ISSN 1466-1535

CHANGING PATTERNS OF EMPLOYEE INVOLVEMENT

SKOPE Research Paper No.28 Spring 2002

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ESRC funded Centre on Skills, Knowledge and Organisational Performance
Oxford and Warwick Universities

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Changing Patterns of Employee Involvement

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30 March 2002

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The 2001 Skills Survey was funded through a contract between the UK Government's Department for Education and Skills and the Centre for Skills Knowledge and Organisational Performance (SKOPE) at the Universities of Oxford and Warwick. We are grateful to Ken Mayhew, the Director of SKOPE, for continued support and to Rosa Fernandez for research assistance. The full set of papers to be published within this contract are:

Dickerson, A.P. and. Green, F. (2002). *The Growth and Valuation of Generic Skills*. SKOPE Research Paper No. 26

Felstead, A. and Gallie, D. (2002) *For Better or Worse*? *Non-Standard Jobs And High Involvement Work Systems.* SKOPE Research Paper No. 29

Gallie, D., Felstead, A. and Green. F, (2002). *Changing Patterns of Employee Involvement*. SKOPE Research Paper No. 28

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Green, F. and Mcintosh, S. (2002). *Is there a Genuine Underutilisation of Skills. Amongst the Over-qualified?*. SKOPE Research Paper No. 30

The report of the survey is published as:

Felstead, A., Gallie, D., and Green. F, (2002). *Work Skills In Britain 1986-2001*. Nottingham, DfES Publications.

NON-TECHNICAL SUMMARY

This paper is concerned with the analysis of the trends and determinants of employee involvement in the 1990s. It distinguishes three forms of employee involvement: task discretion (decision-making in the everyday practice of the job), direct participation (the ability to influence local work organisation) and consultative commitment (the ability to express views about wider developments in the organisation). It draws on employee data collected for the 2001 Skills Survey, a national representative sample of people in work. This is compared with equivalent data from national surveys carried out in 1992 and 1997. The principal conclusions are:

- The nature of the trends in the 1990s varied substantially depending upon the specific dimension of decision-making. There was a decline in task discretion or immediate control at the level of the job, but a small rise in both direct participation and consultative involvement.

- A consistent factor affecting each mode of involvement was skill level. Those who were in lower occupational classes, or in jobs where little was required in terms of qualifications, were systematically less likely to have scope to take or to influence decisions. Advanced technology also led to higher task discretion, more direct participation and greater consultative involvement, although some of our analyses suggested that it is important to differentiate between types of computerised and automated technology, particularly in terms of the complexity of applications. The (net) effects of the other factors that we considered (including part-time status, forms of work control, union presence, size of establishment and industry sector) were contingent on the particular form of involvement.

- Different factors underlay the trends across time from one mode of decision involvement to the other. Changes in task discretion reflected changes in the experience over time of specific categories of the workforce that are likely to have resulted from changes in management practices. In particular, there was a significant erosion of the task discretion of professionals. There was also a distinctive effect for employees in construction, public administration and the health services. At the same

time the discretion of employees using relatively routine forms of computerised equipment was sharply curtailed, possibly reflecting an increased use of such equipment for monitoring and controlling employee performance.

- In contrast, changes in direct participation could be accounted for by changes in the characteristics of the workforce, in particular by changes in skill distributions and changes in establishment size. Finally, changes in consultative involvement were partly influenced by changes in the characteristics of the workforce and partly by changes over time in the effect of the presence of trade unions.

- Our analyses point then to the importance of taking account both of structural determinants and of managerial choice in accounting for the extent of employee involvement.

- The decline of task discretion is a matter of substantial policy concern given the accumulating evidence of its importance both for employee motivation and well-being. It has been shown that rising skills impose higher work demands on employees. Their willingness to assume, and their ability to manage, such increased demands may well have been reduced by low (and falling) levels of task discretion.

- However, the fact that employers committed to a broader high performance management ethos appear to have been successful in promoting higher task discretion indicates that policy can make a difference. Moreover, two of the three industry sectors which are particularly important in accounting for the decline in task discretion (public administration and health services) are sectors where the state itself could play an active role in stimulating improved work practices.

Introduction

The issue of the degree of involvement of employees in decision-making at work has held a central place in the literature on the development of work organisation and employment relationships. It represented a critical factor for researchers coming from two very different perspectives. For the first its importance lay in the fact that it was seen as a central source of employee well-being at work. For the second, it was viewed as an important factor underlying the quality of performance, particularly in work systems that require more highly skilled personnel and that have to deal with more complex and more rapidly changing environments. However, despite a relatively high level of consensus about the importance of employee involvement, there have been sharply differing views about both the factors that determine it and the principal trends over time.

The earliest research literature to focus on the trends in the scope for decision-making in the job focused on its implications for the quality of working life. Its main concern was with the way in which changes in managerial work practices and in the nature of production technologies heightened employee 'alienation' at work (Friedmann 1946). While initially viewed as a problem of the erosion of the independence of the craft worker and the subjugation of manual work to tight supervisory control, the argument was extended in the 1970s and 1980s to the sphere of clerical work (Braverman 1974; Crompton and Jones 1984). Within the alienation tradition, the erosion of employees' scope for decision-making was seen as important for the objective capacity for personal self-development. However, research into the implications of different job characteristics for subjective satisfaction at work also provided a very consistent picture of the implications of low decision making opportunities for subjective job satisfaction (Blumberg 1968; Patchen 1970).

A further dimension was added to this perspective from the 1980s by the work of psychologists, particularly those in the 'psychosocial' school (Johnson and Johansson 1991). Not only did the lack of scope for decision-making lead to lower satisfaction with work, but it was found to be related also to higher levels of work strain, thereby threatening employees' health. In particular, decision latitude in the job was shown by a number of studies to be an important mediator between the level of job demands and the strain experienced by the worker. Several studies linked jobs with these characteristics to higher levels of blood pressure and increased risks of cardiac disease (Karesek and Theorell 1990; Theorell 1998).

The second broad perspective of research was concerned with employees' involvement in decision-making as a potential factor improving work performance and organisational productivity. Its roots lie in a substantial research literature on factors affecting attitudes to organisational change that developed in the period of rapid economic expansion in the first three post war decades. The extent to which employees were allowed to participate in decisions about change were shown to have a marked effect on their satisfaction with their work environment and their views about the legitimacy of the decisions that management had taken (Blumberg 1968; Brannen 1983; Gallie 1978).

In the 1980s, these insights were assimilated into a wider theory of the significance of employee involvement for employee motivation developed by the advocates of high performance management (Walton 1985a; Walton 1985b). The need for employees to be more involved in decisions that affect their work has been a central theme in recent management discourse (Hales, 2000). 'Empowerment' programmes designed to deliver this involvement in their own right as well as those in which involvement is a necessary but not sufficient condition, such as Total Quality Management (TQM), are frequently advocated by management consultants (eg, Clutterbuck, 1994, Dean and Evans, 1994). In both cases, the motivation for greater employee involvement is that it provides a means of unleashing the creativity of employees and harnessing their commitment. The ultimate aim is that workers will eventually become self-managing agents in the production process (Peters and Waterman, 1982; Peters, 1992). This translated in the research literature into a concern with the extent to which participative practices fostered higher levels of organisational commitment, which had been shown to have significant implications for reducing employee turnover (Lincoln and Kalleberg 1990; Meyer and Allen 1997; Gallie et al. 2001) or risked increasing employee alienation through strengthening the mechanisms of organisational control (Sewell and Wilkinson, 1992a and 1992b; Wilkinson *et al.*, 1997). In the latter perspective, employee involvement could be seen as a mechanism for employers to undermine traditional trade union forms of representation, by substituting direct links between management and employees.

If there was general agreement about the importance of employee involvement, there was less consensus about its determinants. Most consistently it was seen as integrally related to the skill requirements of the workforce. Where skill levels were higher, knowledge of the work

process was to a greater extent possessed by the employee. Management then had a strong incentive to either decentralise decisions to employees or involve them in collective decision-making. But there was little agreement about the factors that determined skill levels themselves and this in turn led to very different predictions about the broad trends over time.

The original 'alienation' literature viewed the structuring of work relations as an outcome of employers' decisions taken with a view to achieving greater control over employees. This led to a view that the long-term direction of change was towards deskilling and ever-greater subordination of employees. A similarly dark perspective came from those who emphasised the negative effects of increasing organisational size for bureaucratisation and the centralisation of decision-making, a thesis that achieved its most powerful statement in the work of Michels (Michels 1962).

In contrast, researchers from the 'industrialism' school emphasised the importance of technological change in determining the pattern of work relations. This was accompanied by the view that the long-term trend was towards rising skill levels and increased initiative for employees. While in the inter-war period this had led to an erosion of employees' involvement in decision-making on the job, the emergence of more automated technologies in the post-war period was seen as conducive to a major enhancement of employees' scope for decision-making (Blauner 1964). Finally, those working in the managerialist perspective, while accepting the close links between skill level and the benefits of employee involvement, tended to emphasise the substantial scope for choice about particular systems of work organisation in the light of distinctive managerial values (Child 1972).

A feature of much of the literature discussed above is that there was relatively little concern to distinguish the different forms that employee involvement in decision-making could take and to consider whether trends were likely to be similar with respect to different dimensions of involvement. Yet one can distinguish between quite distinct levels at which employees might have scope for involvement in decision-making. It might occur in the everyday practice of the job itself, it might consist in the capacity to have an influence on the design of, or change in, the system of work organisation in which the employee is involved and it might take the form

of consultation about broader and long-term organisational issues. These could be termed respectively task discretion, direct participation and consultative involvement[1].

Most frequently the implicit assumption appears to have been that the importance attached to 'employee involvement' reflects a broad organisational culture and therefore its different aspects will tend to be found together. However, there is no inherent reason why this should be the case. Advanced technologies, for instance, may undermine the very notion of the individual task in favour of a more highly integrated system of work (Blauner 1964; Naville 1963). In this case the scope for individual decision-making about the job task may be highly constrained, although the degree of participation of employees in collective decision-making may be an important area of organisational choice. Alternatively, employers may decide to compensate for more stringent controls over task performance with some measure of participation at work team or department level.[2] The trends and determinants with respect to the different dimensions of decision-making involvement need then to be considered separately to see to whether they are similar or distinctive.

Finally it has been difficult from research to date to get a clear picture of the trends with respect to employee involvement. Much of the empowerment debate is based on case study evidence. This usually involves conducting numerous interviews with managers, workers and even trade union officials in organisations that have introduced change management programmes aimed to give employees a greater say in decision-making. The choice of case study locations is inevitably affected by factors such as ease of access and the generalisability of results is difficult to assess. There are only few national data sets on which to draw and those that do exist have a number of drawbacks. The Workplace Employee Relations Survey carried out in 1998, for example, has been used to examine the impact that teamworking has on levels of task discretion exercised by individual workers on a daily basis (Harley, 2001). However, it is not possible to track changes over time by comparing these results to those produced by previous WERS. Instead, researchers have been forced to compare trends in worker consultation, as reported by management, using these data (Millward et al. 1999).

[1] For the conceptual distinction between task discretion and direct participation, see (Frohlich and Pekruhl 1996; Gallie et al. 1994; Geary and Sisson 1994).
[2] A factor analysis of our data sets showed distinct dimensions for task discretion, direct participation and consultative involvement.

Surveys that ask employees about their involvement in decision-making at work are relatively rare. The Chartered Institute of Personnel and Development's annual survey of the state of the employment relationship is a possible exception. It asks employees about the influence they have over the planning of their work, how the work is to be done and what tasks they are to carry out. However, these have only been asked consistently over a comparatively short period –1998-2001. Respondents to the survey are also asked whether they are kept informed about business issues, have opportunities to express their views and participate in programmes designed to involve workers. These types of questions were asked of respondents throughout the 1996-2001 period. However, the questions have not always been posed in identical fashion and the response sets have varied. Comparison over time is, therefore, difficult. In addition, the surveys are comparatively small – the 1996-1999 surveys were based on telephone interviews with 1,000 employees and a reported response rate of 23% of those answering the initial telephone call for the 1997 survey (Guest and Conway, 1999: 20). For the 2000 and 2001 surveys, the sample sizes have doubled, but technical details on the response rates and stratification procedures are not reported (Guest and Conway, 2001). The validity of the CIPD findings must, therefore, be open to question.

The 2001 Skills Survey, on which we draw in this paper, provides a major improvement in the quality of data available for examining employee involvement through the eyes of employees themselves. It not only provides a good descriptive picture for the year of the survey, with a representative sample of 4470 individuals aged between 20 and 60 in paid work, but it was designed to allow for a wide range of comparisons with earlier national surveys – in particular the Employment in Britain Survey, carried out in 1992 and the first Skill Survey carried out in 1997 (for fuller details see Felstead et al. 2002).

The paper will begin with an analysis of changes over time in the light of the different indicators available in the surveys. It will then turn to examine the empirical evidence with respect to a number of factors that have been viewed in the literature as potentially important determinants of the level of employee involvement. Finally, to the extent that there are changes over time in the forms of employee involvement, it will explore the factors that may underlie this.

Trends in Employee Involvement

As a measure of task discretion we take four detailed questions designed to assess how much personal influence people thought they had over specific aspects of their work: how hard they worked, deciding what tasks they were to do, how the task was done, and the quality standards to which they worked. People were asked: 'How much influence do you personally have on …how hard you work; deciding what tasks you are to do; deciding how you are to do the task; deciding the quality standards to which you work?' The possible responses included 'a great deal (of influence)', 'a fair amount', 'not much' or 'none at all'. The question was posed in identical format in three national surveys: in 1992, in 1997 and in 2001.

At each of the dates a high degree of employee discretion was most frequently reported with respect to work effort and quality standards (Table 1). Employee influence was substantially lower over decisions about what tasks were to be done and especially over decisions about how to do the task.

Table 1 Employee Task Discretion, 1992-2001

	1992	1997	2001
Influence Over How Hard to Work			
A Great Deal	70.7	64.4	50.6
A Fair Amount	23.2	28.8	39.2
Not Much	4.9	4.7	8.6
None At All	1.2	2.0	1.6
Influence Over What Tasks Done			
A Great Deal	42.4	33.1	30.5
A Fair Amount	33.5	36.2	35.7
Not Much	15.4	20.6	22.1
None At All	8.7	10.0	11.7
Influence Over How To Do Task			
A Great Deal	56.9	49.7	42.8
A Fair Amount	30.9	34.5	40.4
Not Much	8.4	10.2	11.0
None At All	3.9	5.6	5.8
Influence Over Quality Standards			
A Great Deal	69.6	51.1	51.7
A Fair Amount	23.1	28.4	32.0
Not Much	4.8	12.6	10.4
None At All	2.6	7.9	5.9
Overall Task Discretion Index[1]			
All	2.43	2.25	2.18
Men	2.43	2.26	2.19
Women	2.44	2.24	2.17
N (All Employees)	3408	2218	3984

Note:

1. The task discretion index is computed as the summed average score of the four 'task influence' questions, with a highest score of 3 and a lowest score of 0.

Examining the trend over time, there has been not an increase but a considerable reduction, in employee task discretion over the period. Between 1992 and 2001 there was a marked decline in employees' perception of their influence over each of the specific aspects of the work task. For instance, the proportion reporting that they had a great deal of influence over how hard they worked fell from 71% in 1992 to 64% in 1997 to only 51% in 2001. Those with a great deal of influence over choice of task fell from 42% to 31%. The decline was equally sharp with respect to decisions about how to do the task and the quality of work.

To provide an overall picture from these items, which could take account of the full range of responses, a summary index was constructed by giving a score ranging from 0 (no influence at all) to 3 (a great deal of influence) and then taking the average of the summed scores.[3] As can be seen in the last three rows of Table 1, the overall index score for task discretion declined from 2.43 in 1992 to 2.25 in 1997 to 2.18 in 2001. Moreover, the pattern was virtually identical for men and women.

Turning next to 'direct participation', our measure is a question about employees' influence over changes in work organisation. It asked: 'Suppose there was going to be some decision made at your place of work that changed the way you do your job. Do you think that you personally would have any say in the decision about the change or not?' Those who thought that they would have some say were then asked whether that would be 'a great deal', 'a lot' or 'just a little'. The two questions have been combined to produce a single 'direct participation' variable ranging from 0 denoting 'No influence' to 3 representing 'a great deal of influence'. This is available in our datasets for 1992 and 2001.

In contrast to the pattern with respect to task discretion, there was a small but significant increase in direct participation over the decade. In both years a substantial proportion of employees did not feel they had any clear influence over changes in work organisation that affected them (50% in 1992 and 47% in 2001), but the proportions reporting a lot or a great deal of influence had increased from 32% to 36%. Men had greater influence in both years, but the sex gap increased over time. The main beneficiaries of the increase in participation were men, with 33% reporting a great deal or a lot of influence in 1992 compared with 38% in 2001. Among women the proportions had risen only from 31% to 34%.

[3] The index was statistically robust, with an overall alpha of .78.

Table 2 Direct Participation 1992-2001

	No say	A little say	Quite a lot of say	A great deal of say
1992				
All	49.8	18.5	20.8	10.8
Men	49.0	17.6	21.3	12.1
Women	50.7	19.5	20.3	9.5
N (All employees)	1707	635	714	372
2001				
All	47.2	16.9	21.4	14.5
Men	46.6	15.4	20.3	17.7
Women	47.8	18.7	22.6	10.9
N (All employees)	1876	674	852	576

Note: Question: 'Suppose there was going to be some decision made at your place of work that changed the way you do your job. Do you think that you personally would have any say in the decision about the change or not?' Those who reported having a say, were asked 'how much say or influence do you think you personally would have?'

Finally, we have for three surveys comparable questions with respect to consultative involvement. After an initial question asking whether management held meetings in which they were informed about what was happening in the organisation, people were asked whether management held meetings in which they could express their views about what was happening in the organisation. The two items correlate highly, but it is the second that gets closest to the notion of consultative involvement, with its implication of possibilities of dialogue.

Table 3 Consultative Involvement 1992-2001

% of employees in organisations with consultative meetings

	1992	1997	2001
All	62.6	66.5	65.5
Men	63.4	67.4	65.4
Women	61.8	65.6	65.5
N (All Employees)	3452	2209	3969

Note. Question: 'At your workplace, does management hold meetings in which you can express your views about what is happening in the organisation?'

As can be seen in Table 3, there was a rise over the period in the proportion of employees reporting that such consultative meetings took place in their organisations. This is consistent with the picture that emerges from managers through the Workplace Industrial Relations surveys, which show a substantial increase between 1990 and 1998 in regular meetings between management and the workforce (Millward et al. 2000). But our evidence indicates that the expansion of such practices took place entirely between the period 1992 to 1997. There was no statistically significant difference between the figures for 1997 and 2001.

Overall the trends with respect to task discretion were quite distinct from those with respect to direct participation and consultative involvement. This leads us to examine whether the three dimensions of employee involvement were shaped by rather different factors, which may help account for the differences in trends.

Determinants of Trends in Employee Involvement

As was seen in the introduction, previous literature provides us with a range of (sometimes conflicting) hypotheses about the factors that could be expected to affect the extent of employee involvement. In particular we have focused on the following core hypotheses:

Hypothesis 1: The higher the skill level of the employee, the greater should be the degree of employee involvement. By extension, the higher the skill level of the workforce, the greater should be the prevalence employee involvement.

Hypothesis 2: The optimistic literature on advanced technologies suggests that employees working with advanced computer-based forms of technology should have higher levels of involvement than those who do not. An expansion in the use of advanced technology should then be associated with a greater frequency of involvement.

Hypothesis 3: However, following the pessimistic literature about the implications of new technologies, there is also the converse hypothesis that employees working with advanced computer-based forms of technology should have lower levels of involvement.

Hypothesis 4 : The more traditional the forms of control over work performance, the less the use of employee involvement procedures. In particular work situations in which work effort is controlled directly by supervisors or by the constraints built into machinery should be less favourable to involvement, whereas work situations where effort is controlled more indirectly by client or colleague pressure should be more favourable.

Hypothesis 6: Employee involvement should be higher in organisations in which trade unions have a presence. This may be because employers will be concerned to create an alternative system of representation or because trade unions have the capacity to put pressure for employees to have a voice. A decline in the presence or strength of membership of unions should then be reflected in a decline in involvement.

Hypothesis 7: The larger the size of the organisation in which employee work, the less likely they are to be personally involved in decision-making. A decline in larger scale organisations should then result in an increased prevalence of involvement.

Although it has not been prominent in the literature, sectoral shifts in the economy may also be important. There can however be contrasting expectations:

Hypothesis 8: Employees in the service sector may have better opportunities for involvement because of greater client orientation and smaller-sized organisations.

Alternatively:

Hypothesis 9: Employees in the service sector may have fewer opportunities for involvement because of the greater prevalence of part-time work and lower levels of collective organisation.

Finally, following the managerial choice literature:

Hypothesis 10: The level of employee involvement and trends in employee involvement may be largely independent of structural factors and primarily reflect the nature of managerial beliefs about the most effective modes of organisation.

In the following sections of the paper, we examine the way in which such factors affect in practice the different types of employee involvement and the extent to which they account for the overtime changes that have been observed.

Task Discretion

The analysis of the determinants and source of change in task discretion is focused on the years of 1997 and 2001, the periods for which our data is richest in relation to the variables that inform the theoretical discussions. The explanatory variables have been grouped into two broad types. The first are factors defining skill position and employment status. As these are related to age, age controls have been included systematically in these analyses. The second broad group of variables are characteristics that tend to be more specific to the organisation – specifically the nature of the technology, the forms of control of work performance, the degree of adoption of a human resource management orientation, the size of the organisation and its industry sector. Table 4 gives the mean effects for each year separately and for the years combined. Table 5 (Model 3) shows the coefficients and their significance once other factors have been taken into account.

Skill Level and Employment Status

Class theory has tended to argue that employers have strong incentives for enhancing employee involvement in its diverse forms for those in higher class positions because of the greater difficulties of monitoring performance and the higher costs of losing organisational specific knowledge. In contrast, for those employed largely on a labour contract basis, the primary concern is with detailed levels of control since the work process is largely transparent and individuals are more easily substitutable. This type of theory would lead us to expect that any general trend would turn out to be highly differentiated and possibly contradictory in form depending on the labour segment of concern. If this is the case, it is important to assess to what extent changes in employee involvement reflect compositional changes in the workforce rather than shifts in employer policies or the modification of task characteristics.

Occupational class is often taken as a broad index of skill level. Our measure of occupational class is first digit SOC 2000 (Standard Occupational Classification) coding. The longer-term pattern has been for a growth in the proportion of jobs at the higher-skilled end of the labour market and a decline in those at the lower-skilled end. Taking the period 1986 to 2001, managerial jobs rose from 9.5% to 15.2%, professional jobs from 10.2% to 11.7% and associate professional from 8.2% to 13.3%. In contrast, there have been slight declines in the proportion employed in clerical and secretarial, personal service, operative and elementary occupations and a rather sharp decline in those in craft occupations. The same trends were evident in the most recent period 1997 to 2001, although the greater part of the decline of craft occupations had already taken place.

In both 1997 and 2001 managers had by far the highest task discretion scores (2.61 in 1997 and 2.58) in 2001 (Table 4). In both years the lowest discretion scores were among sales personnel (2.06 and 1.94), elementary occupations (2.04 and 1.92) and operatives (1.90 and 1.86). Even when other work factors had been controlled, these class effects still emerge very strongly (Table 5). All other classes had significantly less discretion than managers and sales personnel, operatives and those in elementary occupations had the lowest discretion of all. While scores were lower for all occupational groups in 2001 than in 1997, the main difference between the years is the position of professionals. The data suggest a particularly striking decline between the two periods in the task discretion exercised by professionals, with the task discretion score declining from 2.48 in 1997 to 2.23 in 2001.

A second measure of skill level is that of the qualifications currently required for the job. The evidence for both years strongly confirms the view that those in more highly skilled jobs tend to be given more discretion over the task. In both 1997 and 2001 the mean level of task discretion rose linearly across the qualification categories. In 1997, it ranged from 2.03 among those in jobs where no qualifications were required to 2.48 among those in jobs requiring level 4 or level 5 qualifications. The comparable figures for 2001 were 1.98 for those in the lowest skill category to 2.36 for those in the highest. When other factors are controlled for those in levels 2, 3 and 4/5 still stand out as having significantly higher levels of discretion than those without qualifications or at level 1.

With respect to employment status, there is now a wide range of evidence that part-time workers experience inferior work conditions in a number of respects (Tam, 1997). This was confirmed with respect to task discretion. Those in part-time work were more circumscribed in their ability to exercise initiative in the job. Taking the overall differences, those who worked less than 30 hours a week had an average score of 2.19 compared to 2.32 among full-time employees. This pattern held for both sexes. The proportion of part-timers who were men was very small, but their situation appeared to be even worse than that of female part-timers. Although the general level of control declined between 1997 and 2001, the divergence between part-timers and full-timers was evident in both years. The disadvantage of part-timers still stands out clearly in the regression analyses (Table 5), which control other work characteristics.

New Technology

A wide range of theories has postulated the importance of automation and computerisation for levels of task discretion. One of the weaknesses of previous work was that it was either heavily based on studies of developments in manufacturing or used very broad indicators of computerisation or automation that necessarily involved the aggregation of technologies requiring very different levels of skill. An advantage of the current survey is that it provides a more sophisticated classification of the types of computer use. Those who used computers were given a set of statements about possible types of use and asked which best characterised their own job. The four broad types of use given were: 'Simple' (for example, using a computer for straightforward routine procedures such as printing out an invoice in a shop); 'Moderate' (for example, using a computer for word-processing and/or spreadsheets or

communicating with others by e-mail); 'Complex' (for example, using a computer for analysing information or design, including use of computer aided design or statistical analysis packages); and 'Advanced' (for example, using computer syntax and/or formulae for programming).

In 1997, all employees making use of computers had notably higher mean scores on task discretion than employees that did not work with advanced technologies. The scores rose from 2.05 for those not using such equipment, to 2.26 for those using computers for routine procedures, to 2.33 working at moderate levels of complexity. Discretion was highest amongst those making complex use (2.47) or advanced use (2.42). While non-users had a virtually identical score in 1997 and 2001, all categories of computer user had somewhat lower discretion scores in 2001. But the main difference between years was the sharp loss of discretion among those involved in routine computer applications. With a score of 2.08 these were now little different from those not using computerised equipment at all.

Systems of work control

An assumption in common between the protagonist theories was that the degree of involvement of employees in decision-making could be primarily conceptualised in terms of a trade-off between the decision-making power of management (or supervision) on the one hand and of rank-and-file employees on the other. But developments in the last two decades have increasingly stressed the importance of the environments in which organisations operate. With respect to manufacturing this tends to be the degree of competitiveness or volatility of the market, whereas in the case of services there is a greater emphasis on the increased constraints from clients or customers on the way in which employees carry out their work. In short, this raises the possibility that a decline in employee autonomy may not reflect a re-assertion of traditional managerial prerogatives of control, but rather the pressures for the increased responsiveness of organisations to their environments.

To examine this, people were asked which of a range of factors were 'important in determining how hard you work in your job'. These included a machine or assembly line; clients or customers; a supervisor or boss; pay incentives; and reports and appraisals. They were asked to choose as many factors as were relevant.

With one exception, all these forms of external control were more frequently mentioned in 2001 than had been the case in 1992. The only factor that had changed little was that of the constraints of machinery or of an assembly line. The strongest rise had been in the influence of 'fellow workers' – an increase of 14 percentage points between 1986 and 2001. This was followed by the influence of pay incentives (7 points), clients (6 points), supervisors (5 points) and reports and appraisals (3 points). Taking the period that directly concerns this analysis – 1997 to 2001 – there was a continued rise in the importance of clients and especially of reports and appraisals, but control through pay and the influence of fellow workers fell back a little.

Taking the overall mean scores on the task discretion index, by far the lowest level of discretion was among those whose work was controlled by a machine or assembly line (a score of 1.98). The next lowest were those whose work effort was controlled by their supervisor (2.15), and by pay incentives (2.20). Those whose work effort was controlled by their colleagues, and especially by clients and by reports or appraisals had notably higher levels of discretion (scores of 2.25, 2.28 and 2.29 respectively). In short the classical arguments about the tension between supervisory and mechanical control seem well supported, while the new forms of external constraint appear to be able to coexist with a high level of immediate personal job control. As can be seen in Table 5, once other work characteristics had been taken into account, the effects that remained significant were the negative effects for employee task discretion of supervisory control and mechanical control, and the positive effects of client influence.

High Performance Management Practices and Unionisation

Arguably task discretion is linked to a 'high performance' ethos in the wider organisation that seeks to link the individual to the organisation by offering opportunities for individual involvement through communication and consultation. In some versions of the argument, these practices are viewed by employers as a way of winning employee allegiance away from trade union representation.

An indicator of such 'high performance' practices was constructed by taking a set of questions about the presence or absence of a set of organisational practices. These were the use of quality circles, the ability to make suggestions for improvements, the existence of an

appraisal system, and the practice of holding meetings in which the employee was informed about wider organisational developments, as well as meetings in which they could express their views about these. A score of one was given to each of these organisational characteristics and scores were summed to create index of the number of such characteristics in the employee's work environment. A score of zero meant that none of these practices were present, while a score of five represented a situation where all existed. There was a slight increase in the average score between the two years from 2.91 in 1997 to 2.95 in 2001.

The view that a 'high performance' management ethos would favour individual task discretion among employees was strongly confirmed by our data. The mean discretion score rose with each additional point on the 'high performance' index, ranging from 1.87 among those in organisations where there were none of these practices to 2.41 where all five were present. The same linear pattern was evident for each year taken separately. When other work characteristics were controlled for, the effect of high performance practices remained highly significant.

The results also pointed to the negative effects for discretion of trade union/staff association presence and trade union/staff association membership. Where such alternative representation was present, the average discretion score was 2.16 compared to 2.26 where it was not. Similarly, the average discretion score for those who were members of unions or staff associations was 2.16 compared with 2.23 among those who were non-members. There is a possibility that these associations might reflect factors such as occupational class or organisational size. But even when the full range of individual, occupational and organisational characteristics had been taken into account, the effect of union representation remained statistically significant. This is consistent with the view that employers are reluctant to grant discretion to employees where there is collective employee organisation[4].

Organisational Size and Industry

Organisational size has played a central role in discussions in the literature. Larger scale organisations have frequently been viewed as implying increased centralization of decision making structures, an emphasis upon a more tightly specified rule structure and a consequent

[4] With cross-sectional data, we cannot however demonstrate the order of causality. For instance, it might also be the case that collective employee organisations are more likely to exist where employee discretion is low.

erosion of the scope for employee initiative. The information available in the survey is about workplace size rather than overall organisational size, but arguably this is what is likely to be crucial for the environment that the employee directly experiences. The evidence indicates a decline over time in the proportion of very large workplaces (500 employees or more). In the 1992 survey, 21% of employees were in workplaces of this size, whereas by 2001 this was the case for only 15%. But most of this decline appears to have taken place by the mid-1990s and the distribution of establishment sizes remained very similar over the period 1997 to 2001.

The discretion index scores were consistent with the argument that larger organizations tend to be unfavourable for opportunities for individual initiative on the job. Discretion scores were lower in small and medium-sized establishments (up to 99 employees) than in establishments where there were more than 100 employees (Table 4). Size of establishment is associated with many other factors that may affect discretion, but even with the full set of controls, the effects remain highly significant (Table 5).

Finally, there has been much speculation about the implications of the industry shift towards the service sector for the quality of employment conditions. The overall period saw a marked decline in manufacturing and expansion of services, in particular business and real estate services and health services. In practice, the data show that the service sector is very heterogeneous, with very different levels of task discretion between different sub-sectors. Of the industries for which there were satisfactory sample numbers, discretion was high in education, health and other community services and very low in both transport and hotels. As with size, industry captures a wide range of other skill and work characteristics. Once controls were introduced for occupational structure and work organisation, the hotel industry was no longer distinctive when compared with the manufacturing sector. The industries with significant negative coefficients were transport, financial services and business services/real estate, while education and health retained significantly higher levels of discretion.

The Year Effect for Task Discretion

What factors help to account for the decline of task discretion between 1997 and 2001? Our approach to this is first to estimate the gross year effect and then to introduce sequentially sets of variables that might underlie the trend to see how far they reduce the strength of the year coefficient and its statistical significance. We distinguish compositional effects, which might

be produced by changes in the prevalence of certain occupational or organisational characteristics, and interactive effects, which reflect differences between the years in the impact of such characteristics for task discretion. For instance, taking a compositional effect, if specific occupational groups had lower task discretion and there had been an expansion in the size of that group between the years, this in itself could account for a decline in average discretion levels. However, it might also be the case that the difference reflected a marked change in the employer policies towards task discretion for a specific occupational group, thereby reflecting an interaction effect. Our analytic strategy is first to see whether the year effect can be accounted for in terms of compositional changes and, if this is not the case, to examine the significance of interaction effects.

The regression analysis is based on the pooled data for the two years. The results of these successive analyses are shown in Table 5. The first column shows the gross year effect: it confirms that the decline in task discretion noted earlier is at a high level of statistical significance with a negative coefficient of –0.06. In the second column, skill status and employment status variables are added (controlling also for age). All of these prove to have significant effects for task discretion. With respect to individual characteristics, there is an increase in the strength of the coefficient across the different age categories with older workers exercising more initiative. Turning to skill status, all of the occupational categories had less discretion than managers, but this was particularly the case for sales, operative and elementary employees. Similarly, those in jobs requiring higher levels of qualification had markedly more discretion than those in jobs with lower skill requirements. Finally, there is a marked difference for women with respect to employment status. Women in full-time work are likely to have higher levels of task discretion than men, whereas there is a strong negative coefficient for women in part-time jobs.

However, despite the importance of these factors (reflected in the fact that they raise substantially the variance explained (from an adjusted R^2 of 0.002 to 0.12), it is notable that they do not reduce either the strength of the negative year coefficient or its statistical significance. Indeed, controlling for such factors accentuates the year effect, with the negative coefficient increasing to –0.11 when work characteristics are taken into account.

The third column adds in the remaining factors relating to the nature of the job task, work organisation and industry. This leaves most of the effects of the previous model still evident: namely those of age, skill status and female part-time employment. However, there is no longer a statistically significant difference between men and women in full-time work. As has been seen, many of the new variables entered into the model have significant effects. Once more the addition of control variables substantially raises the effectiveness of the model in terms of explanation of variance (from an adjusted R^2 of 0.12 to one of 0.18). However, far from being reduced, the year effect rises from –0.11 to –0.13 and remains at a very high level of statistical significance. In short, with respect to the factors that we have been able to take into account, there is no sign that the decline in task discretion between 1997 and 2001 could be accounted for just in terms of the changed prevalence of factors that are consistent determinants of the influence that employees can have over their jobs.

This suggests that the change over the period must reflect changes in the way that specific work characteristics relate to task discretion. In the final stage of the analysis, then, we tested for interaction effects for all of the key variables that had been shown to have significant main effects on task discretion. In most instances, these were found to be non-significant, indicating that their effects were broadly similar between the two years. This was the case for instance for age, level of qualifications required for the job, female part-time employment status, forms of control over work effort, union presence and membership, the adoption by employers of high performance management practices and the size of establishments.

The model shown in column 4 retains the variables for which there was evidence of significant differences between the years: occupational class, complexity of computer use and industry. There are three notable interaction effects. The first indicates that there was a significant decline between the years in the task discretion of professionals. While there are also negative coefficients for sales and elementary workers, these have much weaker coefficients and are not statistically significant. Second, there was a reduction in the scope for decision-making allowed to employees in jobs involving simpler uses of computerised equipment. Finally, there are three industry sectors in which there were particularly sharp reductions in employee discretion: construction, public administration and health. These changes between the years are likely to reflect changes in management practices with respect to these specific categories of the workforce. It is notable that once the interaction effects for

these three blocks of variables are entered, the initial year effect is entirely accounted for. The year coefficient is no longer negative (0.03) is very far from statistical significance (sig T=0.68).

In short with respect to task discretion, our analysis suggests that the changes between 1997 and 2001 were not accountable for in terms of compositional changes, but rather reflected changes over time in management practices towards certain types of employee.

Direct Participation

The second form of employee involvement that we examine is that of direct participation or the capacity of employees to have an influence over management decisions about work organisation that affect their jobs. This is not a matter of the autonomy of employees to take decisions on their own, but rather of being able to participate in a collective decision. As was seen earlier, in contrast to the pattern for task discretion the explanatory issue is to account for an increase over the years in direct participation.

The analytic strategy is the same as that for task discretion. We first examine a range of factors that have been considered important potential determinants and then turn to try to account for the year effect. Comparative questions on direct participation are only available in the 1992 and 2001 data. This means that it is not possible to use the previous variables of complexity of computer use and of high performance management practices. Instead, we substitute a simpler measure of whether or not people used automated or computerised technology in their work and a variable that indicated whether or not management held meetings in which employees could express their views about wider organisational developments. Table 6 presents the mean effects of the variables included in the analysis for each year and for the years combined. Table 7 (model 3) shows the coefficients and their significance when all of the other variables have been taken into account in regression analysis.

Skill and Employment Status

As with task discretion, in both years managers, were by far the most likely to be able exert an influence on local organisational changes that affected their work. They were followed at some remove by professionals. Sales, operative and elementary employees were the least

likely to have opportunities for direct participation. In 1992, the mean direct participation score varied from 1.61 for managers to 0.63 for those in elementary occupations; in 2001, from 1.71 for managers to 0.57 for sales employees. The main difference when other work characteristics had been controlled (Table7) was that skilled manual workers also had exceptionally low levels of direct participation. The other skill indicator, level of qualification required for the job, was also strongly associated with direct participation. The mean scores rose linearly with qualification category in both years. Even taking account of other work characteristics (including occupational class), there is a linear rise in direct participation with increasing qualification level.

Part-timers were again disadvantaged in both years. In 1997, the average direct participation score for female part-timers was 0.76 compared with 0.98 for female full-timers; the comparable figures for 2001 were 0.85 and 1.04. The regression analyses showed that, while these the part-timer effect disappeared when controls were introduced for skill and age, they re-emerged when the wider range of work characteristics was taken into account.

Technology and Systems of Work Control

For the years for which have comparable data for direct participation, we lack the ability to differentiate between new technologies of different levels of complexity. Instead we take a more general measure of the use of advanced technology, namely whether or not people worked with automated or computerised equipment in their jobs. In both years the mean score for those who made use of automated or computerised technology in their jobs was higher than for those who did not use such equipment. This effect remained highly significant in the regression analyses.

Turning to the nature of the controls on work effort, the clearest effect was that those controlled by their supervisor were also less likely to be able to exert an influence on work organisation decisions. This was statistically significant when the full range of other factors were considered. Those whose effort levels were controlled by machinery also had very low (indeed the lowest) direct participation scores, but the effect disappeared once other work characteristics were controlled. Finally, those whose work effort was controlled by clients or customers had relatively high direct participation scores in both years, with the effect remaining significant taking account of other work characteristics.

Wider Organisational Consultation and Representation

Direct participation is sometimes seen as a component of a broader management strategy of winning the commitment and motivation of employees through high performance management practices. The comparison with the 1992 data does not allow use of the broader index used in the analysis of task discretion, but we include instead the indicator of whether or not management held meetings about wider organisational issues where employees could express their views. In practice, this broader emphasis on employee consultation did appear to be strongly related to local shop floor involvement in work organisation issues. In both years those in organisations with broader consultative procedures were more likely to also have the chance of participating in local decisions about work organisation. The effect remained highly significant taking account of other factors.

In contrast, the presence of unions appeared to be a strongly negative factor with respect to management's willingness to give employees more say as individuals over work organisation. This is evident for the scores in both years (Table 4) and remained highly significant in the full model (Table 5). Such a pattern might reflect the fact that, where unions are present, such decisions tend to move to a higher level of management-union decision-making; alternatively employers may be reluctant to concede influence to employees where unions can mobilise collective action. The fact that a rather similar pattern emerged for task discretion, where there was no evident parallel role for the unions, tends to give some credence to the view that it reflected a defensive strategy on the part of management.

Size and Industry

In both years direct participation was more likely in smaller establishments than in larger. The principal difference was between very small workplaces with less than 25 employees and those with larger numbers. The constraining effect of size on direct participation levelled off in the largest organisations (500+). Indeed, employees in these organisations had slightly higher participation scores than those in establishments with between 100 and 499 employees. This is confirmed both by the average scores and the coefficients in the models controlling for other work characteristics. It is likely that large organisations had greater resources to develop long-range plans for increasing employee involvement and they could well have been more informed about new models of organisation, thereby counter-acting the expected negative effects of increased size.

Finally, a number of industries stood out as distinctive with respect to participatory practices. Hotels, transport, financial services and public administration had low absolute scores in both years (Table 6). These could not be attributed to other factors that have been considered such as differences in the distribution of skills between industries. Even with the full range of control variables, there remains a highly significant negative coefficient for these industries (Table 7)

The Year Effect for Direct Participation

Whereas task discretion had declined over the period, direct participation had shown some tendency to increase. In seeking to account for this, we follow the same procedure of taking the initial year effect without other variables and then examining the effect of introducing different types of work characteristics.

As can be seen in column 1 of Table 7, the coefficient for 2001 was 0.17 and was at a high level of statistical significance. Column 2 shows the effect of adding in age, skill status and employment status. In the case of task discretion, these were unable to account for the year effect; rather they accentuated it. However, in the case of direct participation, they produce a sharp reduction of the year coefficient to 0.07, which just failed to reach significance at the 10% level. Once the full range of work characteristics are introduced in Column 3, the year coefficient falls to 0.02 and is very far from significance (P=0.70).

The pattern then contrasts rather sharply with that for task discretion. With respect to task discretion controlling for compositional changes did not account for the change over time. But compositional change would appear to be the major factor underlying the rise in direct participation.

Consultative Involvement

Finally, we turn to involvement in the sense of consultation about wider organisational issues. Comparable information about this is available for three of the data sets – 1992, 1997 and 2001. Our data from employees broadly confirm the pattern shown by other studies that have used employer data, namely that there was a substantial increase in the use of this type of procedure over the 1990s. However our evidence suggests the change occurred primarily

between 1992 and 1997, with little further development between 1997 and 2001. The very small decline in consultation shown in our data for the late 1990s is not statistically significant. Again we begin by examining the broad determinants of this mode of involvement and then turn to consider the year effect. The mean effects for each of the variables in the analysis are presented in Table 8. Table 9 (model 3) shows the coefficients and their significance with other factors controlled through regression analysis.

Skill and Employment Status

As with task discretion and direct participation, skill level was strongly associated with the likelihood that people would be consulted. But in this case there was no evidence that professionals (or indeed associate professionals) were in any way disadvantaged with respect to managers. Taking the combined data, the proportions for the three groups were very close indeed (80% for managers, 82% for professionals and 75% for associate professionals). Indeed, the regression analyses showed that, once other work characteristics had been controlled, professionals were a little more likely than managers to be in organisations with consultative procedures. But, as with other forms of involvement, those in skilled manual, sales, operative and elementary occupations were much less likely to be consulted about wider organisational issues. Taking the extremes, whereas 82% of professionals had access to consultative procedures this was the case for only 46% of those in elementary occupations.

Taken on their own the qualifications required for a job were also strongly associated with the existence of consultation procedures – for instance, only 50% of those without qualifications, compared with 80% of those with Level 4/5 qualifications had such meetings. But once occupational class was controlled, it was only those with the highest qualifications (4/5) that were distinctive.

There was also again some evidence of the negative implications of female part-time work. Women in full-time jobs were even more likely to be consulted than men (69% compared with 65%). In contrast, the proportion of female part-timers with such opportunities was 58%. This difference remains significant when skill differences are controlled for, but it disappears with the introduction of other work characteristics.

Technology and Systems of Work Control

Our previous analyses have shown that the implications of advanced technology had positive effects for employee involvement. At least in its more complex forms, it was strongly associated with task discretion, and working with computerised or automated equipment increased the chances that people would be involved in decisions about work organisation. How did it relate to broader organisational consultation? Our evidence suggests that it again had a strong positive effect in encouraging employee involvement. Taking the overall proportions for the three data sets combined, 72% of those working with automated or computerised equipment were in organisations that held consultation meetings, whereas this was the case for only just over half (52%) of those who were not. The difference is evident in each of the years, and the effect remained statistically significant in the regression analyses even after skill and other work characteristics had been taken into account.

The evidence also indicates that less traditional forms of control of work effort were linked to a more frequent practice of organisational consultation. Where the key influences on work effort were clients or customers, colleagues, pay incentives or reports and appraisals, consultation was more likely than where it was exercised through supervisory monitoring or constraints built into the machinery of work. At one end of the spectrum only 59% of those whose work was controlled by machinery were in organisations that practised broader consultation, whereas this was the case for 70% of those where control by colleagues was important and 79% where reports and appraisals determined work effort. This relation between these more indirect forms of work control and consultation procedures was statistically significant in each year, even when other factors were controlled.

Union Representation

At least in Britain, institutionalised forms of consultation between managers and employees have been seen as a potential rival to union-based systems of representation. Employers, it is suggested, may be seeking to counter the influence of unions by developing their own direct channels of information and influence with their employees. Our evidence certainly supports the view that there is a strong link between the two. Taking the combined data for the three years, those who were in organisations where unions were present and those who were union members were substantially more likely to have meetings with management to discuss

broader organisational issues. For instance, taking the overall figures, 72% of employees had such consultation meetings where unions were present, whereas this was the case for only 55% of those where they were not. The figures were broadly comparable with respect to union members (74% of union members, but only 59% for non-members). Union presence and membership is known to be powerfully associated with other organisational characteristics – particularly size and industry sector. But even when the full range of skill and work characteristics were controlled for in regression analysis, both of these effects remained statistically significant.

Size and Industry

The need for formal consultative procedures is likely to be greater the larger the size of an organisation. In smaller establishments, information can be passed through direct day-to-day interactions. The strong association between size and involvement of this type confirms this. Taking the combined data, only 55% of employees in establishments with less than 25 employees had such consultative meetings, whereas the proportion rose to 74% among those in establishments with 500 or more employees. In strong contrast to the pattern for direct participation, where larger organisational size was associated with lower participation, larger organisations had positive implications for the likelihood of consultation even net of other work characteristics in the combined sample. Taking the years individually, the effects for organisations with 500 or more employees were significant in two of the three years (1992 and 2001), and even for 1997 the coefficients indicated a strong positive relationship.

Industry effects, in contrast, were less consistent. There were certainly major variations in the frequency of formal consultation between industries. For instance only 45% of employees in construction had such meetings compared to over 70% in finance, public administration and health. But a substantial part of these effects reflected other work characteristics. In the regression analysis, construction emerged as distinctively low in the prevalence of consultation, and finance and health as distinctively high. But otherwise there were no significant differences specifically attributable to industrial sector.

The Year Effect for Organisational Consultation

As with the analyses for task discretion and direct participation, we start by estimating the year effect on its own. In this case, as three time points have been used, there are two year

dummies – for 1997 and 2001, with 1992 being the reference year. As can be seen in Column 1 of Table 9, both year effects are positive (indicating higher levels of consultation) and are at the same level of significance (P=0.01), with the coefficient indicating a somewhat stronger effect for 1997.

In column 2, variables relating to age, occupational group and employment status are entered into the model. Skill level is clearly a major determinant of consultative involvement, with all of the occupational variables having a strong effect. These are positive for professionals and associate professionals and (at a much weaker level) for personal service employees. In contrast, they are negative for those in administrative-secretarial, skilled manual, operative and elementary occupations. In addition, those in occupations requiring Level 4/5 qualifications are distinctively more likely to be consulted. There is no difference between men and women in full-time work, but women in part-time work are significantly less likely to be consulted.

This picture remains very similar when the other work characteristics are included. While the use of computers, indirect forms of control, larger organisational size and union presence all have strongly significant independent effects on the likelihood of consultation, these do not account for variations between the years. The introduction of these variables does however remove the earlier negative coefficient for part-time work, suggesting that the disadvantages of part-timers are not so much due to their contractual hours as the type of work environment in which they are typically employed.

This suggests that it is necessary to take account of the change in the relationship between one or more of these characteristics of the work situation and consultation to provide an adequate account of the change over time. We proceeded then to examine in turn the impact of the interaction effects between year and the various skill and work characteristics that had been considered. The interaction effect that emerged as important in this respect was that between union representation and year (Table 9, Column 4). The relationship between union presence and the use by management of consultation was more marked in both 1997 and 2001 than it had been in 1992. Once this factor had been introduced the year coefficient for 1997 was no longer significant and there was a further reduction in the coefficient for 2001 (which was now negative and non-significant).

Conclusions

Employee involvement in decision-making has been seen as of major importance both with respect to the quality of life of employees themselves and with respect to managerial objectives of high levels of commitment and productivity. Our initial objective in this paper was to examine the trends in employee involvement the 1990s. We then considered a number of arguments about the characteristics of the work situation that might affect the extent of such involvement, and finally considered the factors that appeared to best account for the trends over time.

Our starting point was the need to distinguish between different types of involvement. In particular, we differentiated between decision-making in the everyday practice of the job (task discretion), the ability to influence decisions about local work organisation (direct participation) and finally the ability to express views about wider developments in the organisation (consultative involvement). In practice, the nature of the trends in the 1990s varied substantially depending upon the specific dimension of decision-making. There was a decline in task discretion or immediate control at the level of the job, but a small rise in both direct participation and consultative involvement.

It was also notable that the relationship between specific work characteristics and the degree of employee involvement varied in important respects between the different forms of decision-making. The most consistent factor was skill level. Those who were in lower occupational classes, or in jobs where little was required in terms of qualifications, were systematically less likely to have scope to take or to influence decisions. The other factor that had a very general effect was that of advanced technology which led to higher task discretion, more direct participation and greater consultative involvement. However, where we able to use a more refined measure of technology, it was notable that its effects were only evident among those making complex or advanced use.

The (net) effects of all the other factors that we considered were contingent on the particular decision arena. For instance, part-time status and more traditional forms of control of work effort (through supervisory or mechanical control) had negative implications for task discretion and direct participation, but made no difference for broader consultative involvement. Both union representation and size of organisation had strongly negative

implications for task discretion and direct participation, but strongly positive effects on wider consultative procedures. This difference in the pattern of determinants confirms the importance of considering separately involvement in each form of decision-making.

It also appeared that rather different factors underlay the trends across time from one mode of decision involvement to the other. With respect to task discretion, it is notable that compositional factors proved unable to account for the decline in task discretion. Rather our analyses suggested that this reflected changes in the experience over time of specific categories of the workforce that are likely to have resulted from changes in management practices. In particular, there was a significant erosion of the task discretion of professionals. There was also a distinctive effect for employees in construction, public administration and the health services. At the same time the discretion of employees using relatively routine forms of computerised equipment was sharply curtailed, possibly reflecting an increased use of such equipment for monitoring and controlling employee performance.

In contrast, the entire year effect for direct participation could be accounted for by compositional factors, in particular by changes in skill distributions and changes in establishment size. Finally, for consultative involvement, while compositional effects were also important, an adequate analysis of the change over the period also needed to take account of the varying effects at different time periods of the presence of trade unions. In the latter 1990s, union presence was more strongly associated with the existence of consultative procedures than had been the case in the early years of the decade. This leaves open an important issue of interpretation. It may be the case that managers increasingly turned to forms of direct communication as a way of decreasing the influence of unions on the workforce. Alternatively, unions may have played an active role in producing the conditions under which consultation became more effective.

Our analyses point then to the importance of taking account both of structural determinants and managerial choice in accounting for the extent of employee involvement. They confirm the very general view in the literature that employee involvement is strongly related to skill level. Our data are also consistent with the more optimistic interpretations of the implications of technological change, although the longer-term scenario may depend on the relative balance of more complex and more routine applications of computerised technology. But the

prevalence of employee involvement cannot be viewed as simply the necessary outcome of such structural factors, as was implied say by theorists of the 'industrialism' school. The particularly sharp decline in the task discretion of professionals and the growing link between union presence and consultative involvement also point to the significance of specific management policies, which require more detailed investigation.

This paper has been concerned with trends in employee involvement rather than its implications for employee experiences of work. However, our separate analysis of the factors that affect employee well-being at work highlighted the central importance of task discretion[5]. Those workers who have a greater say in decisions concerning their jobs are, other things equal, more likely to be enthusiastic, contented and satisfied with their work. A wide range of research also points to the importance of task discretion in mediating the effects of high levels of work demand on stress. The decline in task discretion in the 1990s may well then have had serious negative implications both for employee morale and well-being. It may have made employees less willing to assume, and less able to manage, the increased demands generated by rising skill requirements.

Yet our analyses also indicate that this is an area in which policy can make a difference. Where employers adopted 'high performance' management practices as a broader management ethos, then task discretion tended to be higher. However, at least in terms of our measures, there is little evidence that there was a major extension of such practices over the period 1997 to 2001. The reasons why many employers sought to restrict the scope for initiative of their employees requires further in-depth research. It may have reflected a concern to standardise procedures and increase work effort, facilitated by the new ease of monitoring performance through increasingly integrated computer systems. It may point to an important failure in the process of transmitting accumulating research evidence to practitioners or to a shortage of adequately trained personnel to implement more complex forms of work organisation. But it is to be noted that two of the three industry sectors that have seen the sharpest declines in task discretion (public administration and health) are sectors where the state itself has considerable scope for encouraging the emergence of improved work practices.

[5] Francis Green and Duncan Gallie 'High Skills and High Anxiety: Skills, Hard Work and Mental Well-Being'. Skills Survey Working Paper January 2001.

Table 4 Task Discretion (Means)

	Overall	1997	2001
Year	2.21	2.25	2.18
Age24-25	2.08	2.14	2.05
Age 25-34	2.20	2.22	2.18
Age 35-44	2.23	2.26	2.21
Age 45-54	2.22	2.28	2.19
Age 55-60	2.27	2.40	2.22
Managers	2.59	2.61	2.58
Professional	2.32	2.48	2.23
Ass. Professional	2.33	2.38	2.30
Admin-Secretarial	2.19	2.25	2.15
Skilled Trades	2.22	2.29	2.18
Personal Service	2.24	2.24	2.24
Sales	1.99	2.06	1.94
Operatives	1.88	1.90	1.86
Elementary	1.96	2.04	1.92
No quals	2.00	2.03	1.98
Level 1 Qual Reqd	2.09	2.15	2.06
Level 2 Qual Reqd	2.24	2.29	2.20
Level 3 Qual Reqd	2.30	2.38	2.26
Level 45 Qual Reqd	2.40	2.48	2.36
Male Full-time	2.22	2.27	2.20
Female Full-time	2.27	2.32	2.25
Female Part-time	2.09	2.13	2.06
No use of computer	2.05	2.05	2.05
Computer use Simple	2.15	2.26	2.08
Computer use Moderate	2.29	2.33	2.27
Computer use Complex	2.38	2.47	2.34
Computer use Advanced	2.38	2.42	2.36
Ctrl Machinery	1.98	2.09	1.88
Ctrl Clients	2.28	2.36	2.24
Ctrl Supervisor	2.15	2.22	2.11
Crtl Colleagues	2.25	2.30	2.21
Ctrl Self	2.28	2.31	2.27
Ctrl Pay	2.20	2.25	2.17
Ctrl Reports	2.29	2.38	2.25
Union Not Present	2.26	2.30	2.23
Union Present	2.16	2.21	2.14
Not Union Member	2.23	2.28	2.21
Union Member	2.16	2.20	2.13
Workplace <25	2.25	2.28	2.22
Workplace 25-99	2.23	2.26	2.24
Workplace 100-499	2.16	2.24	2.15
Workplace 500+	2.14	2.16	2.14
Manufacturing	2.15	2.19	2.13
Construction	2.31	2.43	2.25
Wholesale	2.18	2.18	2.18
Hotels	2.17	2.24	2.13
Transport	1.95	2.01	1.91
Finance	2.20	2.29	2.15
Business Services	2.24	2.27	2.23
Public Administration	2.21	2.33	2.14
Education	2.30	2.37	2.26
Health	2.30	2.35	2.28
Other Community	2.30	2.38	2.26

Table 5 Task Discretion (OLS Regression Models)

	Model 1	Model 2	Model 3	Model 4
Year 2001	-0.06***	-0.11***	-0.13***	0.03n.s.
Age 25-34		0.09*	0.09**	0.08**
Age 35-44		0.12**	0.11***	0.11***
Age 45-54		0.12***	0.13***	0.13***
Age 55-60		0.21***	0.21***	0.20***
Professional		-0.32***	-0.27***	-0.15**
Ass. Professional		-0.26***	-0.19***	-0.19***
Admin-Secretarial		-0.38***	-0.28***	-0.29***
Skilled Trades		-0.32***	-0.17***	-0.10n.s.
Personal Service		-0.27***	-0.23***	-0.34***
Sales		-0.49***	-0.44***	-0.36***
Operatives		-0.62***	-0.40***	-0.38***
Elementary		-0.49***	-0.31***	-0.26***
Level 1 Qual Reqd		0.06*	0.05n.s.	0.04n.s.
Level 2 Qual Reqd		0.16***	0.13***	0.12***
Level 3 Qual Reqd		0.20***	0.16***	0.15***
Level 45 Qual Reqd		0.22***	0.16***	0.15***
Female Full-time		0.05*	0.03n.s.	0.03n.s.
Female Part-time		-0.08**	-0.07**	-0.07**
Computer use Simple			0.01n.s.	0.10**
Computer use Moderate			0.04n.s.	0.07n.s.
Computer use Complex			0.11***	0.17***
Computer use Advanced			0.12**	0.14n.s.
Ctrl Machinery			-0.10**	-0.10***
Ctrl Clients			0.07***	0.07***
Ctrl Supervisor			-0.09***	-0.10***
Crtl Colleagues			0.01n.s.	0.02n.s.
Ctrl Pay			-0.01n.s.	-0.01n.s.
Ctrl Reports			0.03n.s.	0.03n.s.
Union Present			-0.09***	-0.10**
Union Member			-0.06**	-0.06*
High Performance Mgt			0.07***	0.07***
Workplace 25-99			-0.04*	-0.04*
Workplace 100-499			-0.08***	-0.08***
Workplace 500+			-0.13***	-0.13***
Construction			0.07n.s.	0.20**
Wholesale			0.05n.s.	0.01n.s.
Hotels			0.00n.s.	0.01n.s.
Transport			-0.16***	-0.11*
Finance			-0.12**	-0.03n.s.
Business Services			-0.08**	-0.08n.s.
Public Administration			-0.03n.s.	0.11n.s.
Education			0.07n.s.	0.06n.s.
Health			0.06*	0.17**
Other Community			0.07n.s.	0.13n.s.
Professional*2001				-0.18**
Ass. Professional*2001				0.00n.s.
Admin-Secretarial*2001				0.00n.s.
Skilled Trades*2001				-0.10n.s.
Personal Service*2001				0.14n.s.
Sales*2001				-0.13n.s.
Operatives*2001				-0.03n.s.
Elementary*2001				-0.09**
Computer Simple*2001				-0.15***
Computer Mod*2001				-0.05n.s.
Computer Complex*2001				-0.10n.s.
Computer Adv.*2001				-0.01n.s.
Construction*2001				-0.21**
Public Admin*2001				-0.20**
Health*2001				-0.14*
Constant	2.25***	2.38***	2.21***	2.13***
Adjusted R2	0.00	0.12	0.18	0.18
N	6202	6082	5989	5989

Note: All industries were entered as interaction terms ; only significant results are shown.

Table 6 Direct Participation (Means)

	Overall	1992	2001
Year	0.98	0.93	1.03
Age 20-24	0.82	0.85	0.76
Age 25-34	0.93	0.89	0.97
Age 35-44	1.04	0.96	1.09
Age 45-54	1.05	0.98	1.09
Age 55-60	1.06	1.00	1.09
Managers	1.67	1.61	1.71
Professional	1.18	1.20	1.16
Ass. Professional	1.02	0.91	1.10
Admin-Secretarial	1.00	0.95	1.04
Skilled Trades	0.82	0.74	0.89
Personal Service	1.00	1.04	0.96
Sales	0.62	0.66	0.57
Operatives	0.69	0.65	0.73
Elementary	0.65	0.63	0.68
No Qual Reqd	0.71	0.66	0.77
Level 1 Qual Reqd	0.84	0.77	0.86
Level 2 Qual Reqd	0.91	0.87	0.95
Level 3 Qual Reqd	1.10	1.07	1.13
Level 45 Qual Reqd	1.30	1.27	1.33
Male Full-time	1.04	0.97	1.10
Female Full-time	1.01	0.98	1.04
Female Part-time	0.81	0.76	0.85
Uses computerised equip	1.07	1.04	1.10
Not using computerised equip	0.82	0.79	0.86
Ctrl Machinery	0.69	0.57	0.78
Ctrl Clients	1.08	1.04	1.11
Ctrl Supervisor	0.87	0.81	0.91
Crtl Colleagues	1.01	0.96	1.05
Ctrl Self	1.06	1.02	1.10
Ctrl Pay	0.95	0.91	0.97
Ctrl Reports	1.05	1.04	1.06
Union Not Present	1.12	1.07	1.07
Union Present	0.88	0.83	0.83
Not Union Member	1.05	1.00	1.09
Union Member	0.86	0.82	0.91
No Consultative Meetings	0.69	0.64	0.74
Consultative Meetings	1.15	1.09	1.19
Workplace <25	1.17	1.11	1.21
Workplace 25-99	0.98	0.95	1.01
Workplace 100-499	0.82	0.73	0.89
Workplace 500+	0.91	0.87	0.94
Manufacturing	0.94	0.87	1.03
Construction	0.94	0.74	1.09
Wholesale	0.93	0.91	0.94
Hotels	0.84	0.78	0.89
Transport	0.72	0.69	0.75
Finance	0.89	0.84	0.94
Business Services	1.16	1.17	1.16
Public Administration	0.93	0.88	0.97
Education	1.04	0.99	1.08
Health	1.09	0.95	1.13
Other Community	1.13	1.10	1.16

Table 7 Direct Participation (Ordered Logit)

	Model 1	Model 2	Model 3
Year 2001	0.17***	0.07n.s.	0.02n.s
Age 25-34		0.12n.s.	0.14n.s
Age 35-44		0.28***	0.30***
Age 45-54		0.33***	0.37***
Age 55-60		0.44***	0.46***
Professional		-0.98***	-0.77***
Ass. Professional		-1.07***	-0.86***
Admin-Secretarial		-0.82***	-0.51***
Skilled Trades		-1.31***	-1.02***
Personal Service		-0.74***	-0.55***
Sales		-1.37***	-1.25***
Operatives		-1.38***	-1.02***
Elementary		-1.29***	-0.88***
Level 1 Qual Reqd		0.18*	0.20*
Level 2 Qual Reqd		0.24***	0.19*
Level 3 Qual Reqd		0.52***	0.57***
Level 45 Qual Reqd		0.75***	0.78***
Female Full-time		-0.10n.s.	-0.14*
Female Part-time		-0.10n.s.	-0.20**
Uses computerised equip			0.15**
Ctrl Machinery			-0.17n.s
Ctrl Clients			0.12*
Ctrl Supervisor			-0.30***
Crtl Colleagues			0.03n.s
Ctrl Pay			-0.03n.s
Ctrl Reports			-0.01n.s
Union Present			-0.41***
Union Member			-0.13*
Consultative Meetings			0.77***
Workplace 25-99			-0.40***
Workplace 100-499			-0.62***
Workplace 500+			-0.50***
Construction			-0.31*
Wholesale			-0.09n.s
Hotels			-0.31*
Transport			-0.57***
Finance			-0.54***
Business Services			-0.14n.s
Public Administration			-0.24*
Education			-0.08n.s
Health			-0.09n.s
Other Community			0.17n.s
LR chi2	16.11	703.4	1223.92
DF	1.00	19	44
Sig	***	***	****
Pseudo R2	0.00	0.04	0.07
N	7479	7158	6958

Table 8 Consultative Involvement (Means)

	Overall	1992	1997	2001
Year	0.65	0.63	0.67	0.65
Managers	0.80	0.80	0.78	0.80
Professional	0.82	0.79	0.84	0.82
Ass. Professional	0.75	0.72	0.77	0.77
Admin-Secretarial	0.63	0.61	0.65	0.63
Skilled Trades	0.53	0.48	0.61	0.54
Personal Service	0.67	0.67	0.75	0.63
Sales	0.55	0.50	0.61	0.54
Operatives	0.56	0.57	0.53	0.57
Elementary	0.46	0.49	0.48	0.42
No Qual Reqd	0.50	0.50	0.52	0.50
Level 1 Qual Reqd	0.62	0.62	0.71	0.58
Level 2 Qual Reqd	0.66	0.63	0.68	0.68
Level 3 Qual Reqd	0.66	0.64	0.72	0.66
Level 45 Qual Reqd	0.80	0.79	0.79	0.82
Male Full-time	0.65	0.63	0.68	0.66
Female Full-time	0.69	0.66	0.68	0.71
Female Part-time	0.58	0.56	0.61	0.57
Uses computerised equip	0.72	0.70	0.74	0.72
Not using computerised equip	0.52	0.53	0.54	0.48
Ctrl Machinery	0.59	0.60	0.60	0.59
Ctrl Clients	0.70	0.68	0.72	0.69
Ctrl Supervisor	0.66	0.61	0.71	0.67
Crtl Colleagues	0.71	0.70	0.72	0.70
Ctrl Self	0.67	0.65	0.69	0.67
Ctrl Pay	0.69	0.63	0.70	0.73
Ctrl Reports	0.79	0.74	0.83	0.81
Union Not Present	0.55	0.74	0.83	0.55
Union Present	0.72	0.69	0.75	0.74
Not Union Member	0.59	0.57	0.62	0.61
Union Member	0.74	0.71	0.75	0.75
Workplace <25	0.55	0.53	0.59	0.55
Workplace 25-99	0.68	0.68	0.67	0.68
Workplace 100-499	0.68	0.65	0.71	0.70
Workplace 500+	0.74	0.71	0.75	0.77
Manufacturing	0.61	0.59	0.63	0.61
Construction	0.45	0.34	0.56	0.47
Wholesale	0.55	0.52	0.61	0.54
Hotels	0.51	0.47	0.50	0.56
Transport	0.64	0.69	0.63	0.60
Finance	0.78	0.73	0.85	0.79
Business Services	0.66	0.70	0.56	0.66
Public Administration	0.75	0.72	0.77	0.77
Education	0.74	0.71	0.80	0.74
Health	0.74	0.72	0.76	0.74
Other Community	0.58	0.45	0.61	0.66

Table 9 Consultation (Logistic Regression)

	Model 1	Model 2	Model 3	Model 4
Year1997	0.08**	0.08**	0.07*	0.04n.s.
Year 2001	0.01**	0.01n.s.	-0.03n.s.	-0.05n.s
Age 25-34		0.04n.s.	0.01n.s.	0.01n.s
Age 35-44		0.16***	0.09*	0.09*
Age 45-54		0.04n.s.	0.06n.s.	0.06n.s
Age 55-60		-0.11n.s.	-0.03n.s.	-0.03n.s
Professional		0.50***	0.39***	0.39***
Ass. Professional		0.29***	0.05n.s.	0.05n.s
Admin-Secretarial		-0.15**	-0.35***	-0.35***
Skilled Trades		-0.49***	-0.21**	-0.21**
Personal Service		0.20*	0.19*	0.19*
Sales		-0.23**	-0.22**	-0.22**
Operatives		-0.23***	-0.14n.s.	-0.14n.s
Elementary		-0.48***	-0.38***	-0.38***
Level 1 Qual Reqd		-0.08n.s.	0.05n.s.	0.05n.s
Level 2 Qual Reqd		0.09n.s.	0.07n.s.	0.07n.s
Level 3 Qual Reqd		0.06n.s.	0.02n.s.	0.02n.s
Level 45 Qual Reqd		0.38***	0.15**	0.16*
Female Full-time		0.03n.s.	-0.03n.s.	-0.03n.s
Female Part-time		-0.08*	0.03n.s.	0.03n.s
Uses computerised equip			0.19***	0.19***
Ctrl Machinery			-0.05n.s.	-0.05n.s
Ctrl Clients			0.14***	0.14***
Ctrl Supervisor			-0.03n.s.	-0.03n.s
Crtl Colleagues			0.13***	0.13***
Ctrl Pay			0.07**	0.07**
Ctrl Reports			0.27***	0.27***
Union Present			0.19***	0.24***
Union Member			0.10**	0.06n.s
Workplace 25-99			0.17***	0.17***
Workplace 100-499			0.17***	0.17***
Workplace 500+			0.21***	0.21***
Construction			-0.26***	-0.26***
Wholesale			-0.05n.s.	-0.05n.s
Hotels			0.05n.s.	0.05n.s
Transport			-0.02n.s.	-0.02n.s
Finance			0.20*	0.20**
Business Services			0.08n.s.	0.08n.s
Public Administration			0.08n.s.	0.09n.s
Education			0.05n.s.	0.05n.s
Health			0.18***	0.18***
Other Community			0.00n.s.	-0.01n.s
Union rep*1997				0.08*
Union rep*2001				0.08*
Union member*1997				-0.08n.s
Union member*2001				-0.04n.s
Constant	0.66***	0.64	1.22n.s.	1.17n.s.
Chi2 Improvement	10.60	803.27	1382.75	1395.24
DF	2	20.00	44	50
Sig	**	***	***	***
N	9604	9453	9255	9225

Reference List

Blauner, R. (1964) *Alienation and Freedom. The Factory Worker and his Industry.* Chicago: University of Chicago Press.

Blumberg, P. (1968) *Industrial Democracy: The Sociology of Participation.* London: Constable.

Brannen, P. (1983) *Authority and Participation in Industry.* London: Batsford Academic.

Braverman, H. (1974) *Labor and Monopoly Capital. The Degradation of Work in the Twentieth Century.* New York: Monthly Review Press.

Child, J. (1972) 'Organisational structure, environment and performance: the role of strategic choice', *Sociology*, 6, 1.

Clutterbuck, D (1994) *The Power of Empowerment*, London: Kogan Page.

Dean, J W and Evans, J R (1994) *Total Quality: Management, Organization and Strategy*, St Paul, Minnesota: West.

Crompton, R. and Jones, G. (1984) *White-Collar Proletariat.* London: Macmillan.

Felstead, A., Gallie, D. and Green, F. (2002) Work Skills in Britain 1986-2001. Nottingham: DfES Publications.

Friedmann, G. (1946) *Problemes humains du machinisme industriel.* Paris: Gallimard.

Frohlich, D. and Pekruhl, U. (1996) *Direct Participation and Organisational Change. Fashionable but Misunderstood. An Analysis of Recent Research in Europe, Japan and the USA.* Luxembourg: Office for Official Publications of the European Communities.

Gallie, D. (1978) *In Search of the New Working Class.* Cambridge: Cambridge University Press.

Gallie, D., Felstead, A. and Green, F. 'Employer Policies and Organizational Commitment in Britain 1992-7' *Journal of Management Studies*, 38, (8), December: 1081-1101

Gallie, D., Cheng, Y., Tomlinson, M., and White, M. (1994) 'The Employment Commitment of Unemployed People,' in White, M., *Unemployment and Public Policy in a Changing Labour Market.* London: Policy Studies Institute.

Geary, J. and Sisson, K. (1994) 'Europe: Direct Participation in Organisational Change. Introducing the EPOC Project.', *European Foundation for the Improvement of Living and Working Conditions Working Paper No: WP/94/18/EN.*

Guest, D E and Conway, N (1999) *How Dissatisfied Are British Workers? A Survey of Surveys*, London: Institute of Personnel and Development.

Guest, D E and Conway, N (2001) *Public and Private Sector Perspectives on the Psychological Contract*, London: Chartered Institute of Personnel and Development.

Hales, C (2000) 'Management and empowerment programmes', *Work, Employment and Society*, 14(3), September: 501-519.

Harley, B (2001) 'Team membership and the experience of work in Britain: an analysis of the WERS98 data', *Work, Employment and Society*, 15(4), December: 721-742.

Johnson, J. V. and Johansson G.(eds) (1991) *The Psychosocial Work Environment: Work Organization, Democratization and Health. Essays in Memory of Bertil Gardell.* Amityville, New York: Baywood Publishing Company, Inc.

Karesek, R. and Theorell, T. (1990) *Healthy Work. Stress, Productivity and the Reconstruction of Work Life.* New York: Basic Books.

Lincoln, J. R. and Kalleberg, A. L. (1990) *Culture, Control and Commitment. A study of work organization and work attitudes in the United States and Japan.* Cambridge: Cambridge University Press.

Meyer, J. P. and Allen, N. J. (1997) *Commitment in the Workplace. Theory, Research and Application.* London: Sage.

Michels, R. (1962) *Political Parties.* New York: Free Press.

Millward, N, Forth, J and Bryson, A (1999) 'Changes in employment relations, 1980-1998', in Cully, M, Woodland, S, O'Reilly, A and Rix, G *Britain at Work: As Depicted by the 1998 Workplace Employee Relations Survey*, London: Routledge.

Millward, N., Bryson, A., and Forth, J. (2000) *All Change at Work? British employment relations 1980-1998, as portrayed by the Workplace Industrial Relations Survey series.* London: Routledge.

Naville, P. (1963) *Vers l'automatisme social/ Problemes du travail et de l'automation.* Paris: Gallimard.

Patchen, M. (1970) *Participation, Achievement and Involvement on the Job.* New Jersey: Prentice-Hall.

Peters, T (1992) *Liberation Management*, London: Macmillan.

Peters, T and Waterman, R H (1982) *In Search of Excellence*, New York: Harper and Row.

Sewell, G and Wilkinson, B (1992a) 'Empowerment or emasculation? Shopfloor surveillance in a Total Quality Organization', in Blyton, P and Turnbull, P (eds) *Reassessing Human Resource Management*, London: Sage.

Sewell, G and Wilkinson, B (1992b) '"Someone to watch over me": surveillance, discipline and the Just-in-Time labour process', *Sociology*, 26(2), May: 271-289.

Tam, M. (1997) *Part-Time Employment: A Bridge or a Trap?* Aldershot: Avebury.

Theorell, T. (1998) 'Job Characteristics in a Theoretical and Practical Health Context,' in Cooper, C. L., *Theories of Organizational Stress.* Oxford: Oxford University Press.

Walton, R. E. (1985) 'From control to commitment in the workplace', *Harvard Business Review*, 85, 2: 77-84.

Walton, R. E. (1985) 'Towards a strategy of eliciting employee commitment based on policies of mutuality.,' in Walton, R. E. and Lawrence, J. R., *HRM: Trends and Challenges.* Boston: Harvard Business School.

Wilkinson, A, Godfrey, G and Marchington, M (1997) 'Bouquets, brickbats and blinders: Total Quality Management and employee involvement in practice', *Organization Studies*, 18(5): 799-819.