

# Workers' Experiences of Skill, Training and Participation in Lean and High Performance Workplaces in Britain and Italy<sup>1</sup>.

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# **Workers' Experiences of Skill, Training and Participation in Lean and High Performance Workplaces in Britain and Italy**

## **Abstract**

Managerial practices at workplace level in Britain and Italy in the automobile and aerospace industries are examined with regard to their impact on employees' perceptions of skill, training and their relationship to participation. Can it be argued that employee experiences of High Performance Work, in contrast to lean-working, satisfy aspirations for greater employee influence? What is the relationship between perceptions of skill and training trajectories and influence? This is significant because there has been relatively little research on HPW and employees' experiences from an international comparative perspective. Relatedly, do employee experiences of these managerial practices indicate discernable paradigmatic differences in the supposedly contrasting forms of employment relationship advanced by advocates of HPW?

Key Words: lean-production; high-performance-work; employee-perceptions of influence training and skill, participation; international comparison.

## **Introduction**

Sociologists searching for a model form of work organisation which claims to improve organisational performance and gain competitive advantage, whilst improving workers' experience of the employment relationship, have encountered a difficult challenge. The high performance model is the latest attempt to construct an alternative to Taylorism and lean production. Advocates of the High Performance Workplace (HPW) argue that it places greater emphasis on skill acquisition, opportunities to utilise skills, employee involvement and influence than lean work places. Indeed, the provision of voice mechanisms at is regarded as an essential dimension of the 'democratic' nature of high performance work organisation and is taken to be a response to critics who argue that this dimension was missing from the lean paradigm.

The promotion of HPW as the 'high road' option to competitive advantage is grounded on the theory that the deployment of a raft of key management practices, which include methods designed to engage employees and mobilise greater discretionary effort, will lead to advances in organisational performance. The assumption is that extensive employee participation in decisions governing work and organisation may engender greater trust in management, greater commitment to organisational objectives and thus provide the foundation for improved performance. This is often tied to notions of the shift to an often vaguely defined notion of the 'knowledge', or 'new economy' (Lloyd and Payne, 2004) and has now become a taken for granted assumption amongst a number of high profile mainstream sociologists of change (Giddens, 2000). The latter views the new economy, together with its 'virtuous' organisational forms, as a necessary precondition for the development of trust and organisational (social) solidarity. Giddens aside, there is some evidence to support the idea that new organisational forms associated with High Performance working lead to heightened employee trust, commitment and performance. This perception has become increasingly embedded in the thinking of institutions that not only represent employers but also employees. For instance, Ashton and Sung (2002) extol the virtues of HPW in a paper published by the

International Labour Organisation (ILO). They argue HPW organisations that value their workforces; invest in training; develop skills; allow more employee discretion over their job tasks; involve them in organisational decision-making; and build union-management partnerships, are likely to be more successful in creating profitable knowledge-based organizations. Similar views are held by British organisations representing labour, capital and the state. These include the Trades Union Congress (TUC), Confederation of British Industry (CBI), and Department of Trade and Industry (DTI), (CBI/TUC, 2001; DTI, 2003).

This encouragement of adoption and transferability tends towards a technocratic response since sociological variations between societies are often read as culturally malleable and therefore easily made accessible to a 'better form' of employment. Thus evaluation of the concept of HPW as favoured by those above is especially pertinent since the supposition of its transferability, and thus universality, counters the arguments of the employment regimes literature (Gallie, 2007 on the variations between liberal market economies and coordinated market economies). Furthermore, the wider optimistic assumption in the universalistic literature is that of improvement in the experience of the employment relationship more broadly and this is a key concern in our paper. We have some sympathy with Gallie's view that the concept of employment regimes provides a useful antidote to the over simplifications of the universalistic 'better form' of employment literature. For example, commenting on the European Foundation's Surveys on Working Conditions (1995 & 2000) on variations in task discretion amongst fifteen countries of the EU, Gallie<sup>2</sup>, reports that there is;

“...no evidence of general processes affecting either the overall level or the extent of polarisation in task discretion in Western European societies. Rather there have been distinct national developments, which are plausibly related to differences in institutional patterns.” (2007:136)

Italy and Britain had a close profile regarding task order, task methods and speed of work (Overall task discretion index). Furthermore, Gallie et al (2007) perceived similar trends towards effort intensification in both countries. Green's examination of the European Foundation for the Improvement of Living and Working Conditions surveys indicated a greater increase in average effort levels in Italy than in all other EU countries (2006: 59-60). This pattern corresponds with UK survey data (1992 and 2001) highlighting that while job complexity has risen, task discretion declined in the UK for all occupational groups and most of all for professional workers. As Green and Felstead demonstrate, in Italy, task discretion declined significantly between 1996 and 2000 (Green 2006: 105-106; Felstead, 2004).

Although Gallie discerns no “general processes” behind this decline, he suggests union strength and the salience of public policies for improving working life are two critical institutional factors impacting upon the extent of task discretion. While we are not here concerned specifically with the latter nonetheless his findings reinforce the importance of national institutions and history but also we might add, sector specificity. This is interesting due to the distinction Gallie draws between LMEs and

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<sup>2</sup> Citing Gallie, (p113) the questions posed were ‘Are you able, or not, to choose or change: 1) your order of tasks; 2) your methods of work; and 3) your speed or rate of work?’

CMEs since one might anticipate Britain as archetype of the former with Italy going some way towards the latter. Yet this distinction does not easily hold for our cases since our argument will be that to explain some of the closeness in outcomes in these countries another element might be included in the concept of employment regimes. In considering what we take to be a relative lacuna we would wish to extend the notion of employment regime to usefully embrace the idea of managerial regime. This comprises a particular range of managerial techniques and practices and we would delineate these as lean production and HPW. In this case we argue that our findings, country and industrial relations institutional factors notwithstanding, highlight the importance of sector, firm, employment and managerial regime dependence.

There is an additional sceptical literature on HPW which might lend support to Gallie's comparative analysis of the range of criteria that impact upon job quality and employee experience which arguably form part of a spectrum of impediments to 'transferability'. Most notable among the sceptics is Godard (2004), who challenges claims that HPW regimes produce better performance outcomes than preceding regimes of long-standing, good HRM practices. One facet of HPW requiring more attention, however, is employee experience of it and some recent survey-based research has attempted to provide this. For example Appelbaum *et al* (2000), in their US-based study, report evidence of a positive correlation between HPW and job satisfaction. Ramsay *et al* (2000), however, found, in their analysis of the 1998 UK Workplace Employee Relations Survey, that while there was a positive association between HPW and gains in organizational performance, employees experienced greater levels of stress, insecurity and work effort. This negative pattern of employee experience was again evident in the 2004 WERS data and was also identified in Danford *et al*'s (2005), study of partnership and the high performance workplace in the UK aerospace industry. Notably, they argued that increased management control and decreased employee security were '*inherent* features of the high performance workplace' (ibid, p.239).

The question then is twofold. First, what are employees' experiences in respect of specific, contemporary management practices? Second, to what extent will their experience of these allow us to discern paradigmatic differences between the supposedly contrasting archetypal forms of the employment relationship advanced by policy advocates of 'new departures' in working life school of thought? This paper explores managerial practices at the workplace level, across two countries, Britain and Italy, in the automobile and aerospace industries, with particular regard to their impact on employees' perceptions of skill changes. Are employee experiences improved within HPW in contrast to lean production or Fordist regimes? Moreover, to what extent can it be argued that HPW satisfies aspirations for greater employee influence? Specifically, what is the relationship between employee participation, including *influence* on change, and the trajectory of training and skill? Relatively little research has focused on the high performance workplace and employees' experiences, especially in respect to international comparisons and in the context of the hegemony of neo liberal economic policy.

In respect of these themes, we explore the variation in employee experience in the context of two management regimes. Both are typical of what can be understood as a lean production manufacturing regime, the automotive industry, and the other, a High

Performance Work regime, the aerospace industry. Our conclusion is that we should reconsider the assumption that desire for regime change will deliver improved QWL for employees. This desire is often the anticipated but unexamined positive rhetoric of the practitioner-advocate and as such requires careful empirical and explanatory justification. Clearly, there are substantive differences between the labour processes, including conditions of work, of semi-skilled auto assembly and highly qualified aerospace workers. Nevertheless, our research tends to add weight to the caution of those sceptics who, according to Lloyd and Payne (2004), are less than convinced by the rhetoric that HPWs are paradigmatically different from lean production and fordism in their *consequences* for employees

### **Research design and Case Study Firms**

*GM, Ellesmere Port UK.* This General Motors plant employs around 3000 staff. In 2005, interviews were conducted with Transport and General Workers Union (TGWU) officials, and shop floor. Questionnaires were distributed to a sample of staff on the shop floor<sup>3</sup>.

Although lean production was introduced in the late 1980s with the expectation that union influence would be marginalised the latter have retained considerable influence regarding outsourcing and pay (Stewart & Wass, 1998). Until the current economic crisis and the diminution of union power, the TGWU had rejected a partnership agenda.

*Fiat, Melfi, Italy.* 6,000 workers are employed by Fiat at this assembly facility which includes employees of supplier firms. In 2005, a total of 20 taped interviews were conducted with Fiat employees mainly including Fiom-CGIL (*Confederazione Generale Italiana del Lavoro* or Italia General Confederation of Labour) trade union delegates<sup>4</sup>. Inevitably, the influence of Fiom-CGIL at Fiat is markedly different from that of the TGWU in the GM. (Oliveri, 2000). Being a green field site lean production was central to production operations from the beginning (Camuffo and Volpato, 1998). A 'Total Quality Programme' expected that workers would be able to achieve high skills, flexibility and commitment (Pulignano, 2002a, p77). This allowed the company to project the idea of participation between labour and management in pursuit of cooptation of union representatives and employee "resistance". (Oliveri, 2000, p.2). The hierarchical relationships characterising Italian work place unionism allowed the shaping of the partnership agenda which saw 'jobs in the south' (in this case Fiat-Melfi) in exchange for workplace passivity (Lanzara and Patriotta, 2006, p. 993). Trade union acceptance of Fiat's agenda for partnership has diluted confidence in the effectiveness of union representation of worker interests. (Lanzara and Patriotta, 2006, p.994)

### *AircraftCo UK*

The plant was predominantly an R&D and design centre responsible for wing design for the full range of AircraftCo UK products. Of the 4,500 workers based at the site, 2000 were employed in different design and design support functions. The fieldwork took place during the latter half of 2005 and during 2006. Questionnaires were

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<sup>3</sup> Two hundred questionnaires were distributed and 83 usable responses received, a response rate of almost 42%.

<sup>4</sup> Two hundred survey questionnaires were distributed and 103 usable responses were returned; a response rate of nearly 52%.

distributed to a sample of 700 engineers, including first line supervisors and contract engineers<sup>5</sup>.

Following the launch of its 'New World' change programme in the 1990s AircraftCo UK created integrated project teams which transformed the traditional division of engineering labour. The fragmentation of departmental organisation and the transience of project-based labour deployment had serious ramifications for workplace union organisation. It was against this backdrop that the AMICUS-MSF white-collar union at AircraftCo UK developed a partnership relationship with the company but weaker union density and organisation meant that the shop stewards lacked the wherewithal and power to regulate this relationship. This has resulted in a serious weakening of union organisation among white collar staff.

*Alenia Spazio, Rome and Turin.* 2,200 workers are employed in five separate Italian plants which are: Turin, Milan, Acquila, Rome and Florence. Florence is not a production site but a general observatory for planning engineering. Between July 2005 and May 2007 Alenia Spazio was renamed Alcatel Alenia Space as a result of a joint-venture between the French Alcatel Espace and the Italian public financial institution Finmeccanica. Since 3<sup>rd</sup> May 2007 Alcatel Alenia Space has been taken over by the French company Tales SPA. Thus currently, the name is Tales Alenia Space Italy. Union membership in both plants is almost 50%. The fieldwork was based in the two largest plants (around 750 employees per plant) specialising in satellite systems, Turin and Rome. The fieldwork took place during late 2005 and early 2006<sup>6</sup>. Traditionally Alenia has experienced a non-conflictual relationship and arguably one of the reasons for this may be attributed to the high number of high-skilled employees within the company.

### **Worker Attributes**

A number of the characteristics of the workers who participated in the survey reflected typical patterns in manufacturing brownfield sites, and in the case of Fiat, a greenfield site that, with an age of 13 years at the time of the research, was turning brown. For example, At Alenia and GM, towards two thirds of the workers were aged over 40 as were nearly 60 per cent at AircraftCo UK. The age profile of the Fiat sample was younger – 75 per cent of respondents were aged between 30 and 39 – reflecting workforce stability twelve years after the recruitment of a young workforce when the Melfi plant opened in 1993<sup>7</sup>. At Alenia, Fiat and GM, most workers had service periods of more than 10 years whereas at AircraftCo UK the majority had less than five years service, reflecting significant recruitment in the context of new product development and the expansion of aircraft sales over the past decade.

The gender profile of the four workforces reflected deeply entrenched gender segmentation patterns in Italian and UK manufacturing. Women workers comprised

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<sup>5</sup> A total of 320 questionnaires were returned – a response rate of 46 per cent. Interviews were completed with three managers, two union representatives and 22 engineers located in design and project management departments.

<sup>6</sup> Questionnaires were distributed to samples of 100 engineers and manufacturing support staff at each plant. A total of 86 questionnaires were returned, a response rate of 43 per cent.

<sup>7</sup> In order to establish a loyal and malleable workforce, one of the core selection criteria for the new Melfi plant was that no new employee could be more than thirty two years of age (Camuffo and Volpato 1998: 328).

seventeen per cent of the overall sample. These tended to concentrate in engineering functions at AircraftCo UK and Alenia. Occupational profiles reflected the core functions of each plant. At AircraftCo UK and Alenia, both primarily sites for product design and development, the largest occupational groups in the sample were graduate engineers and other technical staff (63 per cent and 54 per cent respectively). At the Fiat and GM car production plants, the largest groups were overwhelmingly manual and the majority of these were assembly line workers. Apart from the Fiat sample, a significant proportion of respondents had management or supervisory responsibilities, at AircraftCo UK this was as high as one third.

The highest qualification of the survey respondents reflected these plant-based occupational differences (see Table One). Of note is the relatively high concentration of graduates in the aerospace plants, particularly AircraftCo UK. The survey also asked respondents how long it took typically for someone to become competent in their type of work. The results in Table One reflect obvious skill differences by occupation with around a half of the mostly white collar aerospace workers indicating more than 12 months compared to significant proportions of automotive production line workers indicating less than one month.

**Table One. Highest qualification, n = 593, (cell per cent)**

	Fiat	GM	Aircraft Co UK	Alenia
PG Degree	2	1	17	5
Degree	1	3	47	37
HND/HNC/BTEC/NVQ5	0	13	19	0
OND/ONC/BTEC/NVQ4	0	6	6	0
Apprenticeship/City of Guild	0	26	4	0
'A' Level or less	0	35	6	0
No qualification	1	17	2	0
Lyceo	5	0	0	12
Industriale	57	0	0	45
Inferiore	34	0	0	1
Competency: < 1 month	53	34	1	5
Competency: > 12 months	25	10	55	46

## **The Labour Process and Employee Participation**

### *Skill and task intensification*

The questionnaire surveys and interviews explored shifts in the intensity and composition of job-related skills and tasks over the four years leading up to the research. The study attempted to differentiate between changes in the level of complex skills and routine tasks by posing two separate questions: whether the level of 'high skills' required in the job had changed over the previous four years and whether the level of 'basic tasks' had changed. High skills were defined as those involving complex tasks and/or the use of new knowledge; basic tasks were defined as more routine and uncomplicated tasks. As far as change in high skills was concerned, only four per cent of workers reported any decrease with no significant difference between plants. Large proportions of workers at AircraftCo UK, Alenia

and GM reported an increase (80 per cent, 59 per cent and 70 per cent respectively). At Fiat, by contrast, only 17 per cent reported an increase. A similar pattern obtained for change in basic tasks. Only five per cent of workers reported a decrease whereas in the UK plants 66 per cent of AircraftCo UK workers and 54 per cent of GM workers reported an increase. In the Italian plants the proportions were lower: 35 per cent of Alenia workers and 19 per cent of Fiat workers. One reason for the relative stability at Fiat's Melfi plant was the absence of new initiatives aimed at increasing labour efficiency. This was partly a function of management's initial success in optimising labour flexibility and efficiency by adopting JIT and UTE manufacturing cells from the outset of the life of this relatively new plant (Lanzara and Patriotta 2007). A recent development, however, saw the re-organisation of the larger UTEs into *domini* (domains) which were smaller units responsible for a sub-set of UTE operations. The impact of this on the labour process was, if anything, a reduction in employee discretion and job rotation as cell workers were restricted to a much smaller number of repetitive tasks.

Workers who had reported an increase in skills and tasks were also asked to indicate the main reasons for this (see Table Two). These were sub-divided into three main categories: '*technological change*' (changes in computer technology; new equipment; product or product complexity), '*working in teams*' (working in teams and participation in problem-solving groups), and '*labour utilisation*' (working more flexibly; changing staffing levels; increased pace of work; outsourcing of work).

**Table Two. Main reasons for change in high skills and basic tasks (cell per cent)**

	Aerospace		Automotive	
	Increase in high skills	Increase in basic tasks	Increase in high skills	Increase in basic tasks
Computer technology	58	53	48	24
New equipment	26	18	45	31
Product complexity	48	19	36	36
Working in teams	20	21	18	16
Problem-solving groups	17	11	11	11
Working more flexibly	41	40	52	45
Staffing levels	31	40	47	40
Increased pace of work	49	48	38	45
Outsourcing of work	16	23	29	19

Working in teams and problem-solving groups were not salient factors in the pattern of skill and task increase over the reporting period. This result reflects the findings of Harley (2001) whose analysis of WERS data found that team membership had little impact on questions of task discretion and work. What did have a greater impact, with some variation between the two sectors, was the range of factors associated with technological change and labour utilisation. For example, many workers reported increases in high skills as a result of the introduction of new computerised technologies into design and production processes, a result that reflects national patterns in skill demand and the usage of computer technology (Green 2006; Green et al. 2003). In particular, in Alenia interviews in both workplaces underline the link between the use of computerised technologies and the market demand as essential to explain the increase in the level of skills of the employees. As one of our union interviewees put it:



I think it is because the technology we use (which follows the demand of the market) is in evolution and it is becoming more and more complex and this requests people to have higher level of skill. (UJLM-UJL, May 2007)

What is also interesting, since national surveys do not highlight this, is that significant proportions of workers felt also that more routine, basic tasks increased as a result of computerisation. In addition, Table Two shows that increases in skills and tasks were associated with increased labour utilisation and rationalisation suggesting a relationship between skill and task increases and greater worker effort. Indeed, such patterns of skill and task intensification were reflected in the case study interviews. Although, for example, some of the engineers at AircraftCo UK described the new skills and greater scope for creativity provided by computer software developments, the overriding impression was of a lack of employee control over the re-composition of tasks in environments of cost-cutting and labour productivity drives. Indeed, for many interviewees, re-skilling was just another facet of work intensification. One AircraftCo UK engineer described this environment:

The time element is taken out. Everything needs to be done faster, faster and faster. When we first started as AircraftCo UK, the time between deciding that we were going to make an aeroplane and the first flight was quite an extended period. And over the years that has come down and come down. So one of the first things they do now is they decide what date the first flight is going to be. And they work back from that...Rather than working from, "Well, here's what we're going to do. This is what we're going to make. We'll start with drawings. When will we get to there?" they set that date and exert the pressure backwards which causes problems. (Design Draughtsperson, August 2006).

In such 'high performance' work settings it is by no means self-evident that skill development may contribute to a more favourable quality of working life. As Anderson-Connolly et al (2002: 402) and Green (2006) have found so-called 'upskilling' can contribute to increased role ambiguity and workplace stress whilst reducing workers' job satisfaction. Green also found that the link between effort intensification and technological change was higher for non-manual workers (2006: 75). The following two AircraftCo UK engineers' comments reflect these patterns:

I've never been very good at blowing my own trumpet but yeah the tool sets we've got require, well, they're very involved, very involved, and at the same time there's a lot of work around so you really are juggling things. You need to know exactly where you are in the process and yeah there's a lot of people that have come and gone here because it's become too much for them, too challenging. So for example, the tool set we've got right now, it's not perhaps as complete as it could be. So you end up dealt with a lot more scripting, writing macro's, and actual using the design tool as well. (Design Integration Engineer, February 2005).

The workload in my area has risen over the past four years, but the manning level has stayed the same. And with all the extra duties we have to undertake (risk assessments, safety tours, lifting plans, safe systems of work, and control of sub-contractors) it's becoming more difficult to get the job done on time. And this has put greater pressure on people resulting in greater stress which is then a problem that causes ill health. (Ground Loads Engineer, April 2005).

In GM's lean production environment, our interview discussions concerning shifts in the composition of assembly line skills became difficult to disentangle from the lean imperative to reduce the porosity of the working day to something approaching insignificance. Any increases in tacit skills and manual dexterity were mostly a

function of workers' adapting to pressures arising from a new Taylorism: the replacement of time to complete a piece by ever more stringent job cycle times. As one operator observed:

Going back to the original question I think the job has got harder. Definitely. Physically harder. Now they've done this thing, where we used to have everything in time and motion they've just now implemented cycle time. It's universal throughout General Motors and that is the cycle time for that job... And times are that tight that if you drop a piece, if you've got to load five pieces and you actually dropped a piece and had to pick it up, the light flashes and the alarm goes off, so you add that time. Every time a station doesn't fill his cycle time another alarm goes off, so you've got flashing lights going off. And there are big blackboards up above so the supervisor can tell which station is what they call "slow cycling". He comes to you, why are you slow cycling?... It's more stressful; the job's more stressful. You're on your feet for the whole shift, they won't let you sit, you're not allowed to sit down. (Assembly Line Operator, May 2005)

A GM shop steward also emphasised how more complete management control - and consequent loss of any semblance of worker control - were also a feature of these work organisational changes:

They control the way you work, control what you do, control where you go, control when you're on the job you know. They don't even want you to like leave the job now do they? If the track stops they don't want you to move away from it, they want you to stand there and wait until it starts up again... It's all based around keeping people where they should be, where they perceive they should be and control them, their movements. The control is all from the senior management not the supervisors, they're just puppets for the main ones. (TGWU Steward, May 2005)

At Fiat's Melfi plant, the lower incidence of reported change in skill and task intensity can be attributed to the early procedural regulation of worker roles and tasks within the greenfield 'Integrated Factory' (Bonazzi 1994; Pulignano 2002). The deployment of workers in self-contained UTE manufacturing cells was aimed partially at achieving a mix of skilled and unskilled labour responsible for a segment of assembly operations. Each UTE would integrate production technologists with assembly workers, running continuous improvements activities and acting as internal customers to the preceding UTE on the production line (Camuffo and Volpata 1998; Lanzara and Patriotta 2007). Equally, the goal was to codify workers' tacit knowledge into a set of tightly supervised working practices in order to reduce idle time and improve productivity and product quality (Pulignano 2002). Although the opening of the plant in 1993 was heralded by the post-Fordist discourse of 'empowerment' and the 'learning factory', both of which were supposed to be characteristics of the decentralisation of management to the UTE, a number of commentators have highlighted the gradual introduction of hierarchical and authoritarian rule into the factory. Manifest in this has been the very high number of disciplinary actions taken out against workers<sup>8</sup>, a tightening of production cycle times and the imposition of unpopular shift rotas (De Angelis 2000; Patriotta and Lanzara 2006; Lanzara and Patriotta 2007). In this context, many of the workers we interviewed described a regime of tight supervision and time control no different from the lean regime at GM. For example:

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<sup>8</sup> Up to 9,000 sanctions were imposed in the five years leading up to a four week strike in 2004; 2,500 disciplinary measures were taken out in 2003 alone (Lanzara and Patriotta 2007: 13).

When we applied for those jobs, we thought we had found an oasis of happiness. It hasn't been like that. During these years, some have had some health problems, some now can't go on anymore: even if you don't want, you forget your family, your friends, your social life. Only people who live close to the plant are a bit luckier, because they do not have to travel. This is why many people quit. After ten years spent working in the plant, if you find another job, you quit. Anything would be better. In my opinion, Fiat wears you out through the years. Not immediately, it does this over the years so that you don't realize it. (Assembly line worker, June 2005)

Another commented on the simple reality of compliance with the rhythm of JIT:

Working in a just in time plant means that, in 1 minute and 20 seconds, they calculate how much you work during that time, so you do not even have time to think about it. (Assembly line worker, June 2005).

In the two years leading up to the research, the Fiat management also restructured the UTEs in order to secure greater direct control over cell labour utilisation and to restrict functional flexibility in the interests of cost control and unit efficiency. To do this, larger UTEs were fragmented into domains, smaller units of labour responsible for a single segment of UTE operations. The impact on the production operator was to further reduce employee discretion and autonomy within the cells and to restrict the scope for job rotation. One cell member summarised this:

Since the domains have been introduced it's got worse because the domain makes fixed stationing, so we now rotate much less. Before, a UTE operator rotated around eight to nine stations. Now it is just one-two-three maximum. Myself, I only rotate around two. (Assembly line worker, June 2005).

### **Skills training and employee participation**

The survey also explored differences in the extent of skills training in the four plants and whether workers felt that the training on offer facilitated greater employee influence over different levels of decision-making at work. In the human resource management literature, skills training has become a leitmotif of the 'empowerment' rhetoric that is associated with both the lean production and high performance work model. This is, in part, due to a reputed link between higher skill levels and increased participation. As Gallie et al (1998: 87) have noted, a number of researchers have argued that the denial of participation to higher-skilled workers would be likely to lead to demotivation and a decline in the quality of work. Patterns of employee participation in the four case studies will be considered in another paper however, for the moment our interest lies in the specific role of skills training in generating the required technical and behavioural skills to enable participation in broad organisational decision-making. This relationship is widely held to be a core factor in the management of both the lean workplace (Kenney and Florida 1993; Womack et al. 1990) and the high performance workplace (Appelbaum et al. 2000; Head 1997; Lawler et al. 1995). It has also been a feature of the 'mutual gains' ideology that has underpinned interest in social partnership in the UK. This is despite the fact that, to date, there is scant evidence that British employers have been prepared to invest sufficiently in workforce training and forgo their prerogative over training and development issues (Martínez Lucio and Stuart 2004: 419; Lloyd and Payne, 2004).

The results from the fifth WERS (2004) survey showed that over four-fifths of UK workplaces had provided 'off-the-job' training for some of their experienced core workers over the previous year and that this was more likely in workplaces where

core staff worked in professional occupations but less likely where staff worked in manual occupations. The WERS employee survey also found that over one third of workers had not received any training over the previous year (Kersley et al. 2006: 82-85). The pattern of training provision in our UK-based case studies reflected these national trends whereas the situation in the Italian plants was markedly different. Respondents were asked how much off-the-job training they had received in the previous 12 months. Off-the-job training was defined as any training away from their work-bench/desk, either on or off-site. As Table Three shows, four fifths of the sample in the Italian plants had received no off-the-job training compared to 40 per cent at GM and one in four at AircraftCo UK. These differences are not accounted for by any contrasting pattern in the provision of on-the-job training: the survey also found that nearly three quarters of the Fiat sample and 56 per cent at Alenia ‘rarely or never’ received on-the-job training compared to less than half of workers in the UK plants. Two reasons were indicated by the respondents in the interviews as explaining the low level of on-the-job training in the Alenia’s plants: the lack of appropriate attention by the HR function towards the implementation of training policy and the consequently lack of dedicated resources and budget opportunity offered to training in the company. The contrast in skills training provision between the British plants reflects national occupational differences identified by the WERS survey.

**Table Three. Days of Formal (Off-The-Job) Training During the Previous 12 Months (cell per cent)**

	No Training	Less Than Two Days	Two to Less Than Five Days	Five to Less Than Ten Days	Ten Days or More
AircraftCo UK	24	18	20	21	16
Alenia	81	4	8	5	2
GM	40	39	9	7	5
Fiat	78	6	9	3	4
All	44	17	15	14	10

The survey then probed the relationship between training and employee participation in organisational decision-making. Respondents were asked to what extent they felt that any training they had received since their employment at the plant helped them to exert greater influence over different levels of decision-making at work. The degree to which this issue was important to these workers was also investigated by asking a second set of matched questions concerning whether they would welcome more training that might help them to exert greater influence over these different levels of decision-making. The results to these two sets of questions are shown in adjacent columns in Table Four<sup>9</sup>.

Three principal patterns emerge from these data. The first is that although, in some cases, sizeable minorities of respondents felt that the skills training they had received did allow them to exercise at least some influence over organisational decision-making, in every plant the majority of workers sampled felt that such training allowed them to exercise only a little or no influence. Indeed, those indicating no influence were the majority group for every level of decision-making. There were expected differences between the British and Italian plants, workers in the latter being more likely to deny any training impact. The second is that notwithstanding the limited

<sup>9</sup> For ease of presentation, the small proportion of respondents answering ‘unsure’ are not included.

evidence for any association between skills training and influence, the results were more positive for those linked to job control (how work is organised and team decisions) compared to broader organisational decisions (those made by line managers and senior managers). The third is the clear contrast that exists between employee aspiration and a reality of the limited impact of training on employees' ability to participate in organisational decision-making. That is, large majorities of respondents in each plant, in most cases two thirds or more, indicated that they would welcome skills training that would help them to exercise greater influence. Significant proportions of respondents felt that this was very important.

The contradiction between the rhetoric and reality of learning-based participation was most obvious in the lean production car plants. At GM, workers we interviewed described how despite the pervasive discourse of the 'learning factory' with its emphasis upon the demand for better educated employees equipped with the necessary vocational skills to continuously improve production and quality, their own plant managers applied a conventional Tayloristic logic to training policy on the shop-floor. One operator commented:

...I mean they tell us what jobs they want us to do if we need training, uh you know they'll train us to do the jobs that are required as standard, but I don't think they utilise our brains. They just utilise our arms and legs. (Assembly Line Operator, May 2005)

A skilled worker in the GM plant also highlighted the gap between existing training resources and what the workforce felt was necessary to meet their needs:

Occasionally people are sent away. Very often trainers are brought in and you're still off the job, taken to a classroom type setting like this and you're given training. Again the company would say they're putting a fortune into it. The hourly pay would say you're not putting anything into it. We need more training. (Maintenance Fitter, May 2005)

**Table Four. Skills training and employee participation**

	A lot	Some	A Little	None	Yes, very important	Yes, quite important	No, not very important	No, not at all important
<i>Has training helped you exercise greater influence over decisions governing how your work is organised</i>					<i>Would you welcome training that helped you exert more influence over decisions governing how your work is organised</i>			
AircraftCo	10	33	20	37	27	47	16	7
UK								
Alenia	11	19	21	44	45	30	13	9
GM	8	29	27	36	47	35	10	3
Fiat	10	17	11	51	39	37	5	10
All	10	28	19	40	34	41	13	7
<i>Has training helped you exercise greater influence over decisions made by your team or section</i>					<i>Would you welcome training that helped you exert more influence over decisions made by your team or section</i>			
AircraftCo	10	28	25	36	26	48	16	6
UK								
Alenia	7	16	31	43	40	36	15	4
GM	8	28	23	41	42	38	12	3
Fiat	6	12	18	53	32	35	7	14
All	9	24	24	40	31	43	14	7
<i>Has training helped you exercise greater influence over decisions made by your line management</i>					<i>Would you welcome training that helped you exert more influence over decisions made by your line management</i>			
AircraftCo	2	24	29	44	28	47	15	5
UK								
Alenia	3	3	17	70	34	28	20	10
GM	6	23	18	49	41	31	16	5
Fiat	4	13	8	60	25	29	11	15
All	3	19	23	50	30	39	15	8
<i>Has training helped you exercise greater influence over decisions made by your senior management</i>					<i>Would you welcome training that helped you exert more influence over decisions made by your senior management</i>			
AircraftCo	1	14	17	64	25	40	21	9
UK								
Alenia	2	2	10	80	35	30	16	12
GM	10	15	14	56	42	26	17	8

Fiat	3	12	7	61	26	24	11	17
All	3	12	14	64	29	34	18	11

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At Melfi, the plant management seemed to have decided that the production workforce required no additional skills training over and above the basic task-related programmes applied when the plant commenced operations in 1993. One worker confirmed:

In my opinion, generally, nothing has changed much since then, especially in relation to ergonomical stationing and workload. I've gained no new skills. We've never had any training...just at the beginning, just those two weeks, that's all. (Assembly line worker, June 2005).

At AircraftCo UK, although the quantity and complexity of skills training was at a higher level than the other plants, and many workers did use the company's annual appraisal system to discuss training needs, the dominant view was that the skill and task intensification described above, based as it was on ever increasing workloads, too often prevented workers from accessing training programmes. The following view was typical:

Well you do your appraisal and you set down your objectives, "you'll do this, this and this" and you walk out the door and you get umpteen different projects thrown at you and the plan goes out the window. I recently did a review where we talked about different skills we needed in the future and so my manager said, "well where do you want to go, do you want to do this kind of thing, or would you rather this kind of thing?...So you're going to learn how to be an expert in your field, so you need to talk to Frank and you need to do this and then you need to do this". And of course I was, "Yeah that sounds really interesting I'd really like to do that." But I haven't heard anything about it since. That was two months ago. So we have all these good plans and there are lots of things that we would like to do and know that we need to do it but we just have too many plans.

Arguably, at Alenia the issue of a training agenda was linked to its structural relegation to what the company considered to be other, more pressing, needs. In response to the question concerning the company's emphasis on training as opposed to 'getting the job done on time', Massimo explained:

Yes, that is true and in the light of that - which also the management underlines! - new training initiatives have been recently taken in order to improve on this point. [...] The reason why there has been less training or not so much training before it is because there was not a structure in the company in charge of taking care of training, there was no management culture towards the importance of training - training was not considered as important - and also the resources and the budget available inside the company for training were limited.

To summarise, notwithstanding the relatively low incidence of reported change at the Fiat plant, there was a surprising uniformity in the high numbers of both non-manual workers at AircraftCo UK and Alenia and manual workers at GM reporting increases in the levels of high skills and basic tasks required to complete their jobs. This increase was mostly a function of technological change, product complexity and factors related to labour utilisation. Moreover, although the specific manifestations of skill change differed between the (non-manual) HPW settings and (manual) lean plants, its overall impact on quality of working life was again more unitary. Many workers did not perceive this so-called 'upskilling' in positive terms: patterns of skill and task intensification were experienced as effort intensification in the context of a decline in employee autonomy and discretion. Thus, despite the contrasting class



locations of the workers in our survey, well-qualified engineers on the one hand and semi-skilled production operators on the other, changes to the labour process in quite different manufacturing contexts had generated a 'circumstantial homogeneity' for the majority in terms of a degradation of conditions (Neilson 2007). As far as skills training was concerned, there existed clear differences between the UK and Italian plants in the provision of formal, on-the-job training. These were more marked than any difference between HPW and lean plants. More pertinently, although minorities of workers felt that their skills training did enhance their ability to participate in organisational decision-making, this was not the majority view. With little difference between the HPW and lean plants, the majority view was that the skills training programmes on offer had little impact upon workers' ability to exert influence over broad organisational decision-making processes even though large majorities in all plants felt that such a link was important.

### **Discussion and Conclusions**

Our micro-level analysis of the interactions between work organisational change, the labour process and effort intensification does, in some respects, reflect national trends in Italy and the UK. Gallie et al.'s (1998) analysis of the 1992 Employment in Britain Survey detected a link between up-skilling and work strain, particularly for those in professional occupations (such as graduate engineers). Green's (2006) more recent secondary analysis of WERS datasets has also highlighted how, in the UK, effort intensification has been mostly driven by technological and labour utilisation factors, such as, new technology, change in work organisation and increased task flexibility (2006: 74). Green's analysis of the European Foundation for the Improvement of Living and Working Conditions surveys also highlighted a greater increase in average effort levels in Italy than in all other EU countries (2006: 59-60). One of the recurrent themes to emerge from our worker interviews was that the experience of increased effort was not an inevitable outcome of the shifts in the composition of skills and tasks, but rather, a function of the workers' loss of any semblance of control over their work routines and range of responsibilities. Indeed, this pattern, applied equally to many of the aerospace engineers whose labour processes have traditionally been subject to more indirect forms of managerial authority such as 'responsible autonomy' (Friedman 1977). Again, this pattern corresponds with national survey data. Between 1992 and 2001, while job complexity has risen, task discretion declined in the UK for all occupational groups and most of all for professional workers. Equally in Italy (and a number of other European countries), task discretion declined significantly between 1996 and 2000 (Green 2006: 105-106; Felstead, 2004).

What is distinctive (and, for some, counter-intuitive) about our case study analysis, however, is that despite obvious material differences between the labour processes and working conditions of highly qualified aerospace engineers employed in high performance work environments and semi-skilled car workers employed on lean assembly lines, in two different countries, similar patterns of degradation of work obtained. That is, technological change, such as the computerisation of design and production processes, along with various manifestations of lean staffing policies were together generating so-called 'up-skilling' - effectively task enlargement. And in micro-political environments marked by a skewed balance of power between labour and the employer in favour of the latter, workers' autonomy had declined as had their ability to maintain some control over the pace and intensity of work. Many critics of lean production environments would, of course, expect such an outcome (for example,

Elger and Smith 2004; Rinehart et al., 1997; Stewart et al., 2009). However, it does not sit favourably with the assumptions of those who advocate the use of ‘high performance work systems’ and for whom a positive relationship between high skill, task discretion and low work intensity is cardinal (for example, Appelbaum et al. 2000; Ashton and Sung 2002; O’Toole and Lawler 2006). That is to say that we can extend sympathy to those described by Lloyd and Payne (2004) as sceptics since our cross national comparative evidence, albeit limited to two sectors, fails to support the notion that HPW improves worker experience in respect of greater control, autonomy and an improved sense of participation, in short, enhanced quality of working life. Explanations for variations in employee employment experiences, while recognizing (national) institutional differences, should also consider the notion of employment regime but enlarged to embrace managerial practices set against the back drop of neo-liberal restructuring by firm and sector. Perhaps we should go further in arguing that neo-liberalism has become the leitmotif transcending differences in management regime? In what ways therefore might we develop a research agenda to highlight common international pressures upon employees across different firms and sectors, other differences notwithstanding?

## **References**

- Ackers, P., Marchington, M., Wilkinson, A. and Dundon, T. (2004) ‘Partnership and Voice, with or without Trade Unions: Changing UK Management Approaches to Organisational Participation’, in Stuart, M. and Martinez Lucio, M. (eds.): *Partnership and Modernisation in Employment relations*, London: Routledge.
- Anderson-Connolly, R. Grunberg, L. Greenberg, E and Moore, S. (2002) ‘Is lean mean? Workplace transformation and employee well-being, *Work, Employment and Society* 16(3): 389-413.
- Appelbaum, E., Bailey, T., Berg, P., and Kalleberg, A.L. (2000) *Manufacturing Advantage: Why High Performance Work Systems Pay Off*, Ithaca, New York: Cornell University Press.
- Ashton, D. and Sung, J. (2002) *Supporting Workplace Learning for High Performance Working*, ILO.
- Bonazzi, G. (1994) ‘A Gentler way to total quality? The case of the “integrated factory” at Fiat Auto’, in Elger, T. and Smith, C. (eds.), *Global Japanization? The Transnational Transformation of the Labour Process*. London: Routledge.
- Camuffo, A. and Volpato, G. (1998) ‘Making Manufacturing Lean in the Italian Automobile Industry: The Trajectory of Fiat’ in M. Freyssenet, A. Mair, K. Shimizu & G. Volpato (eds.) *One Best Way? Trajectories and industrial models of the World’s Automobile Producers*, OUP.
- CBI/TUC (2001) *The UK Productivity Challenge: CBI/TUC Submission to the Productivity Initiative*, London;
- CBI/TUC; CIPD factsheet (revised edition 2006) ‘High performance working’ [www.cipd.co.uk](http://www.cipd.co.uk);
- Coupar, W. and Stevens, B. (1998) ‘Towards a new model of partnership. Beyond the “HRM versus industrial relations” argument’, in Sparrow, P and Marchington, M. (eds.) *Human Resource Management. The New Agenda*, London: FT Pitman Publishing.
- De Angelis, F. (2000) Working-Time at the Fiat Integrated Factory of Melfi. Paper prepared for the International Workshop Lean Production and Labour Force in

- the Automobile Industry: The Forms of Implementation of an Epoch-Making Model, March 25-27, 2000, University of Calabria, Rende, Italy.
- Dionisio C. & Casola A. (2001), 'Innovative Engineering Processes and Production Methodologies to Reduce Development Cost of Future Satellites', unpublished paper, Alenia Spazio S.p.A, Italy
- Elger, T. and Smith, C. (2005) *Assembling Work: Remaking Factory Regimes in Japanese Multinationals in Britain*. Oxford University Press: Oxford.
- Friedman, A. (1977) *Industry and Labour. Class Struggle at Work and Monopoly Capitalism*, London: Macmillan.
- Gallie, D (2007) *Employment Regimes and the Quality of Work*. Oxford: Oxford University Press.
- Gallie, D. White, M. Cheng, Y. and Tomlinson, M. (1998) *Restructuring the Employment Relationship*, Oxford: Oxford University Press.
- Gardell, B (1977), 'Autonomy and Participation at Work', *Human relations* 30(6) pp. 515-533.
- Giddens, A (2000) *The Third Way and its Critics*. Polity Press, Cambridge.
- Godard, J. (2004) 'A Critical Assessment of the High-Performance Paradigm', *British Journal of Industrial Relations*, 42(2): 349-378.
- Green, F. (2006) *Demanding Work. The Paradox of Job Quality in the Affluent Economy*, Princeton, NJ: Princeton University Press.
- Green, F. Felstead, A. and Gallie, D. (2003) 'Computers and the changing skill intensity of jobs', *Applied Economics*, 35(14): 1561-1576.
- Guest, D. (2002) 'Human Resource Management, corporate performance and employee well-being: Building the worker into HRM' *Journal of Industrial relations*, 44, 335-358.
- Head, C. (1997) *Beyond Corporate Transformation: A Whole Systems Approach to Creating and Sustaining High Performance*. Portland: Productivity Press.
- Kenney, M. and Florida, R. (1993) *Beyond Mass Production: The Japanese System and its Transfer to the U.S.*, Oxford: Oxford University Press.
- Kersley, B. Alpin, C. Forth, J. Bryson, A. Bewley, H. Dix, G. and Oxenbridge, S. (2006). *Inside the Workplace: Findings from the 2004 Workplace Employment Relations Survey*, Abingdon: Routledge.
- Lanzara, G. and Patriotta, G. (2007) 'The Institutionalization of Knowledge in an Automotive Factory: Templates, Inscriptions, and the Problem of Durability', *Organization Studies OnlineFirst*, January 11<sup>th</sup> 2007.
- Lanzara, G. F. and Patriotta, G. (2006) 'Identity, Institutions, and New Work Roles: The case of a green field automotive factory' in *American Behavioral Scientist*, Vol 49, No. 7. 987-998.
- Lawler, E. Mohrmar, S. and Ledford, G. (1995) *Creative High Performance Organizations: Practices and results of Employee Involvement and Total Quality Management in Fortune 1000 Companies*. San Francisco, CA: Jossey-Bass.
- Lloyd, C and Payne, A (2004) 'The Political Economy of Skill: A Theoretical Approach to Developing a High Skills Strategy in the UK', in Warhurst, C, Grugulis, I and E Keep (eds), *The Skills that Matter*. Basingstoke, Palgrave-Macmillan.

- Martínez Lucio, M. and Stuart, M. (2004) 'Swimming against the tide: social partnership, mutual gains and the revival of "tired" HRM', *International Journal of Human Resource Management*, 15(2): 410-424.
- National secretariats Fim, Fiom, Uilm, Rome, 18 February 2005.
- National secretariats fim fiom uilm, national coordination rsu alenia space, Rome, 8 March 2004
- Negrelli, S, Pichierri, A, Castellani, M, and Pacetti, V (2005) 'Firms as conversion factors of local capabilities in the territories of Brescia and Turin', Department of Social Sciences, University of Brescia, Working Paper.
- Neilson, D. (2007) 'Formal and real subordination and the contemporary proletariat: Re-coupling Marxist class theory and labour-process analysis', *Capital and Class*, 91: 89-123, Spring 1997.
- O'Toole, J. and Lawler, E.E. (2006) *The New American Workplace*, New York and Basingstoke, Britain: Palgrave Macmillan.
- Oliveri, G. (2000) 'Union for whom? The practical working of participative model at Fiat Sata un Melfi' Paper presented at the International Workshop, *Lean Production and Labour Force in the Automobile Industry The Forms of Implementation of an Epoch-Making Model*, University of Calabria, Rende, Italy.
- Patriotta, G. and Lanzara, G. (2006) 'Identity, Institutions, and New Work Roles: The Case of a Green Field Automotive Factory', *American Behavioral Scientist*, 49(7): 987-999.
- Pulignano, V. (2002) 'Restructuring of work and union representation. A developing framework for workplace industrial relations in Britain and Italy', *Capital and Class*, 76: 29-64, Spring 2002.
- Pulignano, V. (2002a) 'Just-in-time and social relations in the auto-component industry', in Actes du GERPISA International Network No.33.
- Pulignano, V. (2002b) 'Restructuring of work and union representation: A developing framework for workplace industrial relations in Britain and Italy', *Capital & Class*, Spring 2002.
- Ramsay, H., Scholarios, D. and Harley, B. (2000) 'Employees and high-performance work systems: testing inside the black box', *British Journal of Industrial Relations*, 38, 4: 501-531.
- Rinehart, J., Huxley, C. and Robertson, D. (1997) *Just Another Car Factory? Lean Production and its Discontents*, Ithaca and London: ILR Press.
- Stewart, P, Richardson, M, Danford, A, Murphy, Richardson, T and Wass, V (2009), *We Sell Our Time No More: Workers' Struggles against Lean Production in the British Car Industry*. London: Pluto Press.
- Stewart, P. Lewchuk, W. Yates, C. Saruta, M. and Danford, A. (2004) 'Patterns of Labour Control and the Erosion of Labour Standards. Towards an International Study of the Quality of Working Life in the Automobile Industry (Canada, Japan and the UK)', in Charron, E. and Stewart, P. (eds.) *Work and Employment Relations in the Automobile Industry*, Basingstoke: Palgrave Macmillan.
- Stewart, P. and Wass, V. (1998) 'From "embrace and change" to "engage and change": trade union renewal and the new management strategies in the UK automotive industry?' *New Technology, Work and Employment* 13(2): 77-93
- Womack, J. P., Jones, D. T. and Roos, D. (1990), *The Machine that Changed the World: The triumph of lean production*, New York: Rawson Macmillan.