High Performance Workplaces and Skill Development:
Updating the map of the territory

Bill Cochrane, A Dharmalingam, Paul Harris, Michael Law* and Gemma Piercy
University of Waikato*****

The impact of High Performance Workplace Systems (HPWS) on workers and unions is a contentious area for debate in the fields of industrial relations and social science in general. Proponents of HPWS claim that one of the benefits for workers is that they enable workers to develop and raise their skill levels. This paper offers a preliminary evaluation of that claim by sketching an updated map of the territory. It concludes that the HPWS literature contains significant weaknesses concerning the definition of skill in explaining what skill development means for workers, individually and collectively.

Introduction

This paper explores aspects of the contentious debate around the impact on workers of High Performance Workplace Systems (HPWS). In New Zealand, the principal unions that cover workers employed in dairy manufacturing have supported the introduction of a HPWS, known as 'TRACC' or 'Manufacturing Excellence' (ME) (see Cochrane, Law, & Piercy, 2005). Those unions have also encouraged a research team associated with the University of Waikato's Centre for Labour and Trade Union Studies to undertake a Department of Labour funded, Future of Work entitled Skill needs and worker voice in high performance workplaces: A case study of the dairy industry. The project has been designed to reflect both theoretically and practically the Centre's in the relationship between industry training, workplace productivity, worker voice, and the role of unions

In the context of the wider study, the purpose of this paper is quite limited. Specifically, it aims to provide a snapshot of the contemporary research literature--a 'map of the territory'—that begins to bring together both industrial relations considerations and critical perspectives on adult learning. While the research itself focuses on dairy manufacturing, it is clear that in order to make a contribution to the development of HPWS in that industry, it is important to have a broader understanding of what is meant by HPWS and to put HPWS into an international and ideological context. The Labour Studies Centre is committed to furthering the interests of workers and their unions; thus our central questions explore to what extent, and in what forms, do HPWS actually benefit workers and unions. An integral aspect of any positive answer is the degree to which HPWS contribute to the skill development of workers.

High Performance Workplace Systems

With the exception of New Zealand itself, there is a dearth of material in the international HPWS literature on dairy production. This paper therefore focuses on manufacturing in general, although some of the material considered is cross-industry in scope. One thing is clear from the literature: there is no simple, clear-cut and universally agreed upon definition of what HPWS are (White, Hill, McGovern, Mills, and Smeaton, 2003). They have been characterised as being both difficult to define and to measure (Edwards, Geary, Sisson in: Murray et al., 2002). Ashton and Sung (2002) cite research that refers in one case to seven practices of successful organisations, in another case to five key practices and in a third to 18

practices. Cappeli and Neumark (2001) refer to one piece of research that suggests that 27 variables could be used to define 'high performance.'

Other authors believe that certain common features help define HPWS. For McNab and Whitfield (2001) it is 'a generic term covering a wide range of disparate approaches to organizing employment, including high commitment workplaces, flexible specialization and high involvement organizations' (p.294). For Ramsay, Scholarios, and Harley (2000), HPWS are a bundle of practices that involve 'management ceding a degree of control to employees and introducing a range of progressive methods which increase employee welfare' and 'practices aimed at the development of employee skills' (p.508). Summarising the literature, Guthrie (2001) argues that HPWS utilize a 'system of management practices giving employees skills, information, motivation, and latitude and resulting in a workforce that is a source of comparative advantage' (p.181).

Ashton and Sung (2002) suggest that rather than simply listing practices, it makes more sense to think in terms of *'a series of four dimensions:*

- *Employee autonomy.* This is about the *'structuring of opportunities for the exercise of employee skills'* (eg include self-managed work teams and multi-skilling).

- *Support for employee performance.* Includes all practices designed to support continuous acquisition of skills, such as appraisal systems, mentoring and coaching.

- *Rewards for performance.* The use of systems designed to reward performance and motivate the employee (eg individual and group based performance pay).

- *Sharing information/knowledge.* By this they refer to organisations designing systems to communicate with employees and to encourage feedback from them (and the means of ensuring that this feedback reaches the organisation's strategists) as part of a drive to promote employee participation in the management of the work process.

The Diffusion of High Performance Workplace Systems

HPWS are not as widespread as some of the literature might lead one to believe. A survey of 800 organisations in the EU (Business Decisions, 2002) found that only 10% of the sample were *'systematic'* users of HPWS whilst 30% of the organisations had decided against using them. Other EU studies/surveys (Brödner & Latniak, 2002; Oeij & Noortje, 2002; Savage, 2001) have also concluded that HPWS are not widespread and their dissemination rate is slow. Evidence from Australia, the UK, Ireland and the USA points in the same direction (eg Healy, 2003; Hutt & Read, 2003; Knauss, 1998; Roche & Geary, 2000).

One suggested reason for the relatively low take up rate of HPWS is that other business strategies can deliver enhanced profits. Ashton and Sung (2002) see this as a short-term option, but other authors simply point out that there are viable alternative strategies for firm and these are not necessarily short term ones (Knauss, 1998; Roche & Geary, 2000; Business Decisions Ltd., 2002). Two reasons EU firms that rejected HPWS claimed that HPWS did not fit in with their culture or was not needed to meet their customer requirements. Bayo-Moriones and Merino-Diaz de Cerio (2001) consider that multinational firms and firms that utilise a high level of automation are more likely to move to HPWS. However, Datta, Guthrie and Wright's (2003) research suggests that firms with low capital intensity, which practice product differentiation and which are located in growth industries, gain most from HPWS.

Ashton and Sung (2002) conclude that HPWS *'may not be suitable for all companies and organizations'* (p.61). Nor are all firms willing to take the risk of adopting HPWS.

Organisational or system inertia, whereby firms have become fixed in a pattern of operating in a certain way and are resistant to change, has also been seen as a reason why firms do not shift to HPWS (Ashton & Sung, 2002; Healy, 2003). The same authors also point to worker and/or union resistance to change as making it difficult for some firms to introduce HPWS.

As well as low-take up rates, firms often use only one or a few elements of the total bundle of practices that comprise HPWS. An Irish survey found that the most common workplace practice was TQM followed by team work and ad hoc task forces (Roche & Geary, 2000). For the EU as a whole, survey results showed that of those firms claiming to use HPWS 64% had introduced multitasking, 33% had adopted a flattened hierarchy in production, and only 28% had moved to team working. The level of application of HPWS also varied between nations with the lowest level being in Southern Europe (Dell'Aringa, Ghinetti, & Lucifora, 2003).

Employee Losses and Gains

Whereas the overwhelming majority of studies on HPWS would signal gains to employers, whether or not employees stand to gain from HPWS is a much more controversial matter. The literature on employee losses and gains reveals a spectrum of opinions. At the one end of the range are studies which argue that HPWS provide mainly gains to employees, in the middle are studies that attempt to assess both gains and losses, whilst at the other end of the range comprise studies arguing that HPWS produce many more losses than gains to employees.

At the negative end, Danford (2003) cites research that evidently shows that HPWS go hand in hand with downsizing and lead to job insecurity and reminds us that HPWS does not escape the *'capitalist logic'* of *'maximising profits'* (p.73). As Graham (1993) had noted earlier, significant levels of dissatisfaction can be associated with HPWS when employers use worker involvement as a control mechanism to increase the pace of work. And sceptics can take some comfort from Godard's (2004, p.360) wide-ranging critical assessment of the HPWS literature. That study suggests the quite pessimistic finding that the impact on worker job satisfaction of HPWS practices such as autonomous teams may in fact be negative.

White, Hill, McGovern, Mills, and Smeaton (2003) point out that HPWS can have *'negative spillovers'* on work life balance. For instance, because it can lead to employees having to work longer hours and thus having less time at home for their domestic lives. In addition, the pressure of new appraisal systems can lead to domestic tensions. A Canadian study (Godard, 2001) also argues that higher levels of employee involvement can produce stress that counter-weighs the positive impacts on workers of empowerment and task involvement. Kumar (2000) lists reduced quality of worklife, increased workloads, job insecurity, and declines in influence on the job and in confidence in management as being amongst the impacts of HPWS on workers. Danford *et al*. (2004), in a case study of British aerospace workers, found that employee workloads increased, older workers complained about a loss of job variation, worker stress levels rose, workers–and managers-especially came under increasing time pressure. These also had a negative spill-over into the workers' home lives. Looking at workplace changes in the EU from 19976-2000 Oeij and Noortje (2002) found that 32% of employees reported being subjected to high speed work for over 50% of their working time, and there was a general move across Europe to an intensification of work. Further, *'monotonous work decreased but so did task complexity and learning opportunities'* (p.45).

In an attempt to move beyond the polarisation of the HPWS debate between those who are unqualifiedly enthusiastic and those who where equally strongly critical, Anderson-Connolly, Grunberg, Greenberg, and Moore (2002) decompose the process of workplace transformation into distinct components: intensity, autonomy, team-work, skilling and computing. They then

analyse the impact of these factors on the psychological and physical wellbeing of workers in a large US manufacturing corporation. These authors found a complex pattern: some aspects of workplace transformation proved harmful to worker well-being and decreased job satisfaction while others were beneficial and contributed to increased levels of satisfaction. They also found that the effects were conditioned by the status of the individual. For example, while some components of workplace transformation, such as autonomy, contributed to the satisfaction and well-being of non-managers they were a stressor to managers. Batt's (2004) study of a large, unionised, telecommunications company also found that status was related to satisfaction with aspects of HPWS. Workers participating in self managed teams reported significantly higher levels of perceived discretion, employment security, and satisfaction while supervisors reported the opposite. Middle managers who had initiated the implementation of these innovations also reported higher levels of employment security than their non-innovating counterparts.

Anderson-Connolly *et al.* (2002, p.409) conclude that productivity enhancing changes, such as HPWS, are more or less inevitable but that this process is contested and offers workers the opportunity to pursue those changes that enhance thei psychological and physical well-being while opposing those aspects that do not. Farris and Toyama (2002) would agree that it is possibile to mitigate the impact of the 'mean side of lean' by focusing on the importance of 'worker voice', a key aspect of the HPWS paradigm. Their comparative study of US and Japanese lean production systems also points to the tensions within HPWS between those elements that improve productivity and product quality through increased worker effort and stress, and reduced worker health and safety, and those that promote job satisfaction through increased autonomy, interaction with co-workers and upskilling (Bauer, 2004).

Closer to home, Buchanan and Hall's (2002) analysis of 19 case studies of best practice in the Australian metal and engineering sector support sceptics of unions' strategic capacity to take advantage of HPWS opportunities. They acknowledge that team-working has the potential to provide workers with opportunities for greater autonomy and control at work, but doubt the ability of workers to press their claims for increased autonomy against the firm's desire for increased labour flexibility, reduced waste and 'slack' in the labour process and strengthened monitoring and surveillance of worker and process performance. They report that this was not a product of a lack of worker voice, as trade unions were usually present and active. Rather they suggest that it was, at least in part, a consequence of a union strategy that legitimated the change process, albeit in pursuit of higher levels of worker job satisfaction, empowerment and control over change, and ultimately marginalised rather than empowered unions.

Cochrane, Law, and Piercy's (2005) New Zealand case study of the implementation of ME in the dairy industry's Whareroa plant found a mixed set of responses from workers. Most respondents felt they had limited involvement in key decision making, but a majority felt that the workplace had become safer. There was evidence of more pressure from management on workers to come to work if sick or injured and that the pace of work had increased. A majority agreed that the changes had led to the skill level of their job rising and a bigger majority agreed that new training opportunities had been opened up. But the majority disagreed that the system had any impact on their earnings. Interestingly, and in contrast with the findings reported above of 'negative spillovers,' 25% of the respondents stated that the changes at work had produced off the job, home and community, benefits to them.

An Australian report that is highly supportive of HPWS (Healy 2003) lists higher skills, better rewards and earnings, more secure jobs, access to family-friendly measures and higher job satisfaction as gains to workers, but it also points out that speed and intensity of work effort may be increased, and that the economic gains from greater productivity may not be distributed evenly. Berg and Kalleberg's (2002) survey of over 4000 US workers also

provided mixed findings: that the demands of communication and participation could lead to role overload for workers, but communication and participation systems also reduced co-worker conflict, whilst the level of stress varied according to industry and practice.

At the positive end of the spectrum, Ashton and Sung (2002) surveyed existing studies to argue that HPWS benefited workers via higher levels of job satisfaction, higher earnings, higher skills, though they were cautious about the robustness of the studies surveyed. Around the same time, a survey by Bailey, Berg, and Sandy (2001) of three US industries, concluded that HPWS led to workers being better trained and better skilled, and earning more – allowing for factors such as gender, race and education- than those in traditional workplaces. In 2004, Bauer published a study that utilized data from over 20 000 EU workers and which reached the conclusion that HPWS had a *'highly significant positive effect on job satisfaction'* (p.11).

Workers and Union Involvement

The involvement of workers and their unions in the introduction and regulation of HPWS has been identified as a key element in determining whether the new forms of work organisation succeed or not (Edwards, Geary & Sisson, 2002). Employees are pivotal to the success or failure of HPWS, because they have the responsibility for operating it on a day-to-day basis (Guthrie, 2001). Employee resistance can undermine all the potential gains from HPWS (Ramsay *et al*., 2000). There are many reasons why employees might frustrate or subvert attempts to implement change such as fears of job losses, cuts in pay and conditions, higher work loads, loss of technical status (Business Decisions Ltd., 2002); and *'doubts about employers' motivations and intentions'* (Cochrane *et al*., 2004, p.6). Thus it is argued that employers/managers must *'actively engage in capturing the hearts and minds of all employees'* (Ashton & Sung, 2002, p.65) and must also acknowledge the *'importance of employee satisfaction'* when implementing HPWS (Gollan, 2004, p.8).

The literature holds that workers and unions trust management is crucial (Stuart & Lucio, 2001). There is general agreement that to win employees' hearts and minds involves generating trust and encouraging cooperation (Ashton & Sung, 2002; Business Decisions, 2002; DTI, 2003). This is a two-stage process; that is, employee trust and cooperation should be gained prior to the introduction of HPWS and must be maintained. The continued construction of trust is important to the successful operation of HPWS and participation by employees: autonomy over their task levels, enhances their trust (Kallenberg & Berg, 2002).

The provision of information to, and a willingness to consult with, employees is seen as a pre-requisite for generating such trust and cooperation (Brödner & Latniak, 2002). Whilst management must be willing to share information with the workforce, it must also be willing to give them opportunities to be heard. Participation requires that employees' views are listened to, for *'employees overwhelmingly want voice'* (Gospel & Williams, 2003, p.2). In their concluding comments on their own (SET) version of HPWS, Brown, Reich and Stern (1992) noted that for it to work *'management must be willing to give up its belief that management always knows more and works harder than workers'* (p.21).

Management might make use of a mixture of formal and informal, direct and indirect means of informing and communicating with employees, what seems to matter in the case of achieving successful organisational change is that information and consultation takes place (Dundon, Curran, Maloney, & Ryan, 2003). That Irish study indicates that as well as facilitating workers' greater acceptance of change information and consultation lead to positive outcomes as measured by employee performance indicators such as cost reductions and improved quality of output. The EU and most member states have a statutory requirement

for firms to inform and consult employees and/or Works Councils and trade unions about significant workplace changes (Addison, 2005; 2000; DTI, 2003). In New Zealand, current employment relations/health and safety legislation puts the onus on management to inform and consult employees about significant workplace changes. HPWS rely on the maintenance of high quality working relationships (Hutt & Read, 2003). That is, employment relations should be cooperative not conflictual/confrontational. In unionised workplaces, the introduction and implementation of HPWS needs to take into account the union position. Where unions support HPWS, they are more likely to succeed (Ashton & Sung, 2002; Savage, 2001). Healy (2003, p. 12) recommends that unions be encouraged to *'participate and increase their role as workers' legitimate representatives'* In the UK and Ireland (which, like NZ, have no history of statutory employee participation through Works Councils) employers in unionised firms have utilised 'partnership' agreements with unions as a mechanism for introducing and implementing HPWS (Roche & Geary, 2000, DTI, 2003).

During the early 1990s, the majority of significant New Zealand unions, including the Dairy Workers Union (DWU) which represents over 90% of all employees in dairy manufacturing, were highly supportive of 'workplace reform' as was the Council of Trade Unions (CTU) (Cochrane *et al.*, 2004). This involved various experiments with the reorganisation of work that were similar to those associated with HPWS. Recent industrial legislation again supports and encourages quality (i.e. cooperative and productive) employment relations between employers and unions. That unionisation and worker involvement together can have a highly positive impact on HPWS outcomes was demonstrated by US research based on a survey of 627 establishments. This showed that the highest levels of productivity growth were to be found in unionised firms with high levels of worker involvement and using innovative work practises such as benchmarking, TQM and the self-managed teams. Setting a 'productivity baseline' as that being the levels of productivity achieved by non-union workforces with low employee involvement, the research showed that productivity in unionised/employee involvement firms increased by 20% over this baseline compared to 15% for non-union firms with high involvement (National Centre for Partnership and Performance, 2003, pp.26-27).

The Issue of Skills

One of the gains that workers and unions seek from supporting HPWS is an increased level of skills for the workers concerned in them. A HPWS system can give workers opportunities to become involved as co-ordinators and training and workers *'respond well to their colleagues'* involvement in these roles (Law & Piercy, 2004). For Hutt and Reid (2003), the ability of employees to acquire new skills on the job is a key variable in determining the success or otherwise of HPWS workplaces. The literature offers a number of prescriptions. Appelbaum (2002, p.123) argues that skill development is an integral part of successful HPWS and the forms and workers need to invest *'in firm-specific worker skills'*. *'Practices aimed at the development of employee skills'* are an essential part of HPWS (Ramsay *et al.*, 2000, p.508) and skills associated with problem-solving and contributing to workplace innovation are amongst those that the literature has identified as significant (Lee, Kim, & Kim, 2004). Firms need to consider both how to develop a wider range of skills amongst their employees and also whether they provide opportunities for the employees to upskill in a HPWS environment (Sate of Wisconsin, 1999). Extensive employee training and/or retraining must be seen as an integral part of a successful approach (Bayo-Moriones & Merino-Diaz de Cerio, 2001). Employees and unions must learn how to work within that framework, but managers also have to learn how to manage within it: to adapt to a situation in which they, inter alia, cede their claims to a Taylorist monopoly of workplace knowledge and also cede some of their day to day decision making powers to the workforce (Ashton & Sung, 2002; Guthrie, 2001).

Oeij and Noortje (2002) note steps that firms in the EU have taken to improve training and promote skills. These include widening the scope of training to all employees, and broadening the focus of training. The emphasis has been shifted from training people in the vocational skills needed for their existing jobs to widening workers' technical and business skills to carry out larger jobs and developing social and psychological skills relevant to tasks such as problem solving, team working and interacting with other workers and managers. The focus is more on learning potential than on present skill levels. Employees are also becoming more involved in determining their own training needs. Despite these arguments and findings, one weakness of the HPWS literature that we have identified is that there is often a lack of specificity in defining the nature of the skills involved in HPWS. This is especially so with regard to skills such as developing an understanding of the political economy of the enterprise/ industry.

Learning and TRACC

TRACC is the generic name of a five stage, best practice programme adopted by Fonterra, the New Zealand mega dairy co-operative. Workplaces that achieve the fifth stage would be characterised by work teams that are *'viewed as autonomous operating units, requiring little or no management input'* (Competitive Capabilities International, 2001, p.18). The manuals are replete with references to learning, training, and skills, much of which is drawn from the extensive workplace learning literature. An inherent problem we have with the TRACC literature is the conflation of 'objective' and 'subjective' skills. On one hand, the TRACC approach places considerable emphasis on visual performance measurement and the identification of measurable attributes or technical skills that can be located within a skill matrix and assessed. But on the other hand, TRACC also relies on the development of the capacity to undertake self- and peer analysis, participate in open communication, engage in constructive critique, and many other attributes in order to function effectively as a member of a highly autonomous team. There is an implicit sense in the manuals that workers will, some how, contribute to that learning process yet the learning journey itself is effectively charted for workers before it begins.

While the CCI approach has its own features that distinguish it from other HPWS packages, it essentially conforms to an HRM model that begins with identifying the skill sets that characterise high performance workplaces. This approach is supported by a large amount of employer-focussed, internet material, HRM manuals, academic literature and practical guides (eg. NACFAM, nd). There seems to be some consensus in the mainstream, academic literature about the clusters of skills required in 21st century workplaces. For example, in their analysis of a national survey of over 3000 manufacturing establishments, Gale Jr., Wojan, and Olmsted (2002) measured employers' perceptions of change in six skill requirements … basic reading, math, problem solving, interpersonal/teamwork, computer, and other technical skills' (p.55). They found that:

> Use of new work-organisation practise has an especially strong association with
> problem-solving and interpersonal/teamwork skills requirements, whereas
> production technology use was most strongly associated with increases in computer
> skill requirements (p.75).

In general terms, the six sets of skill requirements employed by Gale Jr. *et al.* include most skills identified in the vocational education and training and related literature. They further observed that the *'Use of high-performance work-organisation practices also appeared to be linked to a broader set of skill requirements'* (p.75). This particular finding seems at odds with

Whitfield's (2000) British study that concluded that high-performance work may be associated with a greater intensity of training rather than a greater breadth.

One of the obvious limitations of the various sets of technical/applied skills that are derived from immediate workplace/organisation needs and/or employers' perceptions of need is the lack of worker input. The more critical literature (eg Addison, 2005; Foley, 2001; Lloyd & Payne, 2002, 2004a, 2004b) implies that two other interrelated sets of skills need to be considered. First, it is clear from this review that unless workers understand why their work is being re-organised—especially if some of the effects are negative—then commitment and trust may be compromised. From this perspective, workers will also require some critical skills such as the ability to understand something of the political economy of 21st century manufacturing in a developed, capitalist economy. Second, the literature confirms the view that worker voice is an important element of successful HPWS. It therefore follows that workers need to develop the ability to participate effectively through collective organisations, such as unions, in order to have real voice at the workplace.

Another area of difficulty is the simplistic learning theory that implicitly informs the mainstream literature. Foley (2001) questions the essentially instrumentalist approach adopted in the HRM literature. Central to his critique are several core propositions: (1) that *'organisational life and learning are complex, contextual and contested:'* (2) that *'people in organisations learn all the time, experientially and informally;'* and (3) that such learning can be *'positive or negative, productive or unproductive'* and that attempts to change organisations have to understand the *'dynamics and outcomes off this informal, experiential learning'* (p.12). For Foley, such understandings must include a searching consideration of the changing nature of the global economy and its impact on the changing nature of work. The central thrust of his argument is that workers live in a real world and that the dynamics of that reality form an important part of workers' experiential and informal learning. Implicit in Foley's work is an appreciation of the collective nature of workers' learnings, knowledge and attributes. This theme has been explored for some time by a number of European writers. For example, in their discussion on the subjective dimensions of particular workplace learning, Salling Olesen and Weber (2001) caution against *'an individual learning concept'* (p.53). Learning is, they argue, *'the essential cultural activity'* that *'deals with the transfer and the reinterpretation or assigning of new meanings by new members of groups in society'* (p.53). To them, professional identity, work identity, and group identity--including that of union member--are all of critical importance when attempting to understand the nature and acquisition of workplace skills.

Conclusion

This paper has discussed aspect of our research project into HPWS and the New Zealand dairy industry. We are concerned to evaluate HPWS as a mechanism for improving the workplace and everyday life of workers and of promoting worker and union voice in the workplace. The debate on HPWS as we read it suggests that HPWS do offer potential gains to workers and unions, but also potential losses. The emphasis that many participants in the HPWS debate put on the need for workers to develop and apply new skills suggest one path by which workers and unions can make HPWS work for them. But for this to occur, the gaps in the HPWS literature on the issue of skills need to be addressed. In our view, not only must specific skills (and the means to acquire them) be identified, but the concept of skill must also include workers' collective skills.

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