continuation of the classic issue of social order, in sociological terms. It concerns the stability of relations between individuals and the harmony and cohabitation among the various sectors and groups in society.

A second risk is the social exclusion of particular groups within the population. In particular, weaker individuals (older workers, single parent families, women going back to work, immigrants, workers dismissed from production industry, those with a low educational level, people with disabilities) risk paying a higher human cost without having had the chance to seize the 'opportunities' that the post-modern society could offer if regulated and well-managed.

Faced with such risks, a lot of literature has focused on the importance of labour market regulation and social protection systems and on the necessity for policies for their reinforcement and extension. Regulation and protection systems constitute social property, the only guarantee that everyone has the opportunity to participate in processes of social organisation and of transforming rights of access to societal resources into a widespread, collective property.

Such policies are of the utmost importance. However, to increase individual and collective wellbeing, it is increasingly important that they should be integrated with policies on time organisation and balance. If this could be achieved, such policies could contribute

considerably to the improvement of people's living conditions. As we have seen, quality of work comprises quality of time, which presupposes time less colonised by work giving the individual the possibility to engage in other activities. A different time distribution and a reduction of work would create space for heteronomous activities; restricted working times could enlarge (or construct) a space for the accomplishment of complex and independent projects for self-fulfilment and a space for positive individualisation potentialities. In other words, a new balance between working and private life could be reached capable of increasing individual and collective wellbeing.

Stemming from this recognition, some interrogatives/research hypotheses can be identified for further examination:

- Which mechanisms can encourage a new division and distribution of care and market work between the genders and generations and thus led to the redefinition of social models towards more balanced solutions to increase quality of life of all individuals?
- What are the main factors that contribute to the definition of positive results or, conversely, negative results of discontinuous and atypical work paths?
- How can a greater work-life balance trigger the activation of virtuous mechanisms of growth in consumption and as a consequence work demand? And what could be the effects in terms of active citizenship and re-appropriation of social ties?
- Which forms of new organisation can be more inclusive, thus opening the labour market for more marginal groups (elderly, ethnic minorities, the disabled, *etc.*), enhancing the quality of life for these groups and their participation in the society?
- How should we understand and research issues related to work-life balance from a global value chain perspective?
- Which forms of new organisation can encourage more worker autonomy without increasing demands, stress and resulting musculoskeletal disorders?
- In what ways do changes in working time structures impact on health and safety problems? Which particular social groups are affected by them?

Some of these questions are too broad to be addressed within the scope of the WORKS project. However some can be addressed, at least partially, within the frame of the qualitative and quantitative empirical research.

Quantitative data sources could, for instance, be used to study time use in a comparative perspective, with particular reference to the gender division of labour inside and outside the workplace, and to the particular occupations and sectors selected for study. Quantitative sources can also be used to identify the prevalence of particular health effects in these groups.

In the organisational case studies, it could be possible to address some general questions about the restructuring of working time (including by gender), as well as asking questions (*e.g.* about absenteeism, turnover rates, *etc.* before and after the restructuring) which might provide indirect evidence of which jobs appear to have become more (or less) stressful as a result of the restructuring of the work organisation. In some sectors it may be useful to ask specific questions relating to the ways in which the restructuring of global value chains may have forced particular forms of working time restructuring, for instance the requirement to work anti-social hours or ignore national holidays in order to communicate with remotely located colleagues, clients or suppliers in different countries or time zones.

However, it is probably the biographical interviews planned to be carried out as part of the occupational case studies which probably offer the richest opportunity to collect qualitative information about changes in work-life balance and quality of life.

11.9 Research questions for WORKS

The empirical research planned to be carried out in the WORKS project falls into two broad methodological categories: quantitative research, based on the analysis of existing datasets, and qualitative research, based on case study investigations. The qualitative research is further broken down into two subcategories: organisational case studies, in which the object of study is the restructuring of an organisation involved in a global value chain, focusing on a particular business function within a particular sector; and occupational case studies, in which the unit of study is an occupational group, selected members of which will be interviewed in-depth to gain a biographical perspective on the individual and impact of changes in work organisation.

Since the main role of the quantitative research is to support the qualitative research, it makes sense to break this down too into the same two categories: data on organisations and data on individuals. This distinction corresponds with the character of most existing data sets, which are drawn on the one hand either from company or establishment surveys or administrative data on companies (the organisational level) and on the other hand from censuses or surveys of the general population, carried out either at a personal or a household level (the individual level). Surveys which link data derived from employers with information from employees are rather rare, although they do supply the richest source of information about changes in work. In the remainder of this chapter, in order to achieve clarity of focus, we therefore break down the research questions into four categories corresponding to how best they can be addressed methodologically: quantitative research (organisations); quantitative research (individuals); qualitative research (organisations) and qualitative research (individuals). It should be noted, however, that, in discussing the quantitative research, these distinctions do not always relate so much to the data sources as to the research questions. This is for the rather paradoxical reason that sometimes information about organisational practices can best be found from the survey results of population surveys (*e.g.* when workers are asked what kinds of employment contracts they have, whether they work shifts, or whether or not they work in teams). Similarly, there may be cases where 'individual' impacts may be obtained from the results of organisational surveys (*e.g.* when employers report on their policies on equal opportunities).

One of the main challenges for the WORKS project here is to pull together the relevant data from as many sources as possible in order to contextualise and validate the qualitative research.

11.9.1 Quantitative research - organisations

11.9.1.1 *Corporate restructuring*

There is a need for empirical information on the ways in which corporations are restructuring leading to the elaboration of global value chains. The most important forms of re-

structuring here can be reduced to two main variables: legal variables and spatial variables. Here, the key decisions made by firms can be summarised as ‘make or buy?’ and ‘here or where?’ If we presume that such decisions are made separately in relation to each business function (a presumption which can be supported by the empirical results from the EMERGENCE project), then it becomes necessary to try to identify in the statistics in which geographical locations these functions are being carried out and under what contractual relationship (whether they are being provided to a parent company or carried out under a contract for the supply of services). Unfortunately, business functions are not easily identified in official statistics (Huws, 2001) and relatively few organisational surveys ask questions enabling this information to be collected systematically. It is therefore necessary to find proxy indicators to give some indication of trends.

An analysis of some data from the European Labour Force Survey (CLFS) has indicated that it is possible to derive some information from it on occupational and sectoral shifts in employment over time by country within the EU and Accession States. Here, a research question that can be asked is: How have sectors involving the supply of business services grown over the past decade and what has been the relationship of this growth to trends in other sectors that can be presumed to be their clients (*e.g.* production industries, energy, public administration)? Is there any evidence that this growth has been greater in New Member States, giving support to the hypothesis that these are becoming a ‘back-office’ for companies in parts of the EU where costs are higher?

11.9.1.2 *New forms of work organisation and training strategies*

What is the evidence from organisation surveys on trends in new forms of work organisation, for instance team-working, project working or a reduction in the numbers of layers of management?

What are the trends in employer-provided training?

What is the evidence from labour force surveys of increases in forms of work that imply external forms of flexibilisation, for instance short-term contracts, interim work/employment by temporary work agencies, or self-employment in occupations where this is not traditional (*i.e.* excluding employment in agriculture, the arts, crafts, *etc.*)?

11.9.2 **Quantitative research - individuals**

11.9.2.1 *Occupational identity*

What evidence is there from administrative or population survey sources of changes in career trajectories, *e.g.* changes in mobility between employment, self-employment, unemployment, multiple job-holding, full-time education and economic inactivity? How are these distributed according to age, gender and other social variables?

11.9.2.2 *Changes in skills and use of knowledge*

What is the evidence from organisation surveys on changes in the degree of specialisation of jobs?

What is the evidence from labour force surveys on the broad trends in the occupational groups selected for study within the selected sectors. Are they growing or declining? Are the workers more or less highly qualified? Is the proportion of women growing or declining? Are wage levels increasing or declining?

Is there evidence of a growth in over (or under) qualification in the occupations/sectors selected for study?

Is there evidence of a growth (or decline) in the number of apprentices in the occupations/sectors selected for study?

What proportions of workers participate in which kinds of employer-provided training, and how do these proportions vary by gender, by occupation and by employment status (full-time or part-time; temporary or permanent)

11.9.2.3 *Time use*

What evidence is there from time use surveys of changes in use of time at work and in the balance of time between home and work? How do these changes correlate with gender, occupation, sector and (if evidence is available) indicators of new forms of work organisation (e.g. project work, teamwork, etc.)? What national variations are visible? And can these be correlated with differing welfare regimes?

11.9.2.4 *Quality of life*

What evidence is there from European Surveys of increases or decreases in stress and other work-related health conditions? How are these distributed by sector, occupation and social variables such as age and gender? Can they be correlated with indicators of new forms of work organisation (project work, teamwork, etc.)?

11.9.3 **Qualitative research - organisations**⁹⁷

This section draws strongly on the work of Workpackage 6 of the WORKS project in drawing on the foregoing chapters of this report to develop questions for the organisational case studies. These are structured here according to analytical dimensions (and therefore do not have the structure of a research guideline). Two perspectives are relevant: first, the current state of affairs (structures) and second the changes, or restructuring (processes). As far as restructuring is concerned the driving forces, motives of main actors also play a role.

In the organisational case studies only a limited number of topics can be addressed. Therefore the focus should be strictly on the interrelations between restructuring of value chains and quality of work. The description of structures should be limited, while the process perspective may be used as a kind of shortcut: It should make it possible to understand the impact of value chain restructuring on work organisation and the main aspects of quality of work.

⁹⁷ This section was drafted by Jörg Flecker (FORBA). It is also included in the final deliverable of WP6 (handbook for qualitative research), in the chapter on organisational case studies

The basic assumptions regarding the consequences of restructuring on quality of work are the following:

1. *direct effects on employment conditions*: restructuring means a decomposition and re-composition of sectors, companies, workplaces and jobs. Quality of work and quality of life are directly affected by this insofar as the boundaries between sectors, companies, workplaces and, most importantly, countries also constitute differentials in terms of basic employment conditions such as job security, wages, working hours, access to training, *etc.* Often, these differentials are the driving force of restructuring in the first place: for instance in the case of outsourcing from a highly regulated industry such as banking to an emerging business service industry or labour cost oriented cross-border relocations of work, *etc.*;
2. *direct effects on work organisation*: changes in the division of labour along the value chain, in workflows, in control strategies, *etc.* directly impact on day-to-day work practices with possible consequences for all dimensions of quality of work: workers of dependent supplier companies may face increasing workloads and time pressures; the transfer to a specialised IT service provider may improve access to training and career options; geographically distributed work may impact on working hours, demands on flexibility and skill needs, *etc.* In addition, the very dynamics of restructuring may increase the level of insecurity and enhance competition. This, in turn, may affect job security, stress levels and career options;
3. *indirect effects on employment conditions and work organisation*: quality of work is not only affected by actual shifts of boundaries or changes in functional relations. The mere existence of differentials also impacts on the bargaining position of actors within countries, sectors and companies because of potential restructuring (outsourcing, relocation, *etc.*) that can be used as a threat. Another important interrelation between restructuring and quality of work therefore are the consequences of changing power relations that can be seen most clearly in processes of 'concession bargaining' but that may also become evident in work practices (working hours, flexibility, *etc.*).

In the organisational case studies the aim should be to focus on all three points. However, regarding the second point it will not be possible to cover everything that might be interesting. Because of the difficulties inherent in international research co-operation and comparative research it would seem advisable to stick to the most tangible issues. Highly complex issues (*e.g.* the relation between autonomy in 'knowledge work' and the quality of work) are very difficult to tackle even within one language area and (research) culture and therefore would require a specialised international research project altogether.

To be able to answer the research questions it will be necessary to collect information in (or on) more than one unit/establishment/company. It seems very important to cover two (or more) linked units that have been affected by restructuring in different ways (*e.g.* internal customer service department and external call centre service provider in case of outsourcing of customer service activities). The focus cannot be on one unit because we are interested in the dynamics of the relationships between units and their consequences for workers within different units. For pragmatic reasons however there will be a focal unit which may be termed the 'point of entry' (to the value chain) in the following.

11.9.3.1 *Legal/organisational dimension (company boundaries, single or multiple employer relations, labour regulation, delimitation of units, organisation of networks and value chains, etc.)*

In a first step case studies should describe the selected business functions/companies/value chains in terms of ownership boundaries and contractual relations. This can certainly largely be done on the basis of background material, company reports, Internet research, *etc.* complemented by expert interviews.

Description of structures

How is the business function under investigation organised (*e.g.* internal R&D unit of automobile company only; research company co-operating with internal R&D unit; global dispersion of R&D units within the multinational company, *etc.*)? How is the value chain under investigation organised (units, establishments, workplaces, companies, *etc.* involved in development, production and marketing, *etc.* of product or service)? What are the relevant company boundaries in terms of legal entities and ownership? What are the boundaries in terms of employment relationships? What is the structure of the total value chain in terms of contractual relationships?

What are the main ICT applications supporting workflow, co-operation and control along the value chain?

What are the basic principles of labour regulation in terms of employment protection, wages, working hours and training in different companies, sectors, countries? What are the differences along the value chain regarding the level of labour regulation (regarding pay, working hours, employment protection, representation, access to training)?

Description and understanding of processes

What have been the main changes in recent years regarding the organisation of the business function (vertical disintegration of the company; concentration of specialised service providers (suppliers), *etc.*)? What have been the main changes in recent years regarding the organisation of the value chain (how has the division of labour changed between units, organisations and companies through outsourcing, insourcing, relocation of work, *etc.*)? What have been the main changes in recent years from a sector perspective? How has the market environment changed? What are the driving forces and the dynamics of restructuring?

Have there been relevant technical changes (ICT) that have impacted on value chain restructuring?

To what extent do differences in the labour regulation and in the level of employment conditions (wages, hours, employment protection, representation) trigger outsourcing, relocation and other forms of restructuring of value chains? To what changes in these terms and conditions does restructuring lead for workers in different units along the value chain?

11.9.3.2 *Spatial dimension (location of units and workplaces, distributed work, relocation of work)*

The information on the spatial dimension may, again, be collected by way of background research using company documents, sector studies, *etc.* It will probably be necessary to complement this information through expert interviews and findings from the actual case study interviews.

Description of structures

What is the geographical structure of companies, units, *etc.* involved? How can the value chain be described in terms of spatial fragmentation and concentration? What is the spatial division of labour along the value chain? Is there geographically distributed work within the business function and the units under investigation? What form does geographically distributed work take? What is the importance of distance in work processes, *etc.*? What are the demands on workers' geographical mobility?

Description and understanding of processes

How has the degree of spatial fragmentation or concentration of the value chain developed over time? What processes of geographical relocation of work have taken place? What are the locational advantages and disadvantages of the regions or cities involved? What were the main determinants of locational decisions (availability of labour, access to knowledge, labour costs, other costs, access to market, subsidies, *etc.*)?

11.9.3.3 *Functional dimension (products/services, workflow, tasks, communication, skills, knowledge, etc.)*

At this level we are interested in the actual functions performed, tasks carried out, services delivered, goods produced, *etc.* including co-operation, co-ordination and control. Change in this context refers to two different aspects: First, it relates to changes in particular units and for particular workers. Second, it refers to the differences between the situation in the unit (for the workers) that carried out the tasks before restructuring and the situation of the unit (the workers) that have carried out the tasks after restructuring.

Description of structures

What is the exact overall function of the unit that is used as a 'point of entry' to the business function and the value chain? What are the tasks carried out? What are the functional links with other units in terms of division of labour, co-operation and control? What are the overall functions of these other units?

What is the workflow? What is the division of labour in core areas? What are the main forms of functional flexibility? What forms of co-operation exist? What are the main forms of managerial control? What is the role of customers?

What are the skill needs? What is the knowledge-intensity of the different tasks? To what degree can knowledge be codified?

Description and understanding of processes

What was the impact of recent value chain restructuring on the functions performed and tasks carried out in quantitative and qualitative terms in the 'point of entry' unit? How did this affect the other units in the company, in the value chain and in the business function?

How have basic skill structures changed because of restructuring? Has the degree of standardisation and formalisation of tasks changed? What does this mean in terms of skill needs and occupational identities? Have the opportunities for skill acquisition and skill development changed due to restructuring and, in particular, due to the undermining of internal labour markets and the establishment of market relations?

How has workload developed in recent years? What are the main factors for the level of individual workload? How has value chain restructuring affected the workload?

11.9.3.4 Social dimension (power relations within a value chain, employment relations, social relations between occupational groups, gender relations, collectivity, etc.)

The social dimension and, in particular, the employment relations are the second core element of the organisational case studies because they are crucial for the understanding of the impact restructuring has on the quality of work and the quality of life. Again, in the following section 'change' refers to two different aspects. First, it relates to changes in particular units and for particular workers. Second, it refers to the differences between the situation in the unit (for the workers) that carried out the tasks before restructuring and the situation of the unit (the workers) that have carried out the tasks after restructuring.

Description of structures

How can the value chain be described in terms of symmetry or asymmetry of power between organisations and units? What kind of (mutual) dependence exists? What is the position of the 'point of entry' and other selected units within the value chain? What are the main power resources (market dominance, specialised knowledge, etc.)?

What categories of workers are there in the establishments/units? Under what contractual arrangements do workers work? What forms of contractual flexibility are used (agency work, freelance, fixed-term contracts, contract work)? How and for what activities? What differences are there between the different units along the value chain?

What are the basic gender relations within the organisations? How does the segmentation between groups of workers reflect the gender division of labour?

Are there workers' representatives? Are unions present at the workplace? Is there a European works council? What issues are negotiated between management and workers' representatives? How is pay regulated in the different companies, units and for different occupational groups? How are working hours regulated? How are issues of flexibility dealt with? Is the work-life balance an issue? Who are the actors dealing with health and safety issues? Is bargaining and participation organised within the establishment or the company or the sector? How are flexible workers represented? Do representation and negotiation also cover workers in closely linked units of the value chain (e.g. not belonging

to the same company)? Are workers covered that work within the establishment but have a different employer (agency, IT service provider, *etc.*)?

Description and understanding of processes

Who are the main actors in restructuring (headquarters of multinational companies, local management of multinationals, entrepreneurs, consultants, other intermediaries, governments, trade unions, *etc.*)?

What have been the changes in the numbers employed in the different units along the value chain? Have there been any changes in the level and the form of pay in the different units? Have there been changes in the employment contracts?

To what extent did transfer of workers play a role in restructuring? What were the impacts of transfers on employment conditions?

How does human resource management respond to value chain restructuring? How does HR respond to strategies of the companies/units in relation to their position within the value chain (competition, upgrading)? What changes were there regarding the access to training and knowledge acquisition more widely?

How has restructuring changed workers' representation and workers' voice? What is the interrelation between restructuring of value chains and bargaining ('concession bargaining', 'coercive comparison', involvement of workers' representatives in restructuring decisions, involvement in dealing with employment consequences of restructuring, *etc.*)?

To what extent does national/European regulation shape the involvement in and negotiation of consequences of restructuring? Does concession bargaining put pressure on national regulation? To what extent is existing regulation undercut in particular cases? Are there strategies of renewal in labour regulations and industrial relations with a view to better cope with restructuring and its consequences?

11.9.3.5 Temporal dimension (time-line of restructuring *etc.*, working hours, temporal flexibility, *etc.*)

Description of structures

What is the temporality of the functions performed and of the workflows (importance of time-to-market; just-in-time systems; simultaneous engineering, *etc.*)? What is the role of time in market competition? Does speed and flexibility play a role in the relations between units and companies in the value chain? Are demands for flexibility passed on between units/companies in the value chain?

How is working time organised? To what extent are workers autonomous in their time use? Are there flexitime arrangements? How do relations within the value chain shape temporal flexibility?

What are the differentials in working time regulation between companies, sectors and countries? What are the differences in actual hours worked? How does national regulation by law or collective agreement actually shape working hours?

Description and understanding of processes

What is the temporal dimension of restructuring (*i.e.* dynamics of value chain restructuring)? To what extent has the temporality of workflow, *etc.* changed?

To what extent have differences in working hours regulations or practices influenced decisions on restructuring?

How have working hours and time use been affected by value chain restructuring? What are, in this context, the trends and dynamics of enforcement of working hours regulation?

11.9.4 Qualitative research - individuals⁹⁸

We now turn to the conclusions that can be drawn from the literature review for the aims and scope of the case studies of occupational groups. Here, the theoretical papers completed in WP3 make it possible to identify a series of research hypotheses, which can be grouped into five thematic areas:

- work biographies, career construction and choices;
- changes in occupational identities;
- quality of work;
- learning and skills development;
- work-life balance, including household dynamics.

Selected hypotheses have been formulated here into research questions. It is the task of Workpackage 6 of the project to select the most relevant and feasible research questions and to translate them into guidelines for interviews of individuals and this section draws strongly on this work.

11.9.1.1 *Work biographies, career construction and choices*

The literature overview makes it clear that we cannot take it for granted that organisational careers are either disappearing or becoming anachronistic in new patterns of work organisation and restructuring, although the boundaryless concepts appears to be consistent with value chain restructuring. Empirical data collection has to consider both *boundaryless* and *organisational careers* and to investigate the various rationales behind them.

- Who are in boundaryless careers: which profiles, which occupations, which organisations? What determines boundaryless careers: individuals, institutions or others? How and where do we find organisational careers? Is there any link with the restructuring of value chains?

Factors of differentiation of career patterns do not only include individual and organisational aspects, but also the *role, policies or strategies of institutions and agents on the labour market*. Such roles and policies are often undermined in the individual approach. The key issue here is to understand how they interact with the individual choices.

⁹⁸ This section was drafted by Patricia Vendramin (FTU). It is also included in the final deliverable of WP6 (handbook for qualitative research), in the chapter on occupational case studies.

- Are there specific policies, institutional factors, and roles of social actors that favour specific types of career? Do local and/or national framework (regulation, configuration of actors, trade-unions role) have an impact on the careers or is it mainly driven by companies and/or individuals? Who and which situations are the more determining in a career trajectory (companies, national frameworks, individuals)?

Not all trajectories on the labour market are implicitly considered as 'careers', the concept is mainly applied to 'target trajectories'. From the labour market point of view the multiplication of transitions and diversification of trajectories encompass a wide range of situations, mainly shaped by the increasing flexibility of work contracts and work status. *Transitions periods* are also shaped by public policies (re-insertion of the unemployed, conversion after restructuring, re-entry on the labour market, *etc.*). Boundaryless trajectories also include constrained mobility or precariousness, not only 'voluntary' nomadic pathways.

- How do workers manage and live transition periods? What is the role of public policies? Which balance between choices and constrains? In which situations and for whom? Who consider being engaged in a career, in which conditions? Who is planning a career? What is seen as threatening careers?

Gender and *ethnicity* are key issues for equal career opportunities. In order to be dealt with efficiently in empirical investigation, the subject should be targeted to the scope of the WORKS project.

- To what extent do globalisation and/or restructuring reinforce career discriminations according to gender or ethnicity? To what extent do they allow for new practices of 'diversity management'? To what extent do they undermine legal or negotiated provisions for equal opportunities at work? Does the individualisation of career paths favour women's careers or not?

11.9.1.2 *Changes in occupational identities*

There are diverse components in occupational identities; two important components are: *recognition* (of knowledge, competences, *etc.*); and *commitment* to work or tasks and/or to an organisation. Changes in work and the restructuring of the value chain modify these components. Restructuring modifies the parameters and contexts of individual recognition. Which knowledge, competences, authority, *etc.* are recognised, and by whom? How do changes in recognition affect individuals? In the restructuring of the value chain, the business functions become the area of mutual recognition. Commitment to work or tasks can be more important than to the organisation. Recognition can come from peers and clients more than from the organisation. In this sense, occupational identities are less sensitive to restructuring and organisational changes. Identification is more based on work and functions than on organisations or sectors. Some authors also argue that the nature of recognition expected from work is changing, from *appreciation* to *admiration*. New organisational models favour the second type of recognition.

- From whom do workers receive recognition for the work they perform? Do they have recognition of their knowledge and competences? Who is important for that (*e.g.* clients, bosses, wages, titles, colleagues)? What kind of recognition do they expect (*e.g.* financial, status, career promotion, admiration)? What do the organisations offer as signs of

recognition? Have things change or is the situation still the same as earlier? Are workers more committed to their specific tasks, their working group, or their company? Have they experienced reorganisation and have these aspects changed? Do they feel something threatening their occupational identity?

Occupational identities are on the one hand, *individually generated* and on the other hand, *socially generated*. The conferring of status and diverse forms of recognition results from a transaction between identification desires and institutions. In the knowledge-based society, it is supposed that the institutions of work (organisations, training operators, etc.) play a weaker role and that workers have more resources and desire to build their own occupational identities. However, there is empirical evidence that demonstrates major inequalities in this field; many workers are increasingly dependant on institutions to gain access to positive occupational identities (as opposed to retreat or blocked identities).

- Do workers have the feeling that they belong to a group and are recognised in a collective? Where does this feeling come from: individual perception and/or specific signs (title, participation to events, access to information, opportunities to express a view)? Do workers find 'their' own place in their organisation? Do they feel recognised? Are they expecting things from their work surrounding, bosses, colleagues?

Flexibility, instability and reorganisation have an *ambivalent impact* on occupational identities. Some are blocked, other promoted. The effects will depend on a combination of diverse factors: socio-economic factors (e.g. level of qualification), cultural factors (e.g. strong/weak enterprise culture) and subjective factors (e.g. attitude to work). The transformation in occupational identities cannot be explained in a 'mechanical' way: all workers with a same profile will not react in the same way to restructuring.

- How do workers experienced flexibility/instability/reorganisation: threats, opportunities, indifference? Are there factors that can explain the diverse ways of experiencing flexibility/instability/reorganisation: according to type of occupations, level of qualification, status, career, enterprise culture, attitudes to work (positive/negative, distant/close by)?

The transformation of occupational identities expresses *the shift from community relationship to society relationship* (decrease of the fusion type, increase of the negotiation type). Social forms of occupational identities are not less compatible with collective life. Social bond, solidarity and collective consciousness in work are not disappearing but the forms and temporalities of the social bond within work are changing. They are closer to a logic of network, organised around projects, with individual involvements rather than to the logic of community that is at the core of the trade union institution.

- Does restructuring lead to less solidarity or collective feeling among workers? What kind of interactions do workers develop in new organisations? Are these interactions mainly functional? Do they have a collective life? How do they organise it? What is their conception of a collective? Do they have capacities for resistance?

Despite globalisation and international work, *occupational identities are locally constructed*. Local cultures and values remain central in the construction of occupational identities.

- In the perspective of globalisation and restructuring of the value chain, do workers engaged in transnational activities develop a different type of identification to occupa-

tions? Do they feel that they belong to a new type of cultural world characterised by different values? To which culture and values do they feel they belong?

Knowledge plays a dynamic role in the transformation of occupational identities. In this dynamic role, interactions with others are crucial, both for the learning process and for the recognition in a new identity. Organisations can support such learning and identification processes to a greater or lesser extent.

- How are knowledge requirements evolving (more/less knowledge expected for the occupation)? Are there learning opportunities in the job? How? What motivates changes in knowledge expectations (e.g. restructuring, technologies)? Do changes in knowledge have an impact on identities? How? What is the role played by others (colleagues, bosses, trainers, etc.)?

A social identity is a *combination of diverse identities*. Occupational identity interacts with other identities (outside work) that constitute a self-identity. Gender identity plays a key role in this combination. The importance of the occupational identity within a social identity will vary between individuals. Some authors assume that occupational identity does not have the same central place as earlier in a social identity. The impact of restructuring and the threats to occupational identity will depend on the role played by occupational identity within a social identity.

- What is the place taken by work in a person's identity? What else is important (e.g. family, friends, children)? What is more important? How do individuals prioritise different areas (work, family, friends, etc.)?

11.9.1.3 *Quality of work*

The quality of working life is vital not just for the wellbeing of workers but also to promote social inclusion and drive up employment levels - thus, it is also linked to employment and social policies. In the reports on *Employment in Europe*⁹⁹ the following *dimensions of quality of work* are highlighted: job security and its absence, access to training and career development, gender equality, flexibility and security, inclusion and access to the labour market, social dialogue, worker involvement, work organisation and work-life balance. Trends in work and employment - as well as in social security and public policies - are crucial for the quality of life and wellbeing.

- Quality of work should be approached through questions concerning the following topics: status in employment, potential support from public policies, work rhythms, working time, autonomy/control, wellbeing, potential for self-development, health and security aspects, gender 'sensitivity' of organisations.

The quality of work in all its dimensions (linked to relations, conditions, times and contents) significantly influences the quality of life. As demonstrated by many sources of literature, changes in working modalities and working time have on the one hand a '*liberating*' potential for individuals, yet, on the other bring risks both at the individual and collective levels. A first risk concerns the threat to social integration or social cohesion. A second risk

⁹⁹ Annual reports published by the European Commission's Directorate General for Employment and Social Affairs.

is the social exclusion of certain sections of the population, in particular weaker individuals (older workers, single parent families, women returners, immigrants, workers dismissed from production industry, those with a low education level, people with disabilities).

- Which forms of new organisation can be more inclusive, thus opening up the labour market for more marginal groups (the elderly, ethnic minorities, the disabled, *etc.*), enhancing the quality of life for these groups and their participation in society?
- What are the main factors that contribute to the definition of positive results or, on the contrary, negative results of discontinuous and atypical work paths?
- How should we understand and research the role of global value chains in today's working conditions? Does the restructuring of value chains favour exclusion or inclusion processes? How? Where? For whom? And in which circumstances?

Quality of work comprises *quality of time* and presupposes that time is less colonised by work, giving the individual the possibility to do other activities and achieve a new balance between work and private life, thus augmenting individual and collective wellbeing.

- Which approaches of working time provide the best balance between work and private life?

Quality of life and wellbeing are central to the *participation of individuals and households in society* and the levels of security they can dispose of to fulfil their needs and choose a certain lifestyle.

- Which mechanisms can encourage a new division and distribution of care and market work between the genders and generations and thus lead to the redefinition of social models towards more balanced solutions to increase quality of life of all individuals?
- How can a greater work-life balance trigger the activation of virtuous mechanisms of growth in consumption and as a consequence in work demand? And what could be the effects in terms of active citizenship and re-appropriation of social ties?
- Which forms of new organisation can encourage more worker autonomy without increasing demands, stress and resulting health disorders?

11.9.1.4 *Learning and skills development*

The restructuring of value chains involves an increasing standardisation and fragmentation of processes which allows them to be configured and reconfigured in a variety of different ways to suit the needs of a given corporation or group of corporations at any particular time. This standardisation and fragmentation cannot take place without changes in the use of human knowledge and skill in a process of commodification. The commodification process drives a continuous process of restructuring which always has a double edge. Each innovation simultaneously requires a new cohort of creative 'knowledge workers' who, in the very process of developing new innovations, bring about, albeit indirectly, the routinisation of the work of others. 'Upskilling' therefore goes hand in hand with 'downskilling' and new forms of specialisation accompany the development of increasingly generic activities.

- Have workers experienced or observed such processes of upskilling and deskilling in their occupational group? How are these processes managed (*e.g.* training, redundancies, outsourcing)? To what extent are changes in work organisation and skill structures

related to (global) corporate restructuring and/or the use of ICT? To what extent and under what conditions is knowledge work becoming an important type of work to the detriment of routine work, as a consequence of the combined effects of ICT and corporate restructuring? What are the characteristics of such knowledge work? Under what conditions are jobs routinised and Taylorised, leading to deskilling, or do they require autonomy and decision-making, which implies the use of more knowledge and skills?

- Is there a gender dimension (risks *versus* opportunities) in these knowledge changes?

The impact of ICT on skills and knowledge is an upgrading and downgrading/deskilling dichotomy. The effects of ICT on skills and knowledge must be understood in the framework of a *mutual shaping between the technological environment and the organisational context*. Another concern about the impact of ICTs is that they move the border between tacit and codified knowledge.

- What is the role of ICT and organisational changes in these processes? Which skills or competences are newly required as a result of technological changes and which ones are no longer useful? Is there knowledge that has been incorporated into ICTs (e.g. in the form of knowledge databases)? Are there specific skills or competences required by the organisational choices or structures (project work, work with clients, distance working)? What is the nature of the ICT skills (in terms of complexity, intensity, diversity)?

A *knowledge worker* is someone who has access to, learns and is qualified to practice, a body of knowledge that is formal, complex or abstract, and who manipulates symbols and ideas. This definition raises the question about the degree of manipulation and creation of new knowledge. In a lot of jobs, it is necessary to distinguish between the increased significance of 'knowledgeability' at work and a more restricted category of knowledge workers - defined as those who manipulate symbols and ideas requiring substantial thinking skills. Some components of the work (autonomy, control, level of responsibility, level of self-organisation) can be used to signify the knowledge dimension of the work.

- Do workers have autonomy, responsibility, areas of self-organisation, ...?
- What is the relative importance of soft and generic skills *versus* technical and professional skills for the occupations under investigation? How can these soft skills be described?

The development of skills and competences requirements questions the *boundaries between mobilisation of knowledge and subjectivisation of work*, or the commercial utilisation of the 'whole person' of workers with their physical, cognitive, psychic and emotional potentials.

- Is there an element of subjective investment in the work? To what extent is this voluntary? And to what extent does it constitute a constraint? In which occupations and contexts is it found? How do workers experience this subjectivisation of work?

It is widely accepted in the recent literature on *knowledge* and *social capital* that the development of *communities of practice* is a key structural precondition for the creation of social capital. Communities of practice help shape the actual terminology used by group members in everyday work communication. In addition, they generate and share the knowledge objects or artefacts that are used by community members. Equally as important,

communities generate stories that communicate the norms and values of the community and of the organisation as a whole. These stories enable new members to take cues from more experienced personnel and allow the development of a community memory that perpetuates itself long after the original community members have departed. The interpersonal dynamics of the relationships of social capital is related to the *trust-based regulation* of human behaviour. Without a shared history of common experiences and interactions or, in other words, without participating in the ‘collective learning process’ we cannot speak about trust relations based on reciprocity.

- What is the relation between communities of practices and learning process? Do occupational groups constitute communities of practices that allow learning processes? Under which conditions? Does restructuring threaten trust?
- Within occupational groups, can we see the transformation of implicit knowledge into explicit knowledge?
- What is the precise role and importance of in-house skills provision and development *versus* skills acquisition on the external labour market in restructured organisations?

11.9.1.5 *Work-life balance, including household dynamics*

The issue of work-life balance is connected with the issue of quality of work. However, within the WORKS perspective, it was intended to focus on this issue, so it is treated as a specific point to be able to include questions related to household dynamics. The household perspective covers all questions that can be connected to work; it includes a number of dimensions including family formation, the decision whether to have children, care responsibilities and career choices.

- Do organisations develop family friendly policies? Which ones? What are their motivations?
- Does work has an impact on family formation (and dissolution)?
- How does work impact on diverse family contexts and women’s trajectories?
- Does the growing flexibilisation of work result in the dissolution of boundaries between work and private life (opportunities and risks)?

11.10 Conclusion

The literature review, and the work of the WORKS partners in synthesising the results, has produced a rich array of research questions to be addressed in the WORKS empirical research. Of course considerable further collaborative efforts on the part of the partners will be required to select from and further focus these questions and transform them further into forms that can be operationalised in the research instruments for the qualitative research, and find relevant indicators for them in the quantitative research.

Nevertheless, to have achieved this level of conceptual clarity is no mean achievement, especially considering the extremely broad and interdisciplinary nature of the literature surveyed and the ambitiousness of the aims of the project. For further information on the key concepts that formed the building blocks of this endeavour, readers are referred to the WORKS glossary, which can be found on the WORKS website: www.worksproject.be.

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