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to change in the IT and telecommunications industries in
the United Kingdom

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1. Introduction

Employers attempt to shape employees' work identities through the organisation of work. However, they are partly constrained by employee expectations related to education and training, the occupational structure and the labour market. Employees, individually and collectively, also attempt to influence how their work is performed and play an active role in shaping their own work identities. Work identities are therefore influenced both by structural factors and the agency of employers and employees. This paper concentrates upon the relationship between individuals' patterns of commitment, how they engage in learning at work and their work identities. Examples are drawn principally from individuals working in the IT and telecoms industries in the UK.

Employees are increasingly required to exhibit flexibility at work and are challenged to engage with work that is changing, particularly in industries like IT and telecoms. Adjusting to these changes requires specific attitudes to learning and work that enables the individual to engage actively in work processes in order to ensure his or her continuing integration in the particular work setting. Work-related socialisation theories assume work identities play a decisive role in this process, as they help individuals to define a professional orientation and to develop work attachment and commitment (Heinz, 1995; 2003). The research project "Vocational Identity, Flexibility and Mobility in the European Labour Market (FAME)" attempted to map some of the different ways in which work identities are composed, decomposed and restructured in a time of change. The project sought to examine how the new dynamics influenced employees' work attitudes and career orientations in seven European countries (Czech Republic, Estonia, France, Germany, Greece, Spain and the UK) in four contrasting sectors, covering engineering, health care, telecommunications / IT and tourism (FAME consortium, 2003; Kirpal, 2004; Dif, 2004; Loogma et al., 2004). This paper, however, concentrates learning, commitment and identities at work, with examples drawn from individuals working in the IT and telecoms industries in the UK.

Sennett (1998) argues greater flexibility and mobility could result in looser employee commitment towards the workplace, the occupation, the company or the community of practice. However, many of our interviewees did appear to be highly committed to their work, so it may be worth looking at some different configurations of commitment and identities and, particularly what role learning plays in linking work commitment and identity. The project emphasised the reciprocal relationship between social structure and individual agency in particular work settings (Giddens, 1984). The project partners anticipated that, at the individual level, emerging new demands, with their implications for shifting skill needs, generate a potential for conflict with traditional work orientations and associated values, norms, work ethics and work identity patterns of employees. One focus of the analysis was therefore placed on identifying individuals' strategies for dealing with such conflicts. If it is true that work-related identities are becoming increasingly unstable and disrupted (Carruthers and Uzzi, 2000), what kind of mechanisms and strategies do individuals develop in order to compensate for instabilities, fragmentation and uncertainties of work and employment structures? The project engaged with this and the related question of what role does learning

and skills development play in better equipping individuals to handle instabilities and uncertain working conditions?

Performing particular work tasks generates a certain level of identification with work, regardless of whether the performed tasks are routine jobs or encompass highly complex work processes (Hoff, Lappe and Lempert, 1985). In addition, the performance of work tasks involves some form of learning, which in its broadest sense encompasses preparatory as well as continuing learning through courses or informal methods such as 'training on the job', 'learning by doing' or 'self-directed learning'. Work identities exist at the junction between individual dispositions and structural conditions of the work context and they influence an individual's concept of work and relationship to his or her job, the work environment and the employing organization. Collective identities are built on a 'sense of belonging' (Tajfel, 1981) and most employees belong to departments, divisions, working teams, projects, etc. The organisational structures influence the structure and allocation of work that, in turn, influences the work processes with which the individual engages and affect their sense of 'belonging to' or 'being members of' particular groups (Garrick, 1998; Jones 1995).

The investigation of work identities extended beyond the company to include other sources of identification and non-work commitments that could influence identification with work and work-related commitment. Even within work sources of identification could vary and include not just the organisation or occupation, but could relate to a specific work group (Baruch and Winkelmann-Gleed, 2002) a particular work environment, a set of work activities, relations with others and so on, all of which may change over time, as may the significance individuals ascribe to them (Brown, 1997; Ibarra, 2003).

In the UK in particular, organisational commitment rather than occupational identities drives much of the organisation of work, often with an explicit emphasis on flexibility and multi-skilling (Mason and Wagner, 2002). These trends are noticeable to some extent everywhere, and some German companies viewed the attachment of workers to a single occupational perspective as problematic in attempts to introduce greater team working (Finegold and Wagner, 1999).

Ultimately, any identity formation process is an achievement of the individual. The process of acquiring a work identity takes place within particular communities where socialisation, interaction and learning are key elements. However, it is not simply a matter of taking on identities and roles, which are pre-existent and pre-structured, rather they may also take a proactive role in actively reshaping the community of practice (Brown, 1997). Hence there is scope for individual agency to act upon the structures and processes. Work identities are not constant over time, rather they need to be understood in a dynamic way. The formation, maintenance and change of occupational identities are always influenced by the nature of the relationships around which they are constructed. Over time these interactions may lead to modifications and reshaping of these same structures, the communities of practice and the individual's work identity. There is always a fundamental tension between the elements of continuity and change over time in the processes whereby occupational identities are formed (Brown, 1997).

Studies of occupational socialisation have revealed processes by which individuals may be included (Coffey and Atkinson, 1994; Evans and Heinz, 1994) or excluded (Brown and Behrens, 1995), and the different types of occupational commitment (Coffey, 1994) or organisational commitment (Baruch, 1998; Baruch and Winkelmann-Gleed, 2002) that may

result. These studies of the processes of becoming skilled have increasingly sought to view individuals as active participants in the creation of a ‘new’ community of practice rather than just passively joining an existing community (Lave, 1993; Wenger, 1998; Billett, 2004). The dynamic model of occupational identity formation proposed by Brown (1997) acted as one of the theoretical cornerstones of the project methodology. In particular, it informed the choice of broad issues upon which to focus the interviews with employers and employees: workers engagement with their work activities; their interaction with others; and their learning and development. A diagrammatic representation of the dynamic model of occupational identity formation is outlined in Figure 1.

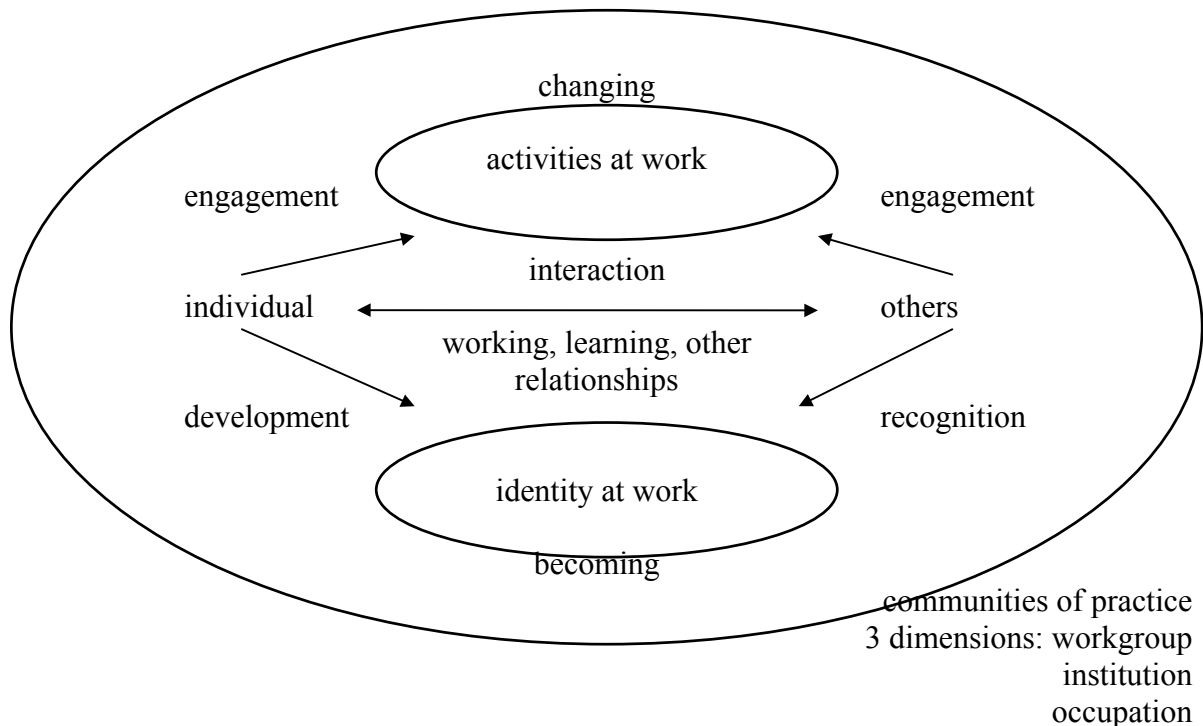


Figure 1: Model of occupational identity formation

Drawing on this model, it was possible to identify the broad issues upon which to focus the interviews with employers and employees: workers engagement with their work activities; their interaction with others; and their learning and development. The relationship between the employers and employees attempts to shape employee work identities could be represented as follows:

Employers, while being constrained by competition; interdependence; uncertainty of demand; and complexity of their product or service etc.,

use organisational structure; vertical and horizontal mobility; flexibility; learning and development; organisation of work; individual scope; power and control

in their attempt to shape **work identities** through the work people do, particularly in relation to:

- workers engagement with their **work** activities

- their **interaction with others**
- their **learning and development**.

However, in this they are constrained by the nature of **societal** influences, ‘offers’ and expectations coming from education and training; the occupational structure and the labour market

and by the action of **workers**, individually and collectively, also to influence how their work is carried out (influence here of work groups; communities of practice; custom and practice; trades unions etc.) and the nature of their **work identities**. The nature of work identities, however, is also necessarily affected by processes internal to the individual in terms of their **self-reflection and appraisal of their current situation**.

The second phase of the research, upon which this paper is based, aimed at eliciting employee perspectives on work identities, and in the UK this included 25 interviewees who worked (or had worked) in the IT and telecoms industries. The qualitative research methodology involved carrying out semi-structured interviews according to a set of interview guidelines agreed by the project partners. Typically interviews were tape-recorded and transcribed verbatim. The data analysis was informed by grounded theory as a means of eliciting respondents’ own categories (Glaser and Strauss, 1967). These categories were developed within the frame of the broad evaluation categories that the partners commonly identified as being relevant to the development of work identities, following the pilot interviews. The main focus was upon how employees sought to develop their work identities.

2. Working and learning: the UK telecommunications and IT industries in context

Besides some companies spanning both sectors some of our interviewees have worked in both sectors. The overall sample is 25 employees (21 male, 4 female) working in a range of small, medium-sized but especially large companies, working mainly for IT and Telecoms companies but also some are working as IT specialists in other sectors such as financial services and Higher Education. Two interviewees no longer worked in the sector. The interviewees had varying levels of qualification from former apprentices to those with graduate or post-graduate qualifications, age range 20s to 40s, with between 2 and 20 years work experience in the sector (although one of the former employees was over 50).

The sector is undergoing very rapid change, especially in its product markets. Both technical and hybrid skills are in great demand, as are ‘soft skills of communication and team-working’ and companies need to be very flexible in developing and deploying the skills of their workforce. Great attention is given to learning while working, and employees also learn by moving from company to company, this process also leading to a transfer of ‘tacit knowledge’. Companies want those working intensively with customers on, for example, network solutions to identify strongly with the customer. Indeed one large company professed not to mind if this results in the employee working for the customer, because of personal networks with the company and the likelihood to use the company for continuing or subsequent business. All companies in this sector have been introducing greater flexibility in work and changes in patterns of work organisation.

Work identities can be strong early in the career of those working in the area, not least because of the very strong labour market demand for technical specialists with ‘hybrid’ skills

– that is, those that can combine highly developed technical and ‘soft’ skills. In the longer term, however, people with such skills could undertake a wide range of work involving horizontal and/or vertical mobility. The skill development strategies of companies make particular use of the employment of graduates and learning while working. Transfer of skills and knowledge, including tacit knowledge, is facilitated by staff often changing their jobs. The interviewees seemed happy working with their particular employers, but also seemed aware that there many other opportunities available.

Most of the large employers have been trying to achieve a greater degree of flexibility in their patterns of work organisation, and many individuals are being expected to use hybrid skill sets. Organisational considerations rather than occupational identities drives the organisation of work, with particular emphasis being given to flexibility and possession of a broad set of skills and competencies. Although there are variations in the degree of skill required of workers in different workplaces and companies, this is an industry where the paradigm of the high performance workplace makes some sense. However, even here employers can take other routes to competitiveness and the development and utilisation of skills, most notably through acquisition of other companies. Companies are also recognising that in order to recruit and retain staff in areas of very high demand (Internet and multi-media) they have to organise work in a way that appeals to young people who may not have conventional ideas about career development.

It is worth noting that the 'classical' difference between the operation of UK labour market and, for example, the German labour market is that the former utilises learning through responsibility in the job itself, whereas in the latter much greater attention is given to preparation and learning for responsibility through a fairly comprehensive programme of initial training. Mason and Wagner (2000), for telecoms and IT, and Rajan et al. (1997), for the operation of the London labour market, especially in financial services, draw attention to how the transfer of skills and knowledge, including tacit knowledge, is facilitated by staff often changing their jobs. This means the individuals are less likely to form a long-term attachment to particular organisations, but rather consider work in the light of the particular opportunities available, their own self-understanding of the skills and abilities they possess and an active commitment to building their own career. One of our cases drawn from IT in financial services, on the other hand, shows the scale of rewards a company is prepared to offer to hold on to its young talent in an extremely competitive labour market.

The ICT sector has been trying to recruit people with more highly developed communication skills so as to be able to interface with customers more effectively. However, the employers also argued that they needed some people who would be happy to do mainly basic operations like writing code. However, there was also a sense that they wanted people who were excited by the technology itself. These real IT 'enthusiasts' included for example Software Design Engineers besotted with the idea that 'you will design and write code on which so many of people the world over will depend.' 'You have to be a master at C and C++, so your code runs fast, performs with precision, and

Interestingly some companies are setting up career routes where these people can be promoted but remain largely within technical areas, rather than needing to move into general management in order to get more pay. Their role was principally to advise, influence and guide a small unit or group in specific research or technology areas and provide technical leadership to internal and external (project or development) groups. They would typically have some responsibility for facilitating competence development, knowledge sharing, and

coaching, and mentoring within their technology area. They would also be involved in technology strategies and participate in, and contribute to, reviews and audits of programmes, but they would not undertake the full range of management duties. Those wider management duties would typically be undertaken by a team leader or project manager.

3. Employee perspectives on relationship between learning, commitment and identities at work in telecommunications and IT

The following ten cases were chosen to illustrate two themes that emerged from looking at the relationships between learning, commitment and identities at work. The first theme highlights the contrasting responses of four individuals to being made redundant during the restructuring of the telecommunications and IT industries. The second theme concerns the emergence of flexible work identities where individuals are focused upon their own development, rather than having a particular occupational or organisational attachment. There are eight cases that illustrate this second theme (two that also illustrate the first theme and six new ones). Note the majority of the interviewees (15) had not been made redundant and had more stable attachments to a particular occupation and/or an organisation. These themes were therefore chosen for their potential to illustrate what may happen when the more stable attachments were no longer in play, because of the actions of either the employer or the orientation of the employee.

Case 1: high commitment to work; strong engagement with learning at and outside work; flexible work identity (positive response to being made redundant)

Vijay is in his early 30s and came to England from Kenya, aged 16. He started an HND in Optical Electronics at university. The HND was a three-year sandwich course with a year out in industry that he did with a newly established development company that was part of a global IT and telecommunications group. After getting the HND, the plan was to return to the company, but recruitment at this time had ground to a halt. So he took the decision to convert his HND sooner rather than later, and enrolled at a different university and he completed his BSc in Optical Electrical Engineering.

He chose optical electrical engineering because it seemed to him the way things were going. 'It was the up and coming field and I wanted to get into it. It's all about optical fibre communications, and I was interested to specialise in the communications side. It's a very diverse field, with lots of different options - lasers, holograms, gas sensors.'

Vijay then began a two-year Masters in Optical Electronics at a third university. 'I was beginning to specialise down. I paid for this course myself, and I did this because there were recruitment difficulties in industry at that time. I decided I could better spend my time getting more qualifications.' Vijay thought the teaching was good, but that facilities were lacking. 'Bits of equipment were either out of date or missing altogether. It certainly wasn't state of the art stuff, and on a Masters, I expected that it would be better.' Because of this, his project on optical communications was held up because he had to develop and construct his own equipment in order to test out his project theory. 'That was good in one way; I learned an awful lot, but it did hold me up and my final project was perhaps not as good as it could have been had the equipment been made available by the course.' [**resourceful learner**]

He gained his MSC, and the university offered him the opportunity to do a PhD ... ‘but I thought, I’m getting too old for this. I’ve been at University for six years now; time I got my feet on the ground and earned some money.’

In his first job, on his year out from the HND at the development facility of a global IT and telecoms group, Vijay was a Development Associate, working on advanced projects evaluating telephonic transmitter signals, and doing some project management. The management expectations of him were very high at this time; they expected him to conduct his work without any help from them. ‘I needed support, mentoring and coaching at this time. I was only half-way through my HND course. I was new to the company and thrown in at the deep-end. It was good experience, and after the first six months, it was OK.’ [**learning while working and self-directed learner**]

After completing his Masters, he went to work for a telecoms company as a Measurement Engineer. ‘I was working on optical measurements in fibre optic cabling systems.’ Along the way, in this job, he picked up some project management responsibility; some quality auditing work on calibration testing, and some work on software instrumentation. ‘I had done some management training on the Masters programme, so was partially prepared for these new responsibilities.’ [**engagement with learning while working and formal education and training**]

The company offered him training on a business excellence course, a week-long course, which was useful. He felt the job was well within his capabilities at this time with no significant problems, until the company was divided into two parts. ‘I was with the communications side, and this was taken over by a US company, working on Optical Fibres. I was put in the Technical Centre, as a Senior Research Engineer, researching test-bed procedures of systems and doing some systems modelling.’ ‘I found this work really fulfilling and challenging. I really enjoyed it. There were some good learning experiences on the job, and no real problems for me. By this time, I was, myself, mentoring students.’

He stayed in this job until the Group moved its and he was offered the job of Development Executive, looking at submerged optical instrumentation in submarines. ‘I’ve been doing performance evaluation for technical development, and supervision of personnel in a seven person specialist team plus student input. Getting so specialised can be a drawback. We got backed into a corner of the industry; we weren’t diverse enough.’

Now, the demand for this work has gone down. ‘September 11th was just an excuse. The signs were there for a year before that. We discussed it on my university course [mixing engineering and management and being taken part-time]. Commissioning has gone right across the manufacturing industry, and there is a knock-on effect on servicing industries. The writing was on the wall. Two months ago, I was given notice that I was to be made redundant.’

He had taken the part-time Masters with a management component, because up until then ‘I had had a very technical background, and I felt I needed to get a feel for the business sector. I thought I would do an MBA or something, but I looked at that, and it was not for me. It was too biased to the business side and no engineering background at all. So, I researched, and came across this course. I looked at the modules on offer; it had everything I wanted.’ [**engagement with formal education and training for strategic career reasons**]

He thoroughly enjoyed the course. ‘My existing experiences have been greatly widened.’ He felt the teaching had been ‘excellent’, but the most useful part came from mixing with other students: ‘People from such diverse fields, and all have brought to the course their own experiences and openly discussed these in the classroom. That has been a superb experience for me.’ [**importance of developing personal networks for both learning and working**].

He feels he has gained confidence in his working life due to the course, and that he has learned about other disciplines within the engineering field which has allowed him to understand and talk across disciplines in the workplace. ‘I can now bring these tools into the organisation and use them on problems and solve these more quickly. My own personal profile has increased as well.’

Career development:

He thinks that the last three years of his career have gone to plan, except that ‘the last two months, well no, that hasn’t gone to plan.’ But he feels he is still in control, and that he has plans for the future. ‘I have plans for the future. I shall be going self-employed, and doing consultancy work. I think I am more in control of my career now than ever before.’

Despite being made redundant, he is happy to be in the position he is in now. He always wanted to be an engineer. His great grandfather was in engineering. He, himself, developed a fascination in optics, and is glad to have had the opportunity to work in this field.

The training he received from his employers was mixed he feels. Some of the broader-based training he found he did not really utilise very much. He had learned a good deal while working, but felt ‘I wish I had moved around more. I spent too long in one organisation; I only learned how things were done in that one organisation. It would have been more helpful if I had had experience of the politics and the cultures of a range of companies.’

Vijay worked hard and demonstrated a high commitment to work, but it his strong engagement with learning at and outside work that stands out. As a consequence, although his work had become over-specialised, he had a range of options and flexibility in his work identity such that he felt in control of his career.

This form of prospective **personal re-definition** occurred with the presenting cause being made redundant due to working for a company that was over-specialised and whose market had collapsed. However, Vijay had already been positioning himself, and undertaking additional education and training, so that he would have a wide range of alternative career options. Hence the decision to go into consultancy work was a positive one, made from a position of strength, with the clear intention of broadening his work experience after a period of (over)specialisation.

Case 2: initial high commitment to work; engagement only with learning at work; following redundancy locked into a work identity in decline and eventually both identity and commitment decay

Most of the profiles of our interviewees in telecommunications and IT represent 'success stories', but even some of them pointed out that it was possible to find your skills were no longer in demand and that with increasing age it became more difficult to overcome a career setback. The following is an example of someone who experienced a major setback from which his career never recovered.

Danny, who is in his early 50s, left school at 16 and completed a telecommunications technician apprenticeship with a major telecommunications company. Upon completion of training he worked as a telecommunications engineer but he only worked in the industry until he was 20. He then switched to a major company in the growing IT industry. His case is interesting because despite reasonably high levels of initial skills training and continuing professional development he was considered 'too old' just after 40, and his career spiralled downwards.

Danny's career with the company initially went well and **he learned through a mixture of on the job learning and short periods of company-specific training**. He became a senior engineer, working from a service centre, making decisions about whether to repair IT equipment or recommend replacement. A couple of years later, however, the company decided to withdraw from offering support services itself directly to one where it encouraged independent contractors to deliver these services. As a consequence for a couple of years he **worked for the company as a trainer** of these new independent contractors. [I suppose I was really working myself out of a job. I was at that time earning over £30,000 a year, and for that sum the company could get three independent contractors, driving their vans to company premises to do the work, mainly computer repair and problem-solving.] At this time he has a strong organisational identity, shown by his willingness to move over to a training role and an expectation that the company would find him new employment.

When the company implemented its policy of closing down its service centres in the early 1990s he was offered either relocation to the head office or a fairly generous redundancy package. He chose to take redundancy for two reasons. Primarily, because moving to the head office would have meant relocating and this he did not want to do for family reasons. The second reason was that he thought he would find alternative employment reasonably quickly, even if not quite at his previous salary level.

In fact it proved very difficult for Danny to get another job: 'although I was only just 40, and there quite a lot of jobs advertised, many employers thought I was too old for work in IT.' Eventually he was able to find work with the computing services arm of a large entertainment conglomerate. The work was not so attractive, repairing computerised systems in pubs and clubs, and the salary was half what he had earned previously. 'It was 10.30 p.m. one New Year's Eve and I was working repairing a computerised till in a pub miles from home. It was hot, noisy and crowded, and there were strobe lights flashing while I was trying to solder a connection, and I was supposed to be at a party somewhere else, and I suddenly felt I have had enough of this.'

Danny was disillusioned with this particular job, and believing that most employers felt he was too old to be in the field at all, and aware that those working in computer maintenance were not earning anywhere near as much as he did ten years previously, he quit this line of work altogether. His company pension was at a level that meant he only had to do some work to top this up to a level on which he could live and 'give myself enough time to go fishing.' From this time on, Danny **did not feel he had an active occupational identity**: if he views himself in this way at all it is as a '**former computer maintenance technician**.'

For Danny, commitment was initially quite high but learning at work was only directly linked to the evolving job. When the allocation of work changed and he was no longer linked to the organisation, he had no further engagement with professional updating so his work identity

remained 'locked'. He tried to continue in the role when computer repair function had changed – eventually both commitment and identity eroded.

He has had other jobs, but he does not identify with these. In the mid-1990s he worked as a taxi driver, mainly at night, in the suburbs of London: 'it was very high stress - you could have a fight every night if you wanted.' He is currently working part-time as a fork-lift truck driver at a local company:

Personal circumstances, age discrimination and being tied to a particular geographical location made it very difficult to recover from a major career set-back. From then on work was always about short-term adaptation rather than identification, and other events in his life reinforced a feeling that you had to 'make do the best you can in the face of events you cannot control.'

This is the territory explored by Sennett (1998) **initial high commitment to work with a large company; engagement only with learning at work; expectation that the company will look after you, but finding yourself locked into a work identity in decline. Then both work identity and work commitment start to slip away.**

The difference between these first two cases is striking. The first illustrated how learning outside work and the networks developed there can greatly increase prospects for a positive personal redefinition in the event of problems with employer and/or work identity. However, that learning outside work does not necessarily have to be in a formal setting as the third case demonstrates.

Case 3: constrained commitment to work; value of learning outside work - self-taught IT skills; following redundancy switched occupational focus and has been developing a work identity based upon organisational attachment

The telecommunications industry has experienced very major job losses over the last twenty years. This interview is with another worker who left the industry. Peter is in his forties and his career has involved a transition from working for a large telecoms company that experienced mass redundancies to working as a self-taught IT technician.

Peter started work as an electronic engineer, working for a very large telecommunications company that experienced major job losses in the 1990s. Some of his former colleagues switched into the mobile telephone industry, while for 2 or 3 years he was employed 'selling computer ancillaries but I wasn't good at that.' So he applied for the role of electronics repair man at a university in South East England.

However, because the university found it very difficult to recruit IT technicians (pay was very low compared with the private sector), in practice very quickly nearly all of his time was spent helping install computers and problem solving: 'I had had experience of working with things like Excel spreadsheets and such like ... **and knew quite a lot from reading (computing) magazines, I'd never actually touched a computer (technically) but I knew about it from reading so fortunately it was a useful second string to the bow and ...**it's appropriate to what I now do, I've learnt programming for example and some of those skills plus the electronicsproviding for classes making equipment availableobviously other colleagues have other specialisations.'

His job has expanded in terms of the IT part of the job, but also in relation to things like 'for practical reasons **very often I find myself representing the department when dealing with other departments and services**. Sometimes I have to know the politics and deal with people whether it be the IT department, or other departments in the case of web development, or in the struggle to get this building re-wired: you have to argue your case with the university authorities when they say that it is extremely unlikely to happen in the next 12 months due to apparently external funding considerations.'

Two things are clear from this. First, after his experiences in the private sector (redundancy and doing work he did not like) he is happy to work in a more sheltered environment. The pay is not so good, but his skills are valued and he gets to undertake as an interesting range of work. Second, Peter's **work-related identity is now organisational rather than occupational: very much bound up with an affiliation to the department**. Occupationally, he sees himself as a 'technician', willing and able to undertake a range of work depending not only on his own skills but also those of others. **The technicians effectively decide among themselves what range of work they will cover and the extent to which they will specialise**. For example, another technician (with an IT background) moved over to supporting a single research project.

'So for example I handle PC support for staff, but I have had to set boundaries, we have one or two Apple Macs in the department and I have had to say I don't do Macs, because that is just as large an area of expertise as knowing all about PCs for example. I'm very loath to say no to anybody on anything but there are practical times when we have to set out the bounds of what you do.'

A further example of following an interest is the Publications Relations aspect of maintaining the departmental web site, 'it's something that you really just keep your eye on, its not in your job description or anywhere. I feel that I just tell them (departmental management), **I don't know whether it's a moral feeling to champion the department's cause, its nothing I'm obliged to do it's just something I feel in a unique place to do, knowing the technical issues involved plus the needs of the department**.'

Other activities depend on an understanding of how the organisation operates: what you do depends on your knowledge of political sensitivities around the institution and how you actually interface with others.' I think politics plays a very large part in what goes on here - indeed, in fact sometimes it threatens to take over from the actual work.'

Positive and negative aspects of the work:

'I think if I was trying to be clever, I would say that both the advantages and disadvantages of the job are the broadness of its scope, one thing I do love about this is that you have a finger in all sorts of pies, as I mentioned with web development, programming, computer repairs. But that can be also a problem at time because you can become a jack of all trades and there is a danger that you might not become a master of any. Contrasting what I do to someone who works for the IT department, they might be purely a network administrator or purely a web designer, purely a Unix expert, purely a Microsoft expert and I may not have quite as much expertise as any of them. But I probably come close to most of them and yet I cover all the different bases so I do enjoy having the breadth although at times when you are trying to concentrate on one thing and you're dragged away to something completely unrelated it can be stretching.'

'Sometimes I wish the job were more narrow (like in an IT services department), but on the whole in the work I do I like the breadth of it.'

The best part of the work was solving problems and helping people. 'I like solving problems really and I think being a technician is about solving problems when someone comes to you, you've got no idea about what they are going to say or what they are going to ask. It can range from the trivial to something that is right at the limit or even beyond your scope and often the challenge of solving people's problems is perhaps the highest point of all.'

There were, however, some frustrations. 'I think I have found two particular frustrations. One is that when I am championing the department's cause with other departments I don't have any power or authority I can only request and sometimes I have to accept that little notice is going to be taken of what I have asked. They have their own agenda and what I'm asking for can't be fitted in. **Also I have found that the expansion of the work does tend to lean towards leaving one over-burdened at times.** When you are doing something complicated or demanding and you try to concentrate on that and you get called away to something completely unrelated it does make work a bit more difficult, that's about the length of it.'

Degree of autonomy:

'I feel very fortunate, actually, I do have quite a degree of licence to make my own decisions. Obviously I do have to act responsibly and work for the greater good but I am not closely supervised and not told this is what you've got to do and this is how we want you to do it, I do have quite a degree of self-determination.'

Another example of having found a niche that is not too demanding can be seen in his attitude to shiftwork and overtime: 'personally, **technically I am required to work one night a week overtime up to nine o'clock if required to do so**, but there are enough of my colleagues who welcome the extra money who are willing to work the shifts to cover the evenings, **so in practice I choose not to and its 9 - 5 for me.**' [Note this is an example of not officially having the discretion to vary working hours, but rather custom and practice has been established within the workgroup.]

Although he had a clearly defined role regarding the help-desk, this did mean that he was largely on his own rather than operating as part of a team: 'that's one of the disadvantages really we are sort of lean and mean, but it would be nice to have another colleague of equal knowledge and ability. Often two heads are better than one, and you can often share work or bounce ideas of one another.' On the other hand he could contact someone from IT services (on another site) if he needed to: 'I do have connections with some people I do know who I can talk to on particular issues, so I do liaise with other colleagues when I can. I am only going to get a conversation or a quick favour from a colleague who is probably based on another site.' Although if he did have a problem in this area, he could informally draw on someone he works with quite a lot regarding other aspects of his work: 'he is sort of a similar ability and work type to myself so sometimes I do work with him as he is part of our broader team.'

Training and professional development:

There has been relatively little support, except that 'very peculiarly this year there was centrally from the university: everyone was given up to £300 to spend on personal development whether it be on courses, or I, like many, opted for books so I bought quite a few technical books as a result of that, it was a unique occurrence in my career, and I have since

been on one course which related to the new Windows system that we are going over to shortly.'

He does not ask to go on training course because he does not really believe in the value of many formal courses: 'I think the budget is limited and I tend to not bother, to a degree in fairness I am not convinced of the value of training courses, typically the good ones are about £350 + vat a day and it's arguable as to whether you learn anything that you couldn't have learned in a £35 book on the subject, in these times of budgetary constraints it is arguable as to whether any of them are worthwhile anyway.'

He tended to be self taught anyway so that is his style of developing knowledge: 'Yes I either buy books or get knowledge from scouring the world wide web nowadays.'

Future prospects in the short and long term:

'That's a good question, I think probably I have reached the limits of my ambition at the moment, that perhaps sounds rather sad, I wanted to get involved with the development of the web site which I am effectively doing for the department. Although now there are more constraints as the marketing department have been a bit more active in that regard so I do have limits as to what I can do, as it has to fit the corporate image which is only fair and natural. I have been doing web programming but I don't think there is any natural progression from here that is just the nature of the job.'

Asked whether transfer to central IT services or work in a larger department elsewhere would be an attractive option, he replied: 'I don't know, there may be promotional opportunities, but I would be equally happy here. There are downsides to working as a small cog in a large corporate environment, but **I feel that I have more autonomy and licence working here than I would in a central service.**' He is happy to stay in his current department and carry out his current mix of work, and he sees himself staying with this type of IT work: 'Certainly yes, I think that is where my gifts lie and you should stick with what you do best.'

He wants to stay in the public sector and has no desire to work in the private sector: 'Yes, indeed I think it is about the pressure. It's only speculative because one can only imagine what goes on in the big wide world, but I would be inclined to think that the expectations are greater especially in the field of programming. I think it tends to suit young bachelors rather than old married people such as myself. I can imagine that it would be expected of me to work until 8 or 9 at night and come in at the weekends, and programming in particular is that kind of beast. Also I think that the pension opportunities are better in the public sector as well.' [Note again, as with the previous case, there was a feeling of you are too old for the private sector of the IT industry if you are over 40.]

Peter strongly identifies with the particular work he does now: in particular, **'I get a lot of pleasure out of helping people, or teaching them in a way.** I don't just like to walk into a room fix something and walk out, it's nice to communicate the reasons why they are having a problem or how they can convert their documents from one format to another or whatever.' Asked if he sees this as an educative role, he says 'I feel so, yes.'

Working environment:

'It's friendly, because there isn't a very rigid authority structure it's a very friendly happy atmosphere which I would contrast to other areas even within the University. I think again its part of the joy of having a broad scope, variety helps make life a bit more interesting.'

Overall:

When asked 'so you see yourself staying here in the same job for the foreseeable future at least' the reply was unequivocal: 'I'm sure yes and am happy to do so.'

This was an example of an individual getting his life into what he saw as an appropriate balance. He exemplifies constrained commitment to work (never working past 5; not doing certain types of work); strong engagement with informal learning both at work and outside work; and a work identity that was organisational rather than primarily occupational.

Case 4: constrained commitment to work; engagement with learning at and outside work; flexible identity (willing to work as a consultant following redundancy)

Shane worked as a telecoms engineer with a large telecoms company he joined upon leaving school. Shane was in his early 40s and had completed an apprenticeship in telecommunications with the company. As well as the part-time technician qualification he obtained through day release during his apprenticeship, **he continued to study part-time gaining a Higher National Certificate (a sub-degree Higher Education qualification.)** He worked with the company for over twenty years, during most of that time being concerned with installation and maintenance of telecommunications systems. **His work continued to evolve and required considerable learning and development.** But with technological change and shifts in focus the company was unsure what to do with staff with these particular technical skill sets, who had survived early waves of redundancies.

Note the rapid pace of technological change meant throughout the 1990s the company kept redeploying people. Sometimes, however, it did not know what to do with the people. In a previous time it had made many such people redundant only to find it wished it had more people with those skills a short time later. So now rather than rushing to make people redundant in such circumstances, the company takes some time to decide what to do with such people. It continues to employ them even though it does not have any work at that time for them to do. Within the company the employees talk of this as being on 'gardening leave.'

Shane was on 'gardening leave' (being paid but with no work to do) for about nine months, a time he enjoyed greatly, before he accepted an offer of redundancy. Since then he has continued to work successfully in a freelance capacity. However, the period of 'gardening leave' and subsequently going back to working five days a week has made him fundamentally rethink his attitudes to work and reflect on his priorities in and outside work. Although he could continue working full-time, his aim now is to balance his work and other elements of his life so that he only works three days a week, so that this would give him space to pursue other interests.

He also reflects that, when he left school at sixteen in his local area there was no expectation that you would stay on and go to university. He thinks now that that course would have been more desirable, partly because it would equip you with more than just the skills to earn your living. He has enjoyed his work and working with colleagues in the past, but is now at the stage where he sees there is more to life than work and this influences both his current attitudes and aspirations and upon how he looks at the past. It should be stressed that unlike

case 2 where disillusion came from his career coming effectively to an abrupt and premature end, this person has been materially very successful. **His redundancy package and current high level of earnings make working just three days a week a viable option, while maintaining more or less his current standard of living.** He did not want to escalate his outgoings, however, on new cars, moving house and so on so that he would be 'locked into' needing to work five days a week at the higher level of earnings in order to maintain his lifestyle. **In other words he was making a conscious decision to get off the 'material escalator' and to seek a less intensive work-life balance.**

It might be thought that this is a counter example to the argument developed from cases 1, 2 and 3 that it is hard to survive without engagement with continuing learning outside work. However, this argument is specifically rejected by Shane – he did get a sub-degree HE qualification, but even then he thinks he was very lucky and that going down the graduate / post-graduate route gives you far more options.

Case 5: another switch from telecoms to IT: high commitment; strong engagement with learning at and outside work; developing a strategic work identity that is primarily individual rather than occupational or organisational

Pauline, who is about 30, was an engineering graduate who became a telecommunications network designer with a large telecommunications company, who subsequently switched to working as an IT consultant and then as an IT systems engineer with a large IT networking company. **She engaged strongly with learning while working – an example of a 'typical' technical graduate career: moving between jobs very quickly.** This is an example where rapid employee churn helps spread tacit knowledge - compare Mason and Wagner (2000) in their comparison of telecomms industries in England and Germany - this is also an example of an industry where the more flexible work-related identities in the English labour market may offer advantages over the firm occupational identities and career expectations of the German 'Berufe'.

Pauline began her career as a network designer with a large telecoms company working on data communications. She considered that **learning while working facilitated development of expertise in, and a knowledge base on, data networks,** both from a practical and a development perspective. Pauline also received **formal training** that led to achievement of vendor qualifications on Networking and started on the IEE (Institute of Electronic Engineers) training programme, which eventually lead to **Chartered Engineer status.** **[This required keeping a development log, consulting with a mentor and developing a portfolio of work that demonstrates increasing expertise.] Hence there is a commitment to a more generalised professional identity rather than a specific occupational identity.**

After a couple of years Pauline became a technical consultant with a firm of IT consultants. **[Note this is quite a popular move early in the career of many graduates, because it gives you experience of work in a number of different settings while working for clients. It is a way for young workers to build up their experience quite quickly.]** The knowledge, skills and experience built as a data communications specialist could be applied in a number of different contexts, including working with some very large companies as clients. **This role was customer-oriented and depended upon communication abilities as much as technical expertise.**

After another couple of years she wanted to update her technical expertise and she joined a very large IT company specialising in network developments. Pauline was also attracted by the opportunity to participate in their training programme: **she receives training and regular technical updating - the training can take several weeks at a time.** The work again involved working intensively with clients and she worked with a major telecoms company as an associate systems engineer, but this also involved linking with account managers and project engineers from her employer. 'As a systems engineer it is very important that you are commercially aware, and enjoy meeting customers, as well as possessing technical expertise.' **[This is an example of someone possessing the hybrid skills that are in such demand in the IT and telecoms sector.]**

This is an example of someone who identifies strongly with the company as being very good for her at this stage of her career - the mixture of bouts of formal training and learning while working with clients gives you very good future career prospects (in the company or elsewhere in the industry). Pauline engages strongly with learning opportunities in a wide range of settings and is aware of the need for professional development. She has a flexible and strategic work identity that is primarily individual, rather than occupational or organisational. Pauline gives the clear impression that in a few years time she will have moved on as she consciously seeks to build her career.

Case 6: switch from telecoms to IT and then out of the sector: high commitment; strong engagement with learning at and outside work; strategic work identity with individual focus rather than either a particular occupational or organisational attachment

This is another example of someone with a strategic career, but who has had more time to develop his career than Pauline in the previous case. Richard has had a strategic career that has involved moving between occupations, organisations and sectors. Richard is an engineering graduate, in his mid-forties, who worked in engineering, contract electronics, supply chain development and finally moved from the technical side into the commercial area. He worked for a large engineering company for seven years **mainly doing project work, and then took a manufacturing management conversion programme for engineers.** Richard then returned to another division of the company as a logistics manager, but **he decided to follow a developing interest and he switched to working in contract electronics,** then he moved to an IT company and eventually became a supply chain manager with a large company of drinks suppliers.

His job was in group planning, although nominally similar to that which he had previously before going into the electronics industry, it was now totally underpinned by IT and it was experience in this area that was responsible for him getting the job. Initially in the late 1980s his IT expertise coupled with the ability to combine this with business development and to lead project teams had been rather rare. However, since then and partly as a consequence of rationalisations following mergers the standards of the company have gone up: **'you are working with some very, very capable people, very motivated people, and you have to work hard to keep ahead or to keep up to them. So this is a competitive environment...'**

He has now worked for his current company for thirteen years although it has expanded considerably as the company has been involved in a number of high profile mergers. He is

highly committed to his work and regards the company as a 'very good employer, a good company to work for, I enjoy working here and they reward you well.' He transferred to London **where his work now involves being part of specially formed project teams with an international remit**, whether they are engaged in managing a change programme, supporting global customer development or brand building. He is increasing his experience in areas that are business-led rather than technically-led, although he recognises he has much less international market experience than others in the commercial field. The work has though represented a new challenge and has been exciting - he had the feeling he was getting 'in a bit of a rut' previously. On the technical operations side he had gone as far as he was likely to go. This was partly because he had had a **very good relationship with his previous boss, who had 'sponsored his career development' but who had left the company when his counterpart from the other company had got his job in the merged organisation. Politically, he was then 'badged as one of his men.'**

Richard has always been highly committed to his work **that has often involved being part of a project team. He mainly learned through engagement with challenging work.** He was also planning his career. For example, he sought to increase his experience in areas that were business-led rather than technical, when he recognised he had much less international market experience than others in the commercial field. On the technical side he had gone as far as he was likely to go. This is a 'classic' example of a strategic career with little long-term attachment to either a specific occupation or a particular organisation. **While this approach is in some ways identified as flexible and a 'modern' orientation, in fact this has long been a common route for those seeking to get into senior management positions in the UK.**

Case 7: Young IT graduate with strong 'technical' identification working for a major IT company: high commitment; strong engagement with learning at and outside work; flexible work identity with individual focus rather than either a particular occupational or organisational attachment

After completing three science A levels Tony, who is in his mid 20s, went to university to study computing and was from then committed to working in the IT industry, because he was attracted to the work, good starting salary and the fact that it was a growing industry. While at university he saw an advert in one of the graduate recruitment publications and completed an on-line application form for a large international IT company. He was then 'invited to an assessment day for psychometric testing, after that I was invited to an 'evaluation day' at the company head office during which there were further tests conducted that involved team working, writing skills and presentation skills as well as two interviews.' As one of the 'blue chip' IT companies they get hundreds of applications and so are able to employ a fairly rigorous selection procedure. He started work after graduating and is on the 'standard promotion track.' Tony has worked for the company for almost two years as a product development group consultant. [The job title identifies the general suite of products with which the team he works for is associated, and **all technical staff are given generic titles like 'consultant', so that they will be able to undertake whatever tasks are required of them.**]

His official role description runs for half a page and covers a very wide range of tasks and activities, but it makes clear that he has to provide 'support, advice and guidance' on applications; 'design, develop and implement (technical) solutions'; handle parts of larger projects 'with minimal supervision from more senior consultants', including client interaction;

'develop depth in one or two areas of specialisation.' He also has to be able to 'resolve routine and non-routine problems in selected functional areas', 'assist with solution architecture design and installation; perform systems design and integration; provide sales support; ...make presentations and conduct demonstrations' and so on. **What is clear from this is that they were expecting new staff to be fairly autonomous in being able to 'learn while working', operate effectively in teams, solve problems and work on whatever is required by the company.** Tony's current work is developing Intranet solutions for the company and for external clients.

Tony has had a mix of formal and informal training as required. For example, he has taken a number of 'vendor qualifications', including some Microsoft Certified Professional qualifications. **These involved 'a combination of 'whilst working' experience, as well as self-study (books, computer based training) and attending instructor led courses.'** There was a major difference between what and how you learned at university compared with these qualifications. 'The Microsoft Exams are highly specific to the Microsoft products which they cover, at university topics were covered more broadly, with more emphasis on theory whereas the Microsoft Exams were much more based on 'real-life circumstances'.

His work with clients involves 'fairly extensive contact from being present on initial contact, to working on proposals, though the project lifecycle until the project is finished.' This aspect of work he finds 'enjoyable on the whole, obviously some experiences are better than others, but mostly enjoyable. It can be stressful if there is a lot of money involved, but not overly stressful - clients are often equally nervous.'

Most of his work involves working with colleagues, although this varies, 'from a small team of 2~3 to large teams of 20+'. The average size is probably in the 5-10 range. I work in teams all the time, it is very rare to be completely alone.' He is happy with this' it is 'fine, teamwork is emphasised at the company and everyone gets on well and acts responsibly'.

Tony has so far 'been working on just three projects since I joined 2 years ago. There is always the opportunity to request transfers etc but I have been happy with my work and not felt I needed to exercise that option.' He does have a degree of autonomy: 'quite a lot (within reason), and this will grow over time as I move up the grades. Day to day decisions I make for myself and my team, and discussions are had with more senior people (as opposed to "orders" being handed down).'

The main advantages of working for the company have been 'the good working environment, good management, and fairly varied work. The disadvantages are not major - living in London so the cost of living is very high, and second, I could make more money working for a different company.' He feels there are opportunities for progression within the company and these could be within the area of IT, and he would not need to move into other areas (e.g. management) to progress further, 'but I could if I wanted to'. So he does not see any particular limits to progression with his current company, at least 'no more than standard limits.'

Overall, he likes his work: 'it is fine, quite varied and enjoyable with a relaxed working environment.' He does not know what he will be doing in 5 years time: 'impossible to say - the industry moves so fast that it is difficult to predict just 1 year in advance.' **He identifies with his work (he enjoys being a 'techie'), and is happy with his company for the moment but without any particular attachment. His strong commitment to continuing learning and his record of development with a blue chip company at the start of his career should**

ensure that he does have a range of options available to him in the near future. He certainly has a flexible orientation where he is not expecting the company to provide for his development and career progression.

Case 8: Example of a young graduate, in his early 30s, gaining experience in a single company while developing a career as a high-flier - very highly developed communication skills and hybrid IT and business strategy skills meant he was 'redefining what was a previously mainly technical role'

Duncan achieved a first class honours degree in maths and was recruited straight from university by a very large international bank that offered a full range of financial services and had a major office in the City of London. He is articulate, modest, an effective communicator and is very good at working in teams. All the companies in the City were, in the early 1990s, in the throes of major IT-based restructuring of their services and business processes and there was intense competition to recruit the 'best technical graduates': indeed Duncan was a direct beneficiary of the 'war for talent.'

From the beginning the company put Duncan on a personalised learning and development programme, where he worked on a number of projects across the full range of company activities and spent up to six months at a time in different company locations in New York and Europe. His technical expertise, range of experience and the fact that the successful implementation of the IT projects were seen as critical to the success of the company meant that the company was very keen to protect its investment. By the time he was 27 he was made an IT director and was earning over £150,000 a year. He worked the very long hours common in the city throughout the 1990s, often not getting home until 10 p.m. or later and starting again before 8 a.m., if that was what was required to complete the project. **Duncan likes the challenge of his work and the relative autonomy he has.** He is happy with the company and the rewards he has earned, but he still does not have that 'company man' syndrome. You (and more importantly he) could imagine him working elsewhere, as his skills are eminently transferable and are highly valued on the labour market. **He has well developed communication skills and crucially 'hybrid' skills where he can align technical expertise with business development.**

The personalised learning and development programme geared to someone identified as a high-flier was a very powerful learning experience. As a consequence his very highly developed communication skills and hybrid IT and business strategy skills meant he was 'redefining what was a previously mainly technical role'. Duncan also demonstrated high commitment to his work, but **his experience of work was so broad and strategic that his value has effectively gone beyond the bounds of the company even though that is the only one he has worked for.** The very breadth and strategic nature of his skill set means that he has a very flexible work identity and he has a very wide range of attractive career options.

Case 9: commitment to work; learning through varied project work and believes in value of frequent job changes; flexible work identity

Steve is an IT systems developer in his early thirties with a flexible attitude to work and a willingness to undertake a variety of work roles. He got married just after completing a degree in computing. While at university he did a work placement with a major IT company and had plenty of options for his first job. However, he looked for a job in particular Midlands city, because that was where his wife had landed a fast track management job with a very large retail and manufacturing company. So from the start they tried to dovetail their careers. He found a job in the city working as an IT consultant with a small software house that was established in the late 1980s. It provided IT and management services to the manufacturing and services industry sectors. **The project work proved to be a useful way of learning while working with clients.** The company also offered training (often provided by vendors) so that staff could keep abreast of the latest technological developments. The range of projects could include application developments, Internet enabled database access and business consultancy. **He worked in a number of different roles and on a wide range of projects.**

Steve then got a job as a systems developer for a regional utilities company. After a couple of years this was taken over by one of the large national utilities companies. He got a promotion to a more senior position, but still involving systems development, and this required relocating to work about thirty miles away. In order to take advantage of a generous relocation offer they moved to a larger home, staying in the original city but affording easier access to the motorway. While this was a positive development overall, **it had the unfortunate consequence of locking him into the company for at least two years and that 'this in turn could create a culture of dependency on the company.'**

He felt it was important not to stay too long: originally 'the plan was to work for them for five years...there is no such thing as a job for life and it is important to move around to new employers - you can get cynical and tired working in the same organisation. **By moving around you also bring fresh ideas to an organisation...this is the type of flexibility that will be important and not your ability to relocate.'** [That this attitude is widely shared within the IT industry can be illustrated by the publicity on the website of his former company. This emphasised that one of the criteria that demonstrated it was a good employer was that the employees stayed an average of seven years - with the clear implication that this was a long time!]

Even outside of IT he saw attitudes changing. So whereas in his current company 'the culture a few years ago was that you had to be mobile to advance your career, **now it was more important to be flexible - willing to work from home, hot-desking and so on.'** He does not identify with his employer in the sense of expecting to have a long-term relationship even though he is well rewarded and gets great benefits. Nor does he identify with a particular occupation - 'I have had various roles in all my jobs' - **rather he sees himself as able to do a wide range of things in IT, and given the pervasive nature of IT in other areas as well.**

Steve believes he is in control of his career direction - indeed the only major constraint is that he would take his 'wife and her career into consideration...in our family both careers are very important.' 'I would not be concerned to change jobs as it is good to be willing to change...I would never consider moving to London as even considering the increase in salary, the lifestyle is better here, also personally I prefer to live in the countryside.'

Both he and his wife are working very hard now, but through choice, in order to pay off their mortgage and open up their options: 'maybe taking it easy later on - I don't see myself working till I am 65....**I would also like to do things not connected to my current job...maybe move abroad or set up my own company in future.**' He does recognise that things have gone well so far: 'I have been very lucky' and his range of experience and current location, where he could work in a number of places across the Midlands, means he would find it very easy to get other work. **He thinks it is also important that you have a job where you continue learning - being adaptable and willing to try new things was good for your career:** 'the company has been going through restructuring and there has been a lot of redundancies in the last year, and you cannot depend upon your employer any more as the business world is so changeable. **However, if you are flexible and willing to work hard it makes this type of life style easier**'. He feels strongly that even with children that may make you less willing to relocate, that **it is flexibility, rather than mobility per se, that is vital.**

Overall, he clearly not only exemplifies being a 'flexible worker' but he identifies strongly with it ideologically as well.

Case 10: commitment to work; learning through frequent job changes; flexible work identity

Martin is an example of a young graduate, aged 30, gaining experience through rapid job change early in his career in IT development within the financial services sector. He is a technical graduate from the North of England who upon completing his degree in London made a 'lifestyle' choice to go and live on the South Coast for a year, just doing occasional temporary work. He then moved back to London for a temporary job for a year to earn some money prior to going back to university to take a Masters degree in IT in Scotland. Upon completing his second degree he got a job straight away as an analyst/programmer for an IT company specialising in the provision of business technology services in the 'high tech corridor' to the West of London. Martin worked there for just over a year and his next move was crucial for his career development.

Martin joined a financial services consultancy as a consultant and started to specialise in business intelligence. The company was a large international IT services provider, with branches throughout the UK and North America, that helps major companies plan, build and manage application software to optimise business performance. He was based in the North of England and **worked in the business consulting area of practice, helping clients develop and implement business intelligence applications. The advice could involve advising clients on how to gain maximum business benefit from their IT investment, including reviewing and challenging current practices and business processes.** The nature of the work meant that there was considerable **'learning while working' and he was rapidly developing significant expertise, learning from clients, colleagues and the challenges inherent in the work itself.** After almost three years he moved to another business consulting firm in the same city - this time as a senior consultant. During this time he had also got married and became a father for the first time.

The work in this company was very similar. This company was an IT services provider that employed more than 1,000 e-business professionals serving different markets throughout the United States and the United Kingdom. They offered strategic IT solutions to clients that combined front-office solutions (strategy consulting, user experience design, application development) with back-end implementation (customer relationship management, business

intelligence, enterprise application integration, enterprise solutions). Martin was attached to the specialist business intelligence area of practice. **His job was to help companies to develop systems to synthesise disparate data and information into knowledge that could be used to meet the clients' business challenges.** His job involved a combination of technical knowledge and extensive experience of applications development, including Internet-based applications, across a range of clients operating in different contexts. **The relationships with clients were intensive, involving sharing areas of expertise and mutually committing to training, co-development, and business development.** He stayed there for just over a year and then got a job with one of the world's largest food and drinks suppliers as a **senior IT consultant working on their global information systems. His work is principally project-based,** and can involve international travel to other company locations.

His new job was based in London and for four months he was involved in long-distance commuting, going home only at week-ends, until they were able to buy a house and the family was able to relocate. As they had a young child they had chosen to rent a house in the area they were brought up, so that his wife would have support from both sets of parents, rather than renting in London where they had no network of family and friends. They bought a house about thirty five miles from work, because they were unwilling to pay the very high prices for somewhere closer. He was surprised by the volume of traffic, however, and found that the journey at peak times could take between two and three hours each way by car. So he bought a motorbike and it now takes about an hour each way and this gives him more time with his family. Although the move was disruptive he felt that from a longer-term career perspective it was the right time to move. He would have far more job opportunities from his current home, his wife should find it easier to get administrative work and they may be less willing to move far once their child starts school.

The two striking things about his career to date are **his geographical mobility** (since completing his first degree he has lived in seven very different and widespread locations) **and how well he represents the type of learning through frequent job changes that is typical of the early career of many of those working in IT and related fields.**

4. Discussion

Cases 1 and 5 –10 exemplify employees with flexible work identities who are very positive about how their careers are developing. These seven individuals are also highly mobile. In contrast, cases 2 – 4 were both less flexible and less mobile. All three individuals were still living and working in the area close to where they grew up. Regarding mobility, it is possible to distinguish between geographical or spatial mobility, horizontal mobility and vertical mobility. All the flexible employees were willing to meet demands to be spatially mobile, that is, they were willing to change workplaces, transfer to a new location, travel extensively for the job or to have a long commute on a regular basis. They positively welcomed horizontal mobility relating to changing employer or departments, practising job rotation, acquiring a range of specialisations and engaging in teamwork. They were all also interested in vertical mobility, with the capacity, interest and opportunity for personal career development by taking advantage of learning opportunities within and outside work. Horizontal and vertical mobility were both strongly connected to taking advantage of opportunities for professional development and learning while working. The individuals who were flexible and mobile were very ready to change employer, geographical location and occupational focus.

Requirements for flexibility and mobility could be regarded as demands that put pressure on companies and employees. However, both flexibility and mobility also create opportunities in terms of opportunities for learning at work, changing job profiles, professional development and career options of employees, and, in some cases, greater scope for autonomy and self-realisation. Companies' organisational strategies may open up new opportunities for employees, or they can create pressure, for example, through work intensification - a prevalent feature that was mentioned throughout all sectors of investigation in the broader FAME study (FAME consortium, 2003; Kirpal, 2004; Dif, 2004; Loogma et al., 2004). The wider study revealed that flexibility and mobility are experienced and valued quite differently in different occupational groups, and showed how this affects identity formation processes at work.

The flexible individuals identified here (cases 1 and 5 – 10) exhibited flexible work identities, a strong commitment to work (for example, they all worked well over and above their contracted hours of work) and a willingness to make the most of learning opportunities in, and often outside, work. They were all highly successful, often engaged in strategic career building and were willing to be geographically mobile. They had 'modern' skill sets that combined technical expertise and excellent communication skills, including when dealing with customers or clients, which were aligned to the goals of business development. Some of them also had a clear ideological commitment that 'being flexible' was of real value and represented the best way forward to having a rewarding career. They were not looking to organisations to provide this. Even when working within large organisations they expected to have to take care of their own career development. What is also striking is that possession of these 'modern' skill sets were linked to very high work commitment. The intensity of work, the long hours and the time taken for work-related learning were often considerable. It is perhaps significant that cases 3 and 4 consciously decided to opt for less stressful patterns of work, while case 2 demonstrated how difficult it could be to recover if you were perceived as 'too old' (at 40!) to be able to sustain such a punishing routine. Cases 2, 3 and 4 were certainly those individuals for whom work was less central in terms of time intensity – their commitment to work was more constrained or more balanced, according to your perspective.

Flexibility, mobility, strong commitments to learning in and outside work and high work intensity – this is the landscape of employees with 'flexible work identities' working in IT and telecommunications in the UK. The contrast with the situation in France, where occupational attachments are still stronger (Dif, 2004), is marked – perhaps in this, as in other respects, the two countries represent 'new' and 'old' Europe. The flexible employees in the UK seem to represent a general quickening of pace and intensity at work to mirror those processes in other areas of UK life (education; drinking; football? – thank heavens for the leisurely trains!). More seriously, the cases outlined here do not represent sustainable patterns of work over a working lifetime – overworking those under 40 is not just a matter of individual choice, it has serious consequences across individual lifecycles and societal consequences in underworking those over 50.

The UK presents a model where the labour market has never been fully structured along clearly defined occupations and professions. Instead, it has become increasingly reliant on a high level of flexibility, deregulation and fluidity of work profiles and related skills requirements. This more open and less formalised system does not place such a great emphasis on an individual's attachment to specific, and to a large extent pre-structured, occupations as in France and Germany, but rather on individual skills development, acquisition of knowledge and competencies, work experience and a pro-active work attitude.

Following the collapse of apprenticeship programmes from the late 1970s onwards, specific work-related or technical skills are usually learned on the job, thus strengthening the importance of general education and work-related learning against vocational education and training. The lack of a common model for vocational training, skills development and occupational identity formation also means that there is enormous variation in these processes across sectors and occupations. As a consequence, work identities are highly individualised and dependent on the specific work context, job profile, individual skills composition and career orientation. UK employees seemed to have learnt how to cope with individualised forms of work identities, and sometimes use frequent job changes as a means of building up their knowledge and expertise. Employers too seem to have adapted to this in their willingness to employ graduates from subject areas apparently unrelated to their area of work.

What could be noticed across all seven countries studied in the FAME project is a general trend towards employees needing to develop multi-dimensional (individual and collective) occupational identities that can cope with socio-economic and technological change (Kirpal, 2004). The UK is in the forefront in this respect (see also Mason and Wagner, 2000). In the UK IT industry employees are challenged to actively construct their own systems of identification with work, with expectations of personal interest and commitment, a pro-active attitude to learning and self-realisation. The focus is upon development of individual skills, knowledge, competencies and active career development, using their own commitment to learning, continuing vocational training, mobility and flexibility as important means to achieve this. A shift in skills requirements from reliance primarily upon technical knowledge to the increased importance of generic and communications skills and client interaction has fuelled demands for more 'modern' skill sets.

The 'flexible employees' as well as demonstrating a willingness to engage in learning it is also clear that they are working in contexts that are particularly rich in opportunities for learning while working. Using the framework developed by Eraut *et al.* (2004) it is clear that 'context' factors, such as allocation and structuring of work, relationships at work, and participation and expectations at work, are all significantly influencing possibilities for learning at work. The influential role of structuring and allocation of work is apparent in those cases where individuals are progressively engaged in more demanding project work, undertake a wide variety of different tasks or follow programmes of work that are expressly intended to lead to further learning and development. Relationships at work could also facilitate learning given the widescale use of project work with opportunities to learn from peers and the many opportunities to learn from clients while engaged on consultancy work. For many of those working in IT the ability to communicate effectively across disciplines has become a core competence as their roles have changed. The work contexts within which these employees were working were generally suffused with expectations that employees should engage with a wide range of opportunities for learning. Even in the odd case where there was not an explicit 'learning culture' the individual had sufficient scope for action that he or she could still engage with learning opportunities.

Using the Eraut *et al.* (2004) framework further it might be instructive to examine the three groups of learning factors that influence what is learned and how it is learned. These factors are: the challenge and value of the work; confidence and commitment; and feedback and support. In most cases these individuals were engaged in work that was highly challenging for a significant amount of their time. Even those engaged in more routine technician work found that the speed of technological change was such that they were frequently required to adapt to new challenges. The exposure to a range of experience over time may be particularly

significant in the build-up of implicit or tacit knowledge rather than explicit knowledge (Eraut, 2000) and it was instructive that a number of individuals used changing jobs, and thereby widening the range and type of work with which they engaged, as an explicit strategy to help develop their expertise through meeting a variety of challenges at work. Throughout this paper emphasis has been given to the importance of high work commitment and its links to learning both in and outside work. The area of feedback and support, however, presents a more mixed picture. Some individuals had extensive support to help with their learning while working, including official and unofficial mentors, while others were pitched into work and left to 'sink or swim' for themselves.

Overall, it is clear that the major contextual factors (such as allocation and structuring of work, relationships at work, and participation and expectations at work) that are so influential in shaping possibilities for learning while working were all largely positive in the cases examined here. Some critical learning factors such as the provision of appropriate mechanisms for feedback and support could be addressed in some contexts, rather than relying upon individual commitment to meet every challenge. It is noticeable that whether or not the individuals were appropriately supported they all felt that looking after their learning and development was primarily their own responsibility as was their own career development.

All the individuals whose working lives were examined here were able to respond to the learning challenges inherent to or related to their work. A more demanding issue was the more general one of coping with the increasing pressures of work. Some individuals downshifted, others formulated plans to become self-employed or leave the sector altogether. However, these were all individual responses and there was no sense that to respond effectively to the increasing work demands requires a collective as well as an individual response. There were some signs, however, even though not represented in the interviews covered here, that some companies were starting to address the issue of long working hours and over-commitment. Interestingly, the type of leisure activities being promoted, coupled with an early finish on Fridays and so on, seemed designed to rebuild an organisational commitment and to create a sense that the company might be one that individuals might wish to work for for an extended period. The first straws in the wind that the moves to encourage individuals to have highly flexible work identities may have gone too far from an organisational perspective?

From a societal perspective the model of the individual with a flexible work identity may exclude large numbers of people who cannot or do not have the means to, or do not wish to, develop highly flexible work attachments. This may be because they either lack the right qualification or skills, come from a disadvantaged socio-economic background, may not be very flexible in general, work may not be a defining life interest and/or they have no wish to be geographically mobile, or they may prefer to hold on to more classical forms of work identity. For example, Atkinson (2002) found that many bank employees still regarded the 'new' contract that transferred responsibility to employees for managing their own career, some years after its introduction, as a violation of the 'old' paternalistic psychological contract. The 'new' contract was seen as a regressive move from a relational contract to a transactional contract.

Additionally, many people considering an occupational identity, to which they are adjusted and that is relatively stable over a period of time, regard it as a psychological 'home'. 'Home' in this context is a "familiar environment, a place where we know our way around, and above all, where we feel secure" (Abhaya, 1997, p2). Viewed in this way it is easy to

understand the sense of loss and dislocation that people may feel if they have to give up an existing work identity (Sennett, 1998). After all, Dewey (1916) had seen an occupation as giving direction to life activities and as a concrete representation of continuity. Since many employees in the UK have undergone a work-related socialisation that did not anticipate the requirements for increased flexibility, mobility and lifelong learning, the number of individuals comfortable with flexible work-related identities even in the 'flexible' UK labour market may still be a minority.

The employees with flexible work identities such as those illustrated here are significant in that they show the value of those individuals with 'modern' skill sets, but they are not destined to be the forerunners of how most people will work in future. They are equipped with the right set of skills and sufficient self-confidence to be willing and able to deal with new demands at their workplace. They may even actively use concepts of flexibility and mobility as instruments to adjust their work to their personal needs. In the UK context individuals with hybrid skills, involving a combination of business and technical skills, as well as 'soft' skills of communication and team working, remain in high demand. Such people could perform a wide variety of roles and there were examples of companies being very flexible in deploying the skills of such people. Indeed, that employers saw these individuals as capable of fulfilling a variety of roles was a key part of their attraction and some companies were certainly looking for organisational commitment rather than occupational identification as a key driver for behaviour. The irony, however, is that flexibility is a two way street and all of the employees with flexible work identities described here worked hard but did not feel a particular attachment to their current employer. Indeed some felt that for practical and ideological reasons it was unwise to do so. As a consequence the response of some employers is that they feel that there may be value in having some employees with more stable organisational attachments, as in the past, rather than moving inexorably towards an ever more flexible future. How learning, commitment and identities at work will be shaped in the future is not clear in the UK – let alone the UK being a harbinger of the flexible future for Europe as a whole.

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