

SKILLS IN THE CONTEMPORARY WORKPLACE: THE 'KNOWLEDGE WORKER'?

INTRODUCTION

Bradley *et al* (2000: 111) stress that the notion that we are entering a 'knowledge society', wherein work organizations are increasingly characterized by the utilization of better-trained, more qualified and higher skilled employees, has lately become one of the most widely articulated propositions about employment in the advanced capitalist societies'. The purpose of today's lecture is to examine these debates and link them to broader discussions about skill changes.

DIFFERENT THEORIES OF SKILL

There has been much debate concerning the way current jobs are constructed and whether or not trends suggest that capitalist development has succeeded in deskilling work, or in fact whether changes in the contemporary workplace are leading to upskilling tendencies:-

1) DESKILLING

Braverman's 'Labour and Monopoly Capital' (1974) places at the centre of its analysis the dual elements of skill and control or more importantly, the ways in which management progressively deskills work through the division of labour which enhanced the ability of capital to control the labour process. Management influenced by Taylorist principles attempted to integrate deskilling into work organisation and machinery design. Management hence pursues a strategy of deskilling in two ways: -

- Organisational Deskilling
- Technological Deskilling

Criticisms

The deskilling argument has been widely criticised (Thompson, 1989; Wood, 1982; Knights and Willmott, 1990) for its failure to capture the processes and the specificities of how work becomes deskilled: -

- 1) Over-simplified management practices
- 2) Oversimplifies diversity between managers
- 3) Over-emphasises management control as a primary strategy.
- 4) Ignored labour resistance
- 5) Ignores the relations between gender and skill
- 6) Ignores changes in skill

Despite some of the criticisms of Braverman's work, it can be argued that his work is better understood as an overall tendency of capitalist development rather than a universal law which can be applied in all cases. His work is also significant for placing management practices and strategies at the centre stage in discussions of skill change.

2) UPSKILLING THESIS

This account focuses the individual and their ability to maximise their opportunities in the labour market through pursuing education and qualifications - Human Capital Theory. It is suggested that firms are increasingly investing in their workforce through greater training provision, so that the emphasis has shifted to 'human capital' as a central means of

accumulating profit. Advances in technology require a more educated better trained workforce in order to cope with the increasing complexity of work tasks. Therefore there is a general upskilling towards more complex work requiring higher levels of skill and discretion. More recently, this thesis is embodied in the concept of flexible specialisation (Piore and Sabel 1984). Technological advancement and flexible forms of production are hence requiring upskilled rather than deskilled workers.

Criticisms

- 1) Causal relationship between technology and skill level.
- 2) Not all new technology requires upskilled workers.
- 3) Not all service sector work leads to skilled jobs
- 4) It assumes that a radical break with Fordism
- 5) There needs to be a global perspective

The upskilling thesis falls prey to the same kinds of problems as the deskilling thesis because it makes generalised and universal pronouncements that do not capture the diversity and complexity of current skill changes. The upskilling and deskilling thesis occupy polar extremes – these are sometimes conceived of as optimistic and pessimistic accounts of skill changes.

SKILL & THE KNOWLEDGE SOCIETY

In recent years it has been argued by management gurus (Handy, Drucker), Government policy makers and academics (Frenkel et al) that we have entered, or are on the brink of a 'knowledge' or 'information' society. It is stressed that we are entering a general trend towards upskilling in employment which is a result of the growing importance of 'knowledge work' which is required by changes in the service sector as well as the increased reliance on new technology.

One of the main problems is the definition of knowledge worker – Winslow and Bramer (1994) define knowledge work as, *'concerned with interpreting and applying information in order to add value to the organisation through creating solutions to problems and making informed recommendations to management'*. It is argued that changes in the nature of work require different kinds of knowledge – theoretical knowledge rather than contextual knowledge.

REVIEWING THE EVIDENCE

To review the evidence of the knowledge worker in the contemporary workplace, we shall consider two methodological approaches to skill trends; quantitative survey data and qualitative data from case studies of specific occupations and organisations.

1) QUANTITATIVE DATA - SURVEY RESEARCH

This data is based on two large surveys. The first is undertaken by researchers involved in SCEL (Social Change and Economic Life Initiative) research. The SCEL study defined skills in terms of **the person and the job setting** the related this to the qualifications the person needed to conduct their work, the length of training they received, the length of time it took to do their job well, responsibility a person had for supervising the work of others and whether a person felt themselves to be skilled (Gallie, 1991).

• SCEL Data

This was a comprehensive survey of skill change in the UK, the results are reported in Gallie (1991) and summarised in Noon and Blyton p.161-162. The research was

specifically interested in testing the deskilling thesis and therefore looked for evidence of deskilling, or upskilling. The findings which emerged warn against such dualistic assumptions and instead note the complexity of skill changes: -

Findings

- Deskilling was rare
- The most common experience was upskilling
- The argument best supported by the evidence is the polarisation of skill.

These polarisations revolved around:- occupational classes, skill differentials, advanced technology, economic sectors and gender: -

Up-skilling – those who witnessed their skills increase were already skilled, worked with advanced technology, were more likely to be employed in manufacturing or the public sector and were men or full-time female employees.

Stagnation of skills - those that did not experience any increase in skills were already non-skilled, did not use new technology and were most likely to be part-time females employed in the private service sector.

Discussion Points:-

- Skill stagnation could be equated with deskilling.
- Changes to the organisation of work with respect to labour flexibility impacted on skill changes.
- Caution needs to be adopted - the relationship between gender and part-time work is not necessarily indicative of deskilling i.e. the social construction of skill.
- Some of the problems associated with defining skill which we have discussed may explain some of the results

• WERS Data

Cully, Woodland, O'Reilly, Dix (1999) report on the 1998 WERS data set reveals that there is widespread variation in access to training across several employee and workplace characteristics:-

- Different industrial sectors have very different patterns of training. 70% of public sector employees receiving some training compared with 55% of private sector employees.
- Different training provision across occupational groups - clear divide between blue-collar, pink collar and white collar occupations.
- Less than half of craft workers, operatives and assembly and those in routine, unskilled jobs received any training at all in the preceding year.
- Part-time workers received less training than their full-time counterparts
- Employees most likely to receive training were younger workers, who were new to the job, employed full-time in a clerical or professional occupations in the public sector
- Those least likely to receive training were older workers in blue collar jobs especially those working part-time.
- Around 50% of non-managerial employees felt that at their workplace people were 'encouraged to develop their skills', a quarter neither agreed or disagreed and the remaining 25% felt they were not encouraged.
- Job autonomy - although 30% of respondents identified that they had a lot of autonomy 27% had little or no influence. These also vary according to job level – 6 out of 10 managers identify that they have a lot of autonomy compared with 2 out of 10 plant and machine operatives and 3 out of 10 clerical and secretarial positions.

Polarisation Thesis

The findings that emerged warn against dualistic assumptions such as deskilling or upskilling and instead note the complexity of skill changes. Both the SCEL and WERS data point to the existence of the polarization of skill. According to the survey data deskilling in employment has been somewhat rare. Moreover, occupational changes have resulted in an increasing number of highly skilled jobs becoming available. Skill polarization however, has meant that individuals who already had relatively high level of skill witnessed an increase in their skill levels, while those with low levels of skill saw their skills stagnate.

2) QUALITATIVE RESEARCH – CASE STUDIES

The case study research has focused upon changes in skill in the contemporary workplace. This research has often been undertaken by those within the labour process tradition, more recently, much of this research has been prompted by the concept of the 'knowledge worker'. It is argued that we are witnessing the end of the 'machine age' and the emergence of an 'information age' (see Warhurst and Thompson 1998). The focus of these debates centres upon evidence that the following factors are stimulating the rise of knowledge workers:-

- Growth of the service sector
- Restructuring of work
- New technology and skills

a) Growth of the service sector

The growth in the service sector is seen to be a key source of the trend towards upskilling as these occupations are believed to involve the acquisition, processing, and utilization of 'knowledge'. Industrial society was typified by the presence of repetitive and unskilled manual tasks carried out to rigid specifications in a Taylorist manner, the emerging 'post - industrial society' based upon the service sector and the deployment of new technology was characterized by the importance of knowledge work. In this respect, the post -industrial society requires more highly skilled workers.

- **Evidence?** – Critical commentators question the simple relationship between the service sector and knowledge workers e.g. Thompson and Warhurst (1998), Ritzer (1998)
- **How much knowledge is utilised?** – Critics question the extent of knowledge used in service sector work e.g. Baldry *et al*'s (1998) case study of white-collar work in the financial service sector.

b) Restructuring of work

It is argued that the restructuring of work requires more highly skilled workers (Womack *et al* 1990: 101-102). The restructuring of work in manufacturing has led to a smaller number of multi-skilled, polyvalent and flexible employees. For some protagonists the development of techniques based on flexible specialisation and lean production provide the opportunity for upskilling.

- **Evidence of multi-skilling?** - Bradley *et al* (2000) argue that changes in work organization have resulted in a general trend of upskilling is highly questionable.
- **Lean production as a hybrid of Taylorism** - Many researchers argue that Taylorist principles of job design continue to predominate, researchers such as Berggren (1993) argue that lean production is hybrid of Taylorism whereas, Parker and Slaughter (1988) view lean production as an intensification of Taylorism.

c) New technology and skills

It is argued that increasingly advanced technological processes necessarily leads to greater demand for more highly skilled and knowledgeable workers to operate them. Therefore employees working with new technology are the best placed to take advantage of the knowledge economy. These new professionals such as scientists and engineers, IT professionals have expanded massively as a group. In this respect, new technology leads to upskilling.

- **Extent of autonomy has been exaggerated** - Warhurst and Thompson (1998) stress that this is a major simplification and the extent of autonomy amongst these groups have been exaggerated – the context of work needs to be investigated thoroughly.
- **Segmentation within these professions** - Research by Beirne *et al* (1998) shows that these workers are still prone to management control and are affected by segmentation within the occupations which means that divisions and hierarchies within the group can be exploited by management control.
- **Work intensification** - Greenbaum (1998) noted how management desire to control computer systems workers means that their work is intensified.

Although the SCETI evidence suggested that those working with new technology are more likely to experience up-skilling, the qualitative case study evidence suggests that it is problematic to make causal links between knowledge work and those working with new technology because it is important to examine organisational contexts and wider economic pressures such as competitive relations on the development of work utilising new technologies.

REALITY OR RHETORIC?

Critical reviewers such as Warhurst and Thompson (1998) and Bradley *et al* (2000) are highly sceptical of the claims of those who claim that we are now witnessing the expansion of the knowledge society.

- **Problems with definitions** - Warhurst and Thompson stress that the description of knowledge workers includes a wide range of occupations from librarians to musicians, bankers and insurance workers.
- **Evidence?** Commentators question the evidence that knowledge workers are increasingly demanded in the contemporary economy e.g. Reich (1993) Nolan (2004) Brown and Hesketh (2004)
- **Over-qualification in the labour market** - Workers may be more *highly educated* but this does not necessarily mean that there is *a higher level of knowledge inherent in the jobs which these people are employed* e.g. Brynin (2002)

EVALUATING THE EVIDENCE

In contrast to the claims of the knowledge economy protagonists, Finegold and Soskice (1988) argued that Britain was trapped in a low skills equilibrium because of: -

- Rational actions of individuals not to invest in training
- Managers' decisions not to invest in skills given short-term financial markets, adversarial IR and poor supply of skills in the labour market.
- Government who reinforce a low demand for skills, where untrained managers run the majority of firms with workers who produce low quality goods and services.

Until the work of Finegold and Soskice (1988), much of the debate on skill development in the UK, focused on supply side problems – that is in terms of skills in the person. In contrast the low skills equilibrium debate identifies how low skill forms of work organisation within British Industry infer wider institutional conditions – short-term financial markets, an adversarial industrial relations system, and a low supply of skills in the labour market. In this way, the discussions of skill levels are contextualised in terms of the context of the environmental, cultural, structural factors that include systems of production, industrial relations, inter-firm networks, industrial capital, corporate governance and politics.

A review of skills in the UK economy by Bloom *et al* (2004) identify some important factors:-

1) Supply-side Factors – Skill in the person

Employees

- 8 million people in Britain lack basic skills, and nearly 7 million adults are functionally illiterate, with reading ages below that of the average 11 year old.
- A disparity with the US exists in terms of high level skills (23% in US and 15% in UK) and with Germany in terms of intermediate skills (55% in Germany v 30% in UK)
- Research identifies that a skill gap – that is skill deficiencies in terms of basic skills, intermediate skills – technician and craft and trade skills, maths and sciences and leadership and management.

Managers

Keep and Westwood (2002) identified that British managers were less qualified than their international comparators, only 49% of UK managers were educated to degree level compared with – 74% (USA), 78% (Japan), 72% (Germany) and 61% (France).

2) Demand-side Factors – Skill in the job

It is also important to be aware of the practices and strategies of managers in discussions of skill change. A range of researchers note that there is no evidence of upskilling in the actions of British management: -

- Thompson *et al* (1995: 8) - British managers frequently choose to use the current state of the market and weakening of union strength to redefine their skill needs away from craft to semi-skilled labour.
- Ackroyd and Proctor (1996) - little evidence of the emergence of new comprehensive systems of education and training to produce the 'polyvalent employee'.
- Clark's (1995) case study of Pirelli Cables - shop-floor innovation is constrained by continuing evidence that most management simply do not trust their workforce.
- Sorge *et al* (1983) - computer technology was implemented by British managers to deskill shop-floor workers in Germany the same technology was implemented to enhance skill.
- Cully *et al* (1998) use WERS data - in the main few organisations in Britain have adopted a 'high road' strategy, most adopted a 'low road strategy'.
- Felstead *et al* (2000) in the 1990s there were winners and losers in skill terms – winners were full-time and employed in modern organisations, the losers were usually part-time workers and those employed in organisations with less progressive management practices.

MAIN POINTS

- Evaluating skill changes is complex and needs to take account of the actions of Government, management, trade unions and employees.
- This approach requires us to combine an understanding of skills in the person, the job and the setting by integrating demand and supply side explanations as well as the broader context of the economy.
- The best way of analysing changes in skill levels is by focusing upon specific occupations which allow us to identify trends over-time, this aids a context specific understanding of skill development.
- Current management practices approach skill in diverse ways which exploits segmentation in the labour market, so management may simultaneously deskill and upskill different workers.

Warhurst and Thompson (1998:7) argue that we need to bear in mind change but also continuities with the past. They stress that the knowledgeable worker is therefore not a post-industrial phenomenon but rather an integral part of the development of industrial capitalism. They suggest that it might be useful to jettison the overly-broad notion of *knowledge workers* in favour of a more realistic appreciation of the growth of *knowledgeability in work*. The managerial instruments to register and capture employee knowledge have some innovative forms in teamworking and off-line problem-solving groups. Despite this, it is important to note that Tayloristic traditions continue to play a part in the contemporary workplace

Which theory best helps us to make sense of these trends?

COMPENSATORY THEORY

Developed by Penn *et al* (1994) to overcome some of the problems with theories of upskilling and deskilling thesis. It argues that technological change generates both deskilling and upskilling. Penn notes that this can be observed in two ways : -

1. The effects are international – the shift in routine manufacturing from advanced, core economics to less developed peripheral economies.
2. The results differ between and within occupations - some gain more skills whilst others see their skills being reduced. So, direct productive workers see their work deskilled but ancillary workers such as maintenance technicians see their skills increase.

This theory acknowledges that we should examine skill changes with reference to occupational groups, industries and national contexts.

SUMMARY

Examining skill changes is a complex undertaking that involves an evaluation of the context and the different actions of managers, unions and employees. For these reasons, broad statements regarding deskilling, upskilling or the rise of 'knowledge workers' can be problematic. Regarding knowledge workers – there are considerable problems with the definition of this term and disagreements over the evidence for these claims. For these reasons Bradley *et al* (2000) conclude, the elaboration of an economy characterised by 'knowledge work' is long way off. They stress that it is important to recognise that while some groups have benefited from changes in the information age relating to economic and technological advances, many others are becoming increasingly excluded from the advantages accruing to the privileged. For them, the skills revolution is, as yet, little more than a myth.

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