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Work Re-organization in Canada: An Overview of Developments

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Executive Summary

The current restructuring of the Canadian economy is leading to a number of workplace changes to increase productivity and competitiveness of firms and improve the work environment of employees. Workplace re-organization through increased employee participation in decision-making is one important development in the area of workplace change that is being studied and implemented in many Canadian organizations.

- With increased competition in domestic and international markets, employers are looking for ways to improve firm performance—productivity, unit costs, product quality, customer satisfaction. Workplace re-organization has the potential to achieve this and, thereby, provide a means of remaining competitive in the market place.
- The traditional model of workplace organization, the 'Taylorist' model, is characterized by a hierarchical system of job control and detailed work procedures based on time and motion studies. Two types of workplace re-organization that have evolved from more traditional Taylorist systems are worker participation schemes and self-managed work teams, both of which give employees some role in decision-making. Examples of worker participation schemes include quality circles, quality of working life programs, total quality management, labour-management committees, and flexible job design. The well-known Socio-technical System, which originated in Scandinavia, and Japanese Production Management, or lean production, both use self-managed work teams.
- Recent surveys indicate that workplace re-organization in the form of employee participation has not increased in Canada in the last ten years. Moreover, one third of those organizations who adopt employee participation programs abandon them within six years.
- Labour's attitude to workplace re-organization has varied. While many unions are cautious and reserved about the issue, many recognize that traditional forms of work organization can represent an alienating work experience for their members. All unions have been involved in restructuring initiatives and many have guidelines for union involvement. The Canadian Labour Congress has not adopted an official position on the issue. It is recognized, however, that successful re-organization that achieves management's goals of improved marketability can have positive effects on employment security and skill levels of the employees.

- There are ten key lessons to be gleaned from case studies of workplace re-organization:
 - The most far-reaching innovations yield the greatest productivity improvements.
 - Unionized environments, or those having a strong collective voice, achieve more effective innovation.
 - New participative structures should be integrated into existing structures.
 - There are costs involved in the implementation of new systems—not everyone benefits.
 - Far-reaching workplace re-organizations have the best chance of success—starting from scratch is better than building on existing structures.
 - Business-labour relations at the societal level affect the chances of successful innovation.
 - Technology, while important and interrelated, does not determine the success of re-organization.
 - The best predictor of the introduction of workplace re-organization is the attitude of key managers toward innovation.
 - There can be a higher payoff both for the firm and the worker from investments in organizational innovations.
 - More attention needs to be given to workplace re-organization in the service sector.

- Workplace re-organization can be an effective means of attaining management's objectives of increased productivity and competitiveness and labour's goals of increased employment security and greater job satisfaction.

The current restructuring of the Canadian economy is leading to a number of workplace changes, designed both to increase the productivity and competitiveness performance of firms and improve the work environment for employees. Workplace change is a general concept that encompasses a number of specific developments that are affecting Canadian workplaces. These developments include, but are not limited to, changes in work organization, changes in remuneration systems, increased emphasis on customer orientation and product quality, and of course technological change. This paper provides a comprehensive overview of the first aspect of workplace change, namely work organization, or more appropriately work re-organization through increased employee participation in decision-making. As well, other aspects of workplace change will at times be referred to given the close interrelationships between the different aspects of workplace change.

The paper is divided into six main sections. Part one provides a discussion of the factors behind the push for workplace re-organization in Canada, both from the perspective of the employer and the employee. Part two looks at the various types of workplace organization, from the traditional Taylorist work structures, to worker participation schemes, to self-managed work teams. The third section looks at the evidence on workplace re-organization in Canada. The fourth section discusses the attitudes of labour and business to workplace re-organization. The fifth and final part, based on both the case studies and the literature, outlines ten lessons which come out of the experience in workplace re-organization. An Appendix is included that lists Canadian workplaces identified as innovative in change.

The Economic Restructuring Committee of the Canadian Labour Market and Productivity Centre (CLMPC), in its report *Canada: Meeting the Challenge of Change*, identified enterprise and workplace re-organization as playing a key role in the effective and equitable restructuring of our economy towards the objectives of high and rising living standards, full employment and low inflation, wealth creation, societal equity and sustainable economic development. Indeed, the promotion of effective business-labour relationships at all levels of the economy, including the enterprise and workplace level, was put forth as one of the guiding principles for restructuring. The report recommended that business and labour expand joint approaches to enterprise and workplace organization and technological change that focus on a more decentralized approach to decision-making and problem solving that incorporates greater employee involvement; quality improvement, innovation and customer service; employment and income security; and equity concerns. This paper builds on and develops insights and recommendations from the Economic

Restructuring Committee report on the role of enterprise and workplace re-organization in restructuring.

Factors Behind Workplace Re-organization

The number of attempts at workplace re-organization in Canada has increased considerably in recent years (see Mansell 1987, Newton 1989, Economic Council of Canada 1987a and 1987b, Long 1989, and Betcherman, Newton and Godin 1990). The impetus for this development has largely come from employers, although in some cases, particularly in unionized workplaces, both workers and employers have jointly initiated re-organizations. The motivation for employer interest in workplace innovations is to improve firm performance as measured by such indicators as productivity, unit costs, product quality, and customer satisfaction.

Improved firm performance is driven by the profound changes in the environment in which business operates.

Improved firm performance is of course driven by the profound changes operating in the environment in which business operates. We are seeing the globalization of markets for unskilled labour, of goods markets and of investment. Comparative advantage can now be acquired through knowledge and skills and is no longer dependent on resource endowments.

Increased competition from domestic sources and international sources has made the business climate much more uncertain and increased the need for business flexibility. In addition, the deep and prolonged economic downturn of the early 1990s has put greater pressure on firms to cut costs and improve productivity. Employers see workplace reorganization as a means to remain competitive in the market place.

The motivation for worker participation in workplace re-organization differs somewhat from that of employers. Of course, workers have an interest in the survival of their employer, but their main interest in workplace re-organization lies in the potential for the re-organization to improve various aspects of the workplace environment. Three particular areas of concern are employment security, job satisfaction, and opportunities for skills upgrading. Indeed, workplace re-organizations which have been perceived by labour to have no positive effects in these areas are often opposed.

Worker concern for employment security stems from increased labour market instability and high unemployment. These trends have increased the probability of layoff and difficulty of regaining employment once laid off, particularly for older workers. Greater worker interest in job satisfaction reflects both the changing characteristics of the labour force, in particular the greater number of young persons with post-secondary education. Worker concern with better opportunities for skills upgrading reflects the rising skill requirements of the workplace. Advancement in the workplace and even employment security increasingly depend on skill levels. Workplace innovations that broaden and deepen skills and improve

Types of Workplace Organization

This section provides an overview of three types of workplace organization. The first, Taylorist work structures or practices, represents the traditional model for workplace organization. The second, worker participation schemes, give the worker some input into decisions affecting his or her work-life. The third, self-managed work teams, goes the farthest in the direction of worker autonomy. The last two types of workplace organization represent workplace re-organization when they have evolved from more traditional Taylorist structures.

Taylorist Work Structures and Practices

Before examining types of workplace re-organization, it is important to situate these developments in relation to the traditional characteristics of the workplace in the postwar period. These characteristics make up a work organization system called Taylorism after Frederick Taylor, the founder of the doctrine of scientific management, the dominant influence on work organization in the postwar period. The basic principle of Taylorism was the separation of the conception and execution of work. This took from workers autonomy in their manner of working as it eliminated their power to control the rhythm and method of work.

The archetypal characteristics of Taylorism are:

- a hierarchical system of job control from manager to supervisor to worker, leaving little discretion to those on the bottom; and
- detailed work procedures based on time and motion studies, which decompose operations into their simplest elements.

Taylorist work organization patterns contributed significantly to raising the productivity of relatively unskilled workers in mass production industries. These productivity gains made it possible for workers to enjoy real wage increases. However, Taylorism has been criticized for its supposed tendency to treat workers more as machines than persons (see Braverman 1972 for a critique of Taylorism and Drucker 1993 for a defense). Under the more extreme forms of Taylorism, workers have no possibility of varying the pace of their work, have no sense of purpose by orienting efforts to the completion of a task, are subjected to repetitive movements under intense time pressures and severe physical demands.

The Taylorist system of work organization has been criticized in recent years. Indeed, some observers now consider Taylorism a barrier to both productivity advance and to the creation of a better work environment. This dissatisfaction with Taylorism and the search for more effective work organization structures, in North America at least, are also related to the loss of international competitiveness in certain mass production industries.

After the Second World War, American, and to a somewhat lesser extent, Canadian manufacturing had higher productivity levels and produced better quality and more sophisticated products than was found in other countries. Taylorism was the dominant work organization structure in both countries. As other countries like Japan adopted American technologies and developed their manufacturing sector, the North American competitive advantage was reduced. Firms looked at their organizational structure to see to what degree it was responsible for declining competitiveness, or from a positive perspective, to ascertain what contribution it could make to an improvement in competitiveness.

The traditional Taylorist structures were found deficient in a number of regards. First, rising skill requirements in many sectors because of more advanced technologies meant that workers were required to play a more active role in the production process. Workers could no longer be told what to do, but rather had to use their judgement in a variety of situations. Taylorist work structures were ill suited to this new development and hence stifled the potential contribution of workers to productivity.

To reduce turnover and motivate the workforce, firms have been forced to modify Taylorist structures.

Second, many workers were themselves unhappy with Taylorist work practices and this situation had a negative effect on productivity and product quality. The famous wildcat strike at the Lordstown, Ohio General Motors plant in 1972 was an example of workers rejecting

Taylorist work practices because of their negative effect on the quality of the workplace. In order to reduce turnover and motivate their workforce, firms have been forced to modify Taylorist structures. As will be seen, most workplace innovations attempt to alter Taylorist workplace structures and practices.

Worker Participation Schemes

A second general type of workplace organization are those that give workers some degree of participation in decision-making within the existing structures of the workplace. There are a large number of specific programs under this heading of employee participation or employee involvement, including quality circles (see Hill 1991, Grenier 1988, Portis, Fullerton and Ingram 1986, Rinehart 1984), quality of working life programs (see among others Newton 1986, Palmer 1992, Parker 1985, Davis and Cheing 1975, Greenberg and Glaser 1980, Hochner et al. 1988, Kolodny and Von Bienum 1983, Lemelin 1989), Total Quality Management (see Bak 1992, Fife 1992, and McClenaghan and Portis 1992), labour-management committees (Darby 1986), and flexible job design.

Quality circles (QC) are defined as 'a structured type of employee participation groups in which groups of volunteers from a particular work area meet regularly to identify and suggest improvements to work-related problems' (see Eaton and Voos 1992). The goals of QCs are improved quality and productivity. There are no direct rewards for circle activity and the groups' only power is to suggest changes to management.

Quality of Worklife (QWL) refers to any program that makes improved quality of worklife at least a partial program goal (often in addition to improved product quality, productivity, etc.), and often includes both work group-level participation groups and joint union-management committees. QWL fell out of fashion in the 1980s in Canada, as evidenced by the demise of Labour Canada's QWL program. Union criticism of QWL as a management tool (see Wells 1987) contributed to QWL's decline. Many trade unionists did not believe management genuinely wanted to give workers more input over decisions.

Total Quality Management (TQM), also referred to as participative management, is a Japanese workplace innovation for the application of quality assurance technologies such as brainstorming, customer focus groups, work process engineering to work processes in the firm. It grew out of the quality circle movement. TQM starts from the assumption that quality means meeting the requirements of the user, and that it can be achieved by controlling manufacturing or service processes to prevent defects. It stresses customer relations and relies on team work and

employee input. The focus is the improvement of internal processes rather than on financial results.

Labour-management committees have been formed in many workplaces to deal with a variety of issues, including health and safety, pay equity, technological change and labour relations. They may or may not be part of the formal collective agreement. An important characteristic of these committees is that in unionized enterprises they do not attempt to bypass the union, but rather attempt to actively involve the union, particularly the union executive, in their operations. The most common and important type of committee is the labour relations committee. In many workplaces these meet regularly and allow for early resolution of emerging problems.

Flexible job design also represents a means of increased worker participation. It refers to job rotation (moving workers between jobs), job enlargement (adding tasks to jobs) and job enrichment or redesign. This latter concept is intended to increase worker performance and job satisfaction by increasing the skill variety, autonomy, significance and identity of the task, and the performance feedback.

The benefits arising from participative programs can be characterized in terms of a 'prisoner's dilemma,' that is a conflictual situation in which cooperation could benefit both groups, but where there are barriers to both sides to initiating the gains (see Levine and Tyson 1990). However, once the gains get started, the experiences of arriving repeatedly at mutually acceptable solutions leads to the development of trust as the players learn the advantages of co-operation. The situation is more complicated when one of the parties has an unequal position, as there is sometimes a temptation for the more powerful to impose a solution unilaterally, especially when the solutions proposed by the employees diminish the power of the employer. Employers must resist this temptation if co-operation is to be successful.

Self-managed Work Teams

The third type of work organization examined is the self-managed work team, which represents a radical or fundamental transformation of the workplace. Two well-known production methods that break away from traditional work organization use the team approach—Socio-technical Systems (STS) and Japanese Production Management (JPM), often referred to as lean production.

The socio-technical system approach to work organization originated in the Scandinavian countries. From a STS perspective the economic performance and social indicators of a firm are largely dependent on the goodness of fit between the social and technical subsystems, that is

between the workforce and technology. Its most salient characteristic is the formation of self-managed or semi-autonomous work groups or teams. A socio-technical approach to organizational design rests on eight key principles (Rankin 1990):

- There is harmony between the social and technical aspects of production i.e. technology must be consistent with human needs.
- There is participative design of the specific features of work organizations.
- Detailed job classification and work procedures are not used.
- Responsibility and authority are given to workers to deal with situations outside the norm.
- Each unit of production controls its inputs, produces identifiable outcomes, and possesses response capabilities in terms of skill and information.
- Jobs are designed to provide autonomy and discretion, purpose, and an opportunity to learn.
- Support systems such as remuneration policy, performance assessment, etc. are designed to reinforce the behaviour which the overall organizational structure is designed to elicit.
- Work structures evolve constantly to meet changing circumstances.

The typical features of a comprehensive STS design include a joint steering committee, product/customer focus, self-regulating teams, few job classes, planning/thinking and doing functions combined, few levels of management, pay for skill schemes, information sharing, worker involvement in hiring, increased investment in training, employee participation in a wide range of issues, and minimum status differentials.

The Japanese Production Management (JPM) (Womack, Jones, and Roos 1990, Iani 1986, Kawanish 1992, and Kimura 1992) or lean production also represents a break from traditional Taylorist work organization patterns, and has both similarities and differences with the socio-technical systems approach to work organization. Perhaps the biggest similarity is the use of autonomous, multiskilled work teams which are supposed to empower workers. The key ingredient of JPM is the concept of kaizen or continuous improvement. Kaizen is defined as the process of

searching out waste, eliminating it, and then deploying the resources made available to a more productive task.

The most comprehensive study of JPM (Womack, Jones and Roos 1990) was undertaken by the MIT Commission on the Auto Industry. This study predicts that JPM will replace the traditional Taylorist mass production work organization and become the standard global production system of the 21st century. This is because lean production combines the best features of craft production and mass production—the ability to reduce costs per unit and dramatically improve quality while at the same time providing a wide range of products and more challenging work (Womack, Jones, and Roos, 1990, 277).

It is useful to highlight certain important differences between STS and JPM, with these differences related to the factors behind the development of the two systems. JPM was motivated by fierce domestic competition and the strong and rising value of the yen, while the origins of STS reflect the full employment, less hierarchical culture and more embedded democratic and egalitarian values of Swedish society (Berggren 1992). Sweden's STS approach puts more emphasis than Japan's JPM on:

- the integration of subdivided and monotonous mass production work into more dignified and holistic tasks;
- the broad development of the physical work environment, especially ergonomic aspects of manual workplaces to control strain injuries;
- efforts to make the work system less rigid and more adaptable to meeting diverse human needs; and
- a high degree of union involvement in the decision-making and planning processes of independent partners with legitimate interests of their own.

According to some observers, a relative weakness of Sweden's STS is its lack of consistent devotion to increases in productivity. This may explain why JPM has received much more attention and why some believe it represents a more useful model of work organization than STS. The relative weakness of JPM, on the other hand, is its inattention to certain needs of the worker. For this reason, Berggren (1992, 17) argues that the real challenge of the future is to amalgamate the contribution of lean production and European human-centred manufacturing to create a new synthesis.

Evidence of Workplace Re-organization in Canada

An understanding of the process of workplace re-organization in Canada requires information on the extent of the phenomenon. Fortunately, surveys conducted by the Human Resource Management Project associated with the Queen's University Industrial Relations Centre are now available to shed light on workplace innovation. This section summarizes the key findings of the Working With Technology Survey, which was a follow-up to an almost identical survey conducted by the Economic Council of Canada in 1985 (see Betcherman and McMullen 1986; Economic Council of Canada 1987a and 1987b) and the Human Resource Practices Survey. This section also presents the key findings of a survey conducted for the Task Force on the Organization of Work of the Ontario Premier's Council on Economic Renewal.

Working with Technology Survey

The Working With Technology Survey (WWTS) provides very useful information on the incidence of employee participation programs, defined as quality circles, QWL programs, employee involvement, labour-management committees, semi-autonomous work groups, and incentive pay systems (profit-sharing, employee stock-option plans, gain-sharing and pay-for-skill). Since the survey was conducted in 1985 and 1991, it is possible to compare developments over time.

The survey (see Betcherman, Leckie and Verma 1993) found that 47.5 percent of establishments in Canada reported an employee participation program in 1991 (see Table 1). As small firms were considerably underrepresented in the sample, the actual overall incidence is probably considerably less than indicated by the 47.5 percent figure since the incidence for small firms is well below that of large firms.

Employee participation has not increased in Canada.

The overall incidence was essentially unchanged from that in 1985, indicating that employee participation has not increased in this country. Not surprisingly, the incidence of employee participation programs varied according to establishment characteristics. Probably the most striking variation was with respect to establishment size. Establishments with less than 50 employees had an incidence of 16.2 percent, around one third the overall incidence. Establishments with over 100 employees had an above average incidence. Employee participation programs appear to be a large-establishment phenomenon.

Incidence of employee participation programs (see Table 1) was greater in the goods sector than in the service sector; in foreign-owned

Table 1
Incidence of Employee Participation Programs by Selected Establishment
Characteristics VVVVTS, 1991

	Percent of respondents reporting employee participation program
Overall	47.5
Employment**	
1-49	16.2
50-100	43.5
101-500	60.5
over 500	57.1
Industry sector ^{1*}	
Goods	54.9
Traditional services	34.2
Dynamic services	41.0
Non-market services	55.6
Control*	
Independent company	41.5
Controlled by another firm	55.6
Ownership	
Canada	44.7
United States	56.5
Other foreign	61.5
Age	
1-5 years	56.5
Over 5 years	46.9
Region	
Atlantic	50.0
Quebec	43.1
Ontario	49.4
Prairies	46.0
British Columbia	53.3
Union*	
With a collective agreement	53.4
No collective agreement	41.7
Technology user ^{2**}	
High-tech	53.3
New-tech	41.5
Old-tech	20.8

* Differences between categories are statistically significant (according to a chi-square test) at the .10 level.

** Differences between categories are statistically significant (according to a chi-square test) at the .01 level.

¹ 'Traditional services' include retail trade; accommodation and food; and other services. 'Dynamic services' include transportation and storage; communication and utilities; wholesale trade; finance, insurance, and real estate; and business services. 'Nonmarket services' include health and social services.

² 'High-tech' users are establishments reporting computer-based innovations in both 5-year sample periods. 'New-tech' users reported computer-based innovations only in the second period. 'Old-tech' users reported no computer technology innovations in the second period.

establishments than in Canadian-owned establishments; in younger establishments than in older establishments; and in unionized establishments than in non-unionized establishments. There was no significant regional variation.

The issue most often covered by employee participation programs (see Table 2) was health and safety (79.7 percent of establishments with employee participation programs reporting coverage), followed by quality (74.7 percent), unit performance (57.0 percent), new technology (44.3 percent), supervision and work flow/scheduling (35.4 percent). There were no significant differences in the incidence of coverage of the various issues by establishment size and union/non-union affiliation. The high incidence for health and safety is not surprising given that certain jurisdictions such as Ontario have legislated mandatory labour-management committees in the workplace.

There appears to be a low level of sustainability of employee participation programs.

A key issue in the debate on employee participation programs is the sustain-ability of these programs over time. The overall percentage of establishments reporting programs in 1985 who reported them in 1991 was 67.0 percent (see Table 3). One third of establishments who adopt employee participation programs abandon them within six years. This appears to be a relatively low level of sustainability. Small establishments are less successful in sustaining programs than large establishments. Perhaps surprisingly, there is no significant difference in the success rate between unionized and non-unionized establishments.

Human Resource Practices Survey

The Human Resource Practices Survey (HRPS) was conducted in 1992 as part of the Queen's University Human Resource Management Project. The survey was intended to obtain reliable information on human resource practices in four industries wood and wood products, fabricated metal products, electrical and electronics products, and business services. The survey found that 42.3 percent of establishments had a formal employee participation program, which was quite close to the 47 percent incidence reported in the Working With Technology Survey (WWTS). Six percent of all respondents reported dropping an employee participation program, a figure which rises to 14 percent when taken as a percentage of respondents currently having a program. This appears much less than the one third of establishments reported by the WWTS who abandoned employee participation programs between 1985 and 1991.

Table 2
Issues Covered by Employee Participation Programs by Selected Establishment Characteristics WWTS, 1991

Issue covered ¹	Total	Size		Union		Technology	
		>100	<100	Yes	No	High	Other
percent of establishments with programs							
New technology	44.3	40.0	44.4	45.5	44.1	46.7	36.8
Quality	74.7	70.0	70.4	70.5	79.4	80.0*	57.9
Unit performance	57.0	60.0	40.7	54.6	58.8	56.7	57.9
Supervision	35.4	32.5	29.6	36.4	32.4	35.0	36.8
Health and Safety	79.7	80.0	85.2	84.1	76.5	80.0	79.0
Work flow/scheduling	35.4	42.5	25.9	36.4	35.3	35.0	36.8

¹ Establishments could identify multiple issues as covered by the program.

* Difference between categories is statistically significant (according to a chi-square test) at the .10 level.

Table 3
Sustainability of Employee Participation Programs WWTS, 1991

	Percent of respondents with programs in 1985 reporting them in 1991		Percent of respondents with programs in 1985 reporting them in 1991
Overall	67.0	Ownership	
Employment		Canada	67.6
1-49	50.0	Foreign	61.1
50-100	64.3	Age	
over 100	71.4	1-5 years	64.3
Industry sectors ¹		Over 5 years	67.1
Goods	71.7	Unionization	
Traditional services	77.8	With a collective	
Dynamic services	55.6	agreement	67.9
Non-market services	66.7	No collective	
Control		agreement	65.9
Independent company	68.6	Technology user ²	
Controlled by another firm	63.4	High-tech	66.7
		New-tech	76.9
		Old-Tech	50.0

¹ 'Traditional services' include retail trade; accommodation and food; and other services. 'Dynamic services' include transportation and storage; communication and utilities; wholesale trade; finance, insurance, and real estate; and business services. 'Nonmarket services' include health and social services.

² 'High-tech' users are establishments reporting computer-based innovations in both 5-year sample periods. 'New-tech' users reported computer-based innovations only in the second period. 'Old-tech' users reported no computer technology innovations in the second period.

Product and service quality was the topic area most often covered by employee participation programs, with 79 percent of establishments with programs reporting this program.. It was followed by health and safety (71 percent), work unit performance (67 percent), workplace physical layout (57 percent), introduction of new technology (51 percent) and work flow/scheduling (51 percent).

A very interesting finding is what appears to be the very low level of opposition to employee participation programs among respondents with such programs. There was virtually no opposition from HR personnel, establishment management, head office, or program participants. Union opposition was also extremely low at less than 10 percent. The vast majority of the members of the five groups supported the programs.

Thirty eight percent of respondents reported a formal job design program, with 22 percent reporting job rotation, followed by job enlargement (21 percent), job enrichment (21 percent) and self-directed work teams (15 percent).

Task Force on the Organization of Work Survey

The Ontario Premier's Council on Economic Renewal, through its Task Force on the Organization of Work, has been looking at workplace innovation in Canada. It recently commissioned a survey of 18 workplaces (see Kaplan and Rankin 1993) to quantitatively assess the impacts of major change on how work is performed related to five key performance indicators (costs, human resources, labour management relations, productivity, and quality). Although the results of the survey should be interpreted with caution because of the small sample size, the selection bias of the sample, and the imprecision of the concept of change, they may still be indicative of the positive contribution workplace innovation can make.

Kaplan and Rankin found that after the introduction of the workplace change most firms experienced the following:

- significant improvements in quality;
- considerable increases in productivity;
- reductions in costs, with the longer the change in place, the more substantial the cost saving;
- positive impacts on human resource indicators such as incidence of work accidents and absenteeism; and
- decreases in the number of grievances.

Union Attitudes to Workplace Re-organization

There is wide divergence of views on the issue of workplace re-organization within the labour movement in Canada (Jackson 1993, Drache and Glasbeck 1992, Kumar and Ryan 1988). Some unions and union leaders see new forms of workplace organization as offering at least the opportunity for advancing the interests of their members (see, for example, United Steelworkers of America 1991, Pomeroy 1992). All unions have been involved in workplace restructuring initiatives, and most unions have developed guidelines for union involvement (see, for example, American Federation of Grain Millers 1990 and the United Steelworkers of America 1992).

Other unions are more reserved about workplace re-organizations (see CAW 1989, CPU 1990, Rose 1991, Wright 1992, and Kumar and Ryan 1988), particularly when they are put forward by management, and have been reluctant to become involved on terms defined by management. Some unions that have done a great deal of work on the workplace re-organization issue, have challenged the idea of a partnership between labour and management and have resisted what they see as, a management offensive to gain union support to make workers' goals the same as those of the company.

The Canadian Labour Congress has not adopted an official position on the issue of workplace re-organization. Rather it sees the role of the labour movement to allow debate on experiments to take place and to let members draw experience from that (Wright 1992).

Many unions recognize that traditional forms of work organization can represent an alienating work experience for their members.

A number of factors explain union participation in workplace re-organization. The most important reasons for involvement is that many unions recognize that traditional forms of work organization can represent an alienating work experience for their members. Workers often have little or no involvement in decision-making, and work in stressful and sometimes hazardous environments. Unions are consequently willing to work with management toward the development of more participative work structures which will result in a more humane work environment and greater employee control over the workplace.

A second reason for involvement is that unions recognize that their goal of increased employment and income security can be assisted through the attainment of management objectives of improved productivity, higher

quality and better customer service. To the degree that work re-organization can contribute to management objectives, it will also further the union objectives of improved security. Indeed, unions are more willing to participate in work re-organization initiatives when management can show positive effects for employment security.

A third factor in union participation is the realization that certain types of workplace re-organization can lead to higher skill levels for the workforce. As the upgrading of the skills of their members is an objective, unions are willing to participate in re-organizations that have this effect.

Finally, in cases where management has unilaterally initiated a workplace reorganization, unions sometimes feel they must become involved to avoid marginalization and to ensure a union presence in the workplace. This is particularly so when a significant proportion of the membership support the reorganization in question.

Unions are suspicious of workplace re-organizations for a number of reasons. First, they often distrust the motives behind management's introduction of new organizational structures. For example, they may feel management is interested in increasing the intensity of work, or cutting costs by reducing the number of jobs or contracting out (see Wells 1992 and 1993). Or workplace programs like QWL may actually be designed to get rid of a union or prevent a union from achieving recognition. Most of the early workplace re-organizations were in non-unionized firms and this historical background has fed union suspicions.

Second, unions may fear that certain types of changes may weaken their organization. For example, they may feel that management's promotion of co-operation and the importance of win-win situations is being used to make workers believe there is no conflict between the interests of management and labour—the 'we are all in this together' pitch. Worker solidarity can be weakened. An independent labour union movement is predicated upon the existence of basic differences in interests between management and workers, particularly of a distributive nature.

New organizational structures can interfere with collective bargaining

A third basis for union concern is that new organizational structures can interfere with collective bargaining. They can introduce new situations into the workplace not covered by collective agreements. This can cause division among union members and make collective agreements less important and effective. For example, some argue that if grievances are

dealt with in an informal manner, the formal grievance procedure laid out in the collective agreement becomes redundant.

The fear and distrust expressed by certain unions regarding workplace reorganizations may reflect a view by labour that they may not have sufficient power to sustain their side of a 'win-win' relationship with employers. Some argue that given the industrial relations and macroeconomic environment unfavourable to labour, employers have the upper hand and will use their power imbalance to take advantage of labour. According to this view, only when unions are strong enough to exert countervailing power can one expect that management will have sufficient incentive to enhance productivity through 'worker-friendly' and 'union-friendly' means (Wells 1992). According to labour, a precondition for genuine partnerships is thus a strengthening of labour. Until then, talk of partnerships is dangerous.

Business Attitudes to Work Innovations

It is much harder to identify a business position on attitudes toward work-place innovations than a labour position. Business associations, unlike unions, generally do not formulate official positions on the subject. This reflects the fact that it is business that generally initiates work innovations, so it is not forced into a reactive mode of formulating a response, as is labour. It also reflects the more decentralized and individualistic nature of the business community compared to the labour community. There is thus less need to develop an official business view on work innovations.

Individual businesses approach work innovation in the manner they see most appropriate. There are in fact significantly different views expressed by business on the usefulness of certain types of workplace innovations, with some businesses taking a positive view to work innovations while others are more cautious.

Many leading-edge businesses in Canada are adopting strategies for tapping workers' potential.

Nevertheless, it is probably fair to say that many businesses recognize the importance of restructuring workplace relationships and believe that greater participation by employees can facilitate the necessary economic restructuring of many companies. Indeed, many leading-edge businesses in Canada are adopting strategies for tapping workers' potential. This trend reflects business recognition of the fact that 'traditional hierarchical approaches to human resource management are often at the heart of poor workplace relations' (BCNI 1993, 21).

Observations from the Workplace Re-organization Literature

This section summarizes some of the key findings from the literature on workplace re-organization. Ten specific lessons or observations are put forward for discussion purposes. It should be noted that these observations are tentative and will be recast and refined based on the discussions of Task Force members and as more case studies are examined and literature reviewed. It should also be noted that certain of the observations draw on the American literature, in large part because of the limited extent of Canadian studies. Given the important differences between the two countries, caution may be needed in generalizing American results to Canada. One important difference between the two countries has been that unions in Canada have been more proactive in dealing with workplace reorganization issues.

The ten observations are:

- Far-reaching workplace re-organizations yield the greatest productivity improvement.
- Workplace re-organizations are most effective in unionized environments, or at least in organizations where workers have strong mechanisms for promoting their viewpoint.
- New workplace organizational structures should be integrated into existing structures.
- Implementation of workplace re-organization is not always without costs.
- Far-reaching workplace re-organizations have the best chance of success in new work environments.
- Business-labour relations at the societal level influence such relations at the workplace level and hence affect the chances of successful re-organization.
- Technology is important but not deterministic for new forms of work organization.
- Workplace re-organization is difficult to predict, but closely associated with managerial attitudes.
- Greater priority should be given to organizational innovation.
- Service sector workplace re-organization is a neglected area.

Productivity Improvement

An important finding of the literature has been that the most far-reaching innovations or re-organizations yield the greatest improvement in productivity. A recent study by Eaton and Voos (1992) based on American experience classified workplace innovations into three categories—those that had high, intermediate, and low potential to enhance productivity. The innovations in the high potential category were team production and gain-sharing. Both these innovations represent major changes in work organization and compensation, with an emphasis on moving decisions downward through employee participation. Indeed, the most potent innovations combine substantive employee participation with the sharing of economic rewards for that effort (see Blinder 1990; Levine and Tyson 1990; Ichniowski, Shaw and Prennushi 1993; and Weitzman and Kruse 1990).

Innovations in the intermediate potential category included employee participation schemes and QWL programs. Innovations with less potential were employee stock ownership plans, profit sharing schemes and quality circles. Indeed, Levine and Tyson (1990) concluded that quality circles and other purely advisory shopfloor arrangements are not likely to achieve sustainable improvements in productivity. It is interesting to note that the debate about team production now is not about whether or not teams increase productivity, but whether the effects are primarily due to increased participation, changed work methods, or other factors (see Katz, Kochan, and Keefe 1987).

Unionized Environments

Unionized workplaces are characterized by a distribution of innovations that typically have greater effects on economic performance than non-unionized workplaces, at least in the United States (see Eaton and Voos 1992). This reflects the historical willingness and ability of American unions to engage in productivity bargaining. In contrast, non-unionized workers appear to lack the collective voice to make quid pro quo exchanges with management.

Indeed, Eaton and Voos argue that participative programs and team systems have greater ultimate potential to raise productivity in unionized workplaces for three reasons. First, unions provide workers with important protection against job loss and encourage involvement due to the contribution of union representation. Second, unions provide a mechanism whereby workers can utilize their collective voice in the design and operation of programs. Programs consequently are better balanced and have more legitimacy. Third, unions can play an important role in extending participation from the shopfloor to the entire enterprise

so participation becomes strategic and workers can influence corporate decisions in areas such as the implementation of technology.

The greatest potential for fundamental workplace restructuring is in unionized workplaces.

Mansell (1987), in her overview of workplace innovation in Canada, also found that the greatest potential for fundamental workplace restructuring was in unionized workplaces. After examining the experience of workplaces that had taken a socio-technical systems approach to work organization, she concluded (p.13) that 'the fullest development of the socio-technical systems might only be possible where union and management are both present and both willing to work jointly towards fundamental change. Workers with no independent power base and no neutral means of due process are probably inhibited with respect to the risk taking and openness required for optimal social support and on-going learning.'

Kelly and Harrison (1992) find that employee involvement programs with union participation had a significant productivity-enhancing effect in the machinery and metal working industry in the United States. On the other hand, management-initiated programs in non-union environments failed to raise productivity. They attributed this situation to the union-negotiated guarantees of employment and income security which sustained 'win-win' outcomes in bargaining over technology and workplace re-organization. In the absence of such guarantees, it is rational for workers to resist productivity-enhancing changes resulting in job loss.

In a comprehensive analysis of German industrial relations, Turner (1991) concluded that, the lesson for North America from the German experience was that an entrenched and independent union is not incompatible with good production outcomes. A stable industrial relations settlement that allows for ongoing innovation is what is most essential.

If fundamental organizational change is the goal, different approaches should be used from the start.

New Workplace Structures

Many new participative structures are introduced into the workplace outside of existing structures, such as collective agreements or the organizational hierarchy. For example, QWL programs or labour-management committees are often established parallel to existing structures. The obvious advantage of organizational changes parallel to

existing structures is the relative ease of introduction. However, parallel structures have a number of weaknesses, particularly in the longer term. For example, since such structures are not integrated into permanent structures, they are easy to dismantle. Second, and more fundamentally, parallel structures may be ineffective if they do not tackle problems inherent in existing structures, problems which can only be resolved by the redesign of existing structures. Indeed, if fundamental organizational change is the ultimate goal, then different approaches should be used from the start, or if parallel structures have been introduced, they should be integrated into existing structures.

Indeed, Thomas Kochan (1985) argues that the long-run survival of new organizational structures depends not on isolating them from collective bargaining and corporate decision-making, but in linking them to the decisions and strategies adopted at these higher levels. Kochan identifies three key interdependent conditions necessary for developing such links. First, management and workers must have a significant amount of experience at the workplace level. Second, changes in the legal framework of collective bargaining are needed to permit the integration of new work forms into collective agreements. Third, there must be broader societal changes that support innovation by both unions and management.

Implementation

Fundamental restructuring of traditional workplace organizational structures can represent an overall win-win situation for both management and labour, but it does not necessarily benefit all members of the management and labour communities. For example, the successful introduction of work team and job redesign requires trade-offs by both sides. Management agrees to devolve decision-making authority to the shopfloor while the unions agree to modify the collective agreement to give management greater flexibility, for example, by reducing job classifications, de-emphasizing seniority, or giving up grievance rights on certain issues.

Resistance by middle management is cited as the main cause of the demise of successful workplace innovations.

Such changes can have a negative impact on certain individuals. For example, the devolution of decision-making to work teams fundamentally changes the traditional role of first-line and middle management, reducing this authority and prestige. In the new work environment they become coaches or technical advisors rather than bosses. Indeed, resistance by middle management is, not surprisingly, cited as the main cause of the demise of successful workplace

innovations. However, negative reactions of middle and lower management to the introduction of more participative work structures generally will not determine the outcome if senior management is committed in its belief that the long-run interest of the firm is best served through the productivity enhancement, quality improvement and increased flexibility of the new structures.

Changes in the collective agreement negotiated as part of the development of new forms of work organization also can be injurious to certain union members. For example, the elimination of seniority as a, or even the, criterion for advancement and access to training opportunities can penalize older workers. The elimination of certain grievance rights also can be detrimental to workers who in the past had been protected by the strong fair employee representation role of unions (see O'Grady 1992). Workers with little or no interest in participative decision-making will also not benefit from devolution of decision-making to the shopfloor and may resent the additional responsibility expected of them, although the number of such workers is probably few.

Far-reaching Workplace Re-organizations

It is often easier to start from scratch than to build upon existing structures. This observation appears particularly relevant for the introduction of new forms of work organization into the workplace. The most far-reaching experiments in work organization tend to be found at greenfield sites, as the well known Saturn and Shell-Sarnia workplace experiments. This reflects a number of factors. First, workers can be selected on the basis of the personal characteristics needed to make an innovative workplace successful. For example, workplaces using the team-based approach can hire workers who show evidence that they would be likely to get along well in such an environment. By definition, there are no workers who will be hurt by the new organizational structures.

Input at the ground floor increases workers' sense of ownership and participation in the workplace innovation.

Second, since many decisions about the nature of the workplace in greenfield sites are open, workers can be included at the ground floor in the decision-making process. Input at such an early stage increases workers' sense of ownership and participation in the workplace innovation. Worker input in the organizational layout of the plant can be particularly important.

Third, greenfield sites by definition are free of the accumulated histories of management-labour confrontation which can strain current relations. In existing workplaces, both workers and management can have long memories of past conflicts. In greenfield sites the historical distrust of one side by the other will not be present. This can be an enormous advantage for the development of new forms of management-labour co-operation.

Business-Labour Relations

The relative success of organizational innovations at the workplace is greatly influenced by relations at the societal level. As the Economic Council of Canada (1987a) has noted, however powerful the motive for technological and organizational change at the level of the enterprise, such changes do not occur in a vacuum. Broader environmental factors also are at work—social, political, cultural and economic factors and the institutional framework of industrial relations all affect the chances of successful organizational innovation.

For example, when there is a high degree of employment and income security within society, unions will be more open to workplace innovations as they will feel less threatened. Equally, harmonious business-labour relations at the sectoral or economy-wide level will have positive effects at the workplace level as the level of trust and mutual understanding at this level will percolate down. The opposite will happen when one side perceives the other in a negative light. For example, if labour feels that business prefers a non-union workplace and is not willing to accept them as a legitimate partner, then unions will be most unwilling to support workplace innovations as they will believe a true partnership is not possible.

Technology

A key question in the debate on work organization is whether the kind of technology used plays a deterministic role in the type of work organization that is adopted. There is little doubt that the choice of work organization can be constrained by the choice of technology used by a firm. There are jobs where Taylorist forms of organization tend to reappear despite attempts to develop alternatives. The technological nature of the industry leads to a restricted character of work and an absence of stable conditions for group interaction, which make it very

difficult to find alternatives to hierarchical management. The auto assembly industry is often cited as such an industry (see Berggren 1992).¹

On the other hand, there are industries that lend themselves naturally to non-Taylorist forms of work organization, particularly continuous process industries such as oil refining and chemicals. Jobs tend to be non-standardized, demanding immediate and accurate operator reactions and close cooperation. Workers cannot be divided hierarchically without impairing the efficiency of the process and jobs are characterized by a sufficient work content and degree of autonomy for successful decentralization of decision-making. Most industries fall between the two extremes and offer significant possibilities for non-Taylorist forms of work.

New forms of work organization must adapt to the technological constraints needed to maintain industry competitiveness.

Even in industries such as auto assembly where some form of Taylorist work structure appears inevitable, Taylorism can be adapted through some form of team approach to empower workers, as the NUMMI experiment showed (Adler 1993). New forms of work organization obviously must adapt to the technological constraints needed to maintain industry competitiveness. However, this does not mean that traditional forms of work organization, like Taylorism, are inevitable. As Drache and Glasbeck (1992) point out, there is nothing crudely deterministic about the introduction of new technologies and the more flexible work practices. The outcome can be good, neutral or bad, depending on the way they are introduced and deployed.

Support for the view that technology does not automatically determine work structures also comes from the extensive worksite research conducted by Bert Painter (see Painter 1991a, 1991b). The most important lesson of his research was that management and labour can exercise choices in the design of technology and in its implementation in the workplace. People learned that technology and work organization can be adjusted to meet their needs, just as much as they need to make adjustments to the new technology.

While there is no deterministic relationship between technology and work organization, the lesson of the STS approach to the implementation of new forms of work organization is that technological change is

¹ A case study of a metal refinery by Chaykowski and Slotsve (1992) also found that job restructuring was determined by management in a stepwise manner reactive to the requirements of the new equipment. Supervisor-employee communications was minimal and management followed a non-participatory style in decisions regarding work assignments and the design and layout of jobs. Planning associated with the recapitalization program was directed only towards achieving technical efficiency and neglected planning adjustments aimed at developing the social system that would be required to achieve joint optimization.

inextricably interrelated to organizational change. As the Economic Council of Canada concluded in its study of workplace innovation in Canada (Economic Council of Council 1987a, 89) 'successful adoption of new technologies, with their attendant requirements for a flexible, versatile and committed workforce, depends upon more participative organizational designs that realize the potential and reflect the needs of all stakeholders.'

Managerial Attitudes

A key issue in the debate on workplace re-organization is what are the factors that determine whether firms introduce new organizational structures. Research on this topic in Canada (see Economic Council of Canada 1987a, Long 1989) has revealed that the most striking finding is the limited extent to which the introduction of workplace innovations can be predicted from company characteristics. It found that pre-existing productivity levels have no bearing on whether an innovation will be introduced, which is inconsistent with the view that organizations implement innovations in response to lagging economic performance. The size of the firm was also found to be unimportant in explaining workplace innovation.

The generally low explanatory power of traditional firm characteristics for workplace innovation may indicate that innovations are applicable in a wide range of circumstances. From the point of view of disseminating workplace innovations widely, this is an encouraging finding.

Long (1989) argues that the major determinant of implementation is the attitudes of key managers toward innovation, as it is these managers who are responsible for initiating innovation. The unpredictability of innovation may hence reflect the random distribution of managers who have a propensity to innovate. A key policy question is how to increase the supply of managers who have a propensity to introduce innovations into the workplace.

Organizational Innovation

The Economic Council of Canada (1987a) reported that, at least in the middle of the 1980s, there was little awareness of and even less commitment to the concept of organizational innovation in Canada although the work hours aspect of work innovation was receiving attention. This situation lies in contrast to that in Europe where there is national level social concern about the organizational implications of new technology.

There can be a higher payoff both for the firm and the worker from investments in organizational innovations.

There is an emerging business-labour consensus in Canada (see CLMPC 1993) that recognizes the importance of realizing the objective of both increased productivity and of increased security and greater work satisfaction. The key role organizational innovation can play in meeting these objectives is also increasingly recognized in the literature. Indeed, a strong case can be made that there can be a higher payoff both for the firm and the worker from investments in organizational innovations than from other types of investment. Greater public awareness of the importance of this role of organizational innovation in economic restructuring can contribute significantly to the dissemination of knowledge about innovations and to the actual implementation of these innovations.

The Service Sector

Most research on workplace innovation in Canada and in other countries has focused on the goods sector, particularly manufacturing. Yet the service sector accounts for over 70 percent of total employment, and this proportion will continue to grow over time. There is no doubt important workplace innovations are taking place in the service sector, but they appear to be receiving limited attention.

This bias toward manufacturing in the study of workplace innovation reflects several factors. First, the high rate of unionization in manufacturing may mean unions give this sector more attention in their research on workplace innovation issues. The rate of unionization in many service industries is low, so these industries are of less interest to unions since they have few members in these industries.

A second reason for the concentration on manufacturing is the importance of this sector for Canadian exports. Research on workplace innovations in manufacturing may be associated with the search for ways to improve the productivity and competitiveness performance of a sector crucial for the health of the Canadian economy.

A final reason for the attention given to workplace innovations in manufacturing may be the fact that most workplace innovations, or at least the most important ones, may have been in manufacturing. Whatever the appropriateness of the past focus on workplace innovation in manufacturing, in the future more attention needs to be given to workplace innovation in the growing service sector.

Conclusion

This paper has provided an overview of workplace re-organization, looking at the factors behind workplace re-organization, the types of organizational structures, the evidence on workplace re-organization in Canada, and labour and business attitudes to workplace innovation. The paper has also advanced ten specific observations on workplace re-organization which emerge from the case studies and the literature. It should be noted that the workplace change area is a rapidly changing field, and that the conclusions reached in this paper may be modified as additional experience and knowledge is accumulated.

Workplace re-organization can be an effective means of attaining management's objectives and labour's goals.

The main conclusion is that workplace re-organization can be an effective means of attaining management's objectives of increased productivity and competitiveness and labour's goals of increased employment security and greater job satisfaction. More participative workplace structures should be implemented by Canadian industry, in the service sector as well as the goods sector. The promotion of workplace re-organization should be an important goal of public policy in this country.

GSW Water Heating Company, Fergus, Ontario

Union: United Steelworkers of America

Innovation: World Class Manufacturing (WCM), which involves achieving total quality management via employee empowerment

Sources: Ontario Premier's Council on Economic Renewal's favorite workplace; Sectoral Skills Council (1991, 1992); and Globe and Mail, Change page, November 10, 1992.

General Electric Power Systems and Service Department, Peterborough, Ontario

Union: Communications and Electrical Workers, United Electrical, Radio and Machine Workers, and International Federation of Professional and Technical Engineers

Innovation: a Joint Workplace Training Committee to provide a vehicle and opportunity for all stakeholders to manage the training function

Sources: Sectoral Skills Council (1991, 1992) and Labour Canada (1993) profile.

General Electric Lighting Division, Oakville, Ontario

Union: Communications and Electrical Workers of Canada

Innovation: initiatives in multiskilling and semi-autonomous work teams

Sources: Sectoral Skills Council (1991, 1992) and Labour Canada (1993).

Canadian General Electric, Bromont, Quebec

Union: unionized, union not known

Innovation: self-regulation by teams of production workers, multi-skilling and job rotation, teamwork among supervisors/first level management, worker participation in technological change

Sources: Painter (1996) and Praxis/Coopers and Lybrand (1993).

Ciba-Geigy Agricultural Chemicals Division, Cambridge, Ontario

Union: not unionized

Innovation: socio-technical redesign

Sources: Sectoral Skills Council (1991, 1992).

Inglis Limited, Cambridge, Ontario

Union: Communication and Electrical Workers of Canada

Innovation: High C for high commitment program characterized by self-sufficient teams, fewer job classifications, job rotation, multiskilling and a more recent Workplace Reorganization program

Sources: Sectoral Skills Council (1991, 1992), O'Grady (1992) and Praxis/Coopers and Lybrand (1993).

Crown Cork and Seal Vista plant, Mississauga, Ontario

Union: not known if unionized

Innovation: high work involvement systems with team structures, plant-wide Organizational Review Board, peer performance appraisal, and pay for knowledge and skills

Sources: Verma and Weiler (1993).

Shell Canada Chemical plant, Sarnia, Ontario

Union: Energy and Chemical Workers

Innovation: socio-technical systems, one of the leading examples in North America

Sources: Painter (1991), Rankin (1990), Kingyens (1993), Labour Canada (1993).

Westbridge Computer Corporation, Computer Services Division, Regina, Saskatchewan

Union: Energy and Chemical Workers

Innovation: extensive union-management dialogue and co-determination through constant revision of the collective agreement

Sources: Painter (1991).

Northern Telecom, Business Products Division, Calgary, Alberta

Union: not unionized

Innovation: supervisor teamwork to cope with the requirements of both new technology and a new style of participative management, program called Vision 2000 consisting of just-in-time manufacturing, total quality control and self-managed work teams

Sources: Painter (1991), Canada Awards for Business Excellence (1990) winner for labour-management cooperation.

Ontario Public Service Employees Union, Regional and Head (Toronto) Offices

Union: Ontario Public Service Staff Union

Innovation: effective start-up training, incremental implementation of new technology, upgrading of worker skills

Sources: Painter (1991).

Manitoba Telephone System Operator Services, Winnipeg, Manitoba

Union: Communication and Electrical Workers of Canada

Innovation: employee involvement in technical and organizational design of jobs, multiskilling, participative management, union-management co-determination

Sources: Painter (1991) and Labour Canada (1993).

General Motors Canada, Truck Assembly Centre, Oshawa, Ontario

Union: Canadian Auto Workers

Innovation: ergonomic improvements for production workers, minimal change in supervisory style

Sources: Painter (1991).

British Columbia Telephone

Union: union not known

Innovation: joint management-union involvement in technological change

Sources: Wright (1991).

Pratt and Whitney engine plant, Dartmouth, Nova Scotia

Union: unionized, but union not known

Innovation: increased worker decision making

Sources: anecdotal evidence from Laurent Thibeault.

ESSO refinery, Dartmouth, Nova Scotia

Union: not unionized

Innovation: increased worker decision-making

Sources: MacIssac (1993).

Ault Foods (Stacy Brothers), Mitchell, Ontario and other locations

Union: Retail, Wholesale, and Department Store Union, Teamsters

Innovation: Employee Centred Management (ECM), which gives workers a more active role

Sources: Ontario Premier's Council on Economic Renewal video and Labour Canada (1993).

IBM Canada Ltd., Toronto, Ontario

Union: not unionized

Innovation: New Competitive Design (NCD)—a program to empower workers

Sources: Premier's Council on Economic Renewal video, Praxis/Coopers and Lybrand (1993), and Globe and Mail, Change page, February 9, 1993.

VME Equipment of Canada Limited, St. Thomas, Ontario

Union: International Association of Machinists

Innovation: autonomous work teams

Sources: Perrin and Portis (1992).

LOF Glass, Collingwood, Ontario

Union: Aluminum, Brick and Glass Workers International Union

Innovation: work teams

Sources: Portis (1991), Institute for International Research (1993), and Labour Canada (1993).

I.C.M./Krebsoge, St. Thomas, Ontario

Union: unionized, union not known

Innovation: work teams

Sources: Perrin and Portis (1992).

London Public Utilities Commission, London, Ontario

Union: not known if unionized

Innovation: 'Journey to Excellence' or total quality management program to enhance customer satisfaction through employee involvement

Sources: McClenaghan and Portis (1992).

Inco, Sudbury, Ontario

Union: Steelworkers

Innovation: greater sharing of information between management and labour

Sources: CLMPC (1993), Wright (1991).

Chrysler Mini-Van assembly plant, Windsor, Ontario

Union: Canadian Auto Workers

Innovation: long-term quality policy that provides greater communication between the shop floor and management to remove defects, team work key element of the plan

Sources: CLMPC (1993), winner of Canada Award for Business Excellence.

Chrysler assembly plant, Bramalea, Ontario

Union: Canadian Auto Workers

Innovation: work teams

Sources: Brockhouse (1992).

General Motors-Suzuki CAMI assembly plant, Ingersoll, Ontario

Union: Canadian Auto Workers

Innovation: Japanese Production Management or lean production

Sources: many sources including CAW (1993b), Globe and Mail, Change page, October 13, 1992, and Institute for International Research (1993).

Algoma Steel, Sault Ste. Marie, Ontario

Union: Steelworkers

Innovation: worker ownership and participation

Sources: Delaney presentation at the Labour Research Workshop, Labour Canada (1993), and newspaper accounts.

Spruce Falls Paper Company, Kapuskasing, Ontario

Union: Canadian Union of Paperworkers

Innovation: worker ownership and participation

Sources: Keith Newman of Communication, Energy and Paperworkers has first hand knowledge.

Tembec, Temiscaming, Quebec

Union: Canadian Union of Paperworkers

Innovation: community and worker ownership

Sources: Nadeau (1993), and Praxis/Coopers and Lybrand (1993).

Acier Atlas, Tracy, Quebec

Union: Steelworkers and Confederation des syndicats nationaux

Innovation: social contract whereby union agreed to long no-strike period for investment guarantees and establishment of total quality program and human resource development plan

Sources: special issue of Le Devoir.

Goodyear Tire, Valleyfield, Quebec

Union: Communications, Energy and Paperworkers Union

Innovation: social contract type agreement

Sources: newspaper accounts.

Schneider Foods, Kitchener, Ontario

Union: in-house union (Schneiders Employee Association)

Innovation: increased employee involvement

Sources: Scott (1992), Praxis/Coopers and Lybrand (1993), and Globe and Mail, Change page.

Xerox, Toronto, Ontario

Union: not unionized
Innovation: participative management
Sources: Praxis/Coopers and Lybrand (1993), and Globe and Mail, Change page, October 6, 1992.

Ault Foods, all plants, mostly in Ontario

Union: United Food and Commercial Workers
Innovation: work teams
Sources: Praxis/Coopers and Lybrand (1993), Belleville plant written up in Globe and Mail, Change page, February 16, 1993, and Labour Canada (1993).

3M Canada, all plants

Union: not known if unionized
Innovation: centres of excellence based on vision platforms
Sources: Praxis/Coopers and Lybrand (1993).

Federal Express, all locations in Canada

Union: not unionized
Innovation: P.S.P. philosophy (people-service-profit)
Sources: Praxis/Coopers and Lybrand (1993).

Western Foundry, Wingham and Brantford, Ontario

Union: unionized, union not known
Innovation: self-managed work teams
Sources: Praxis/Coopers and Lybrand (1993).

Canadian Pacific Hotels and Resorts, all locations

Union: not known if unionized
Innovation: employee involvement and ownership of change
Sources: Praxis/Coopers and Lybrand (1993).

Imperial Oil Limited, all establishments

Union: Energy and Chemical Workers
Innovation: program to facilitate change through effective communication
Sources: Praxis/Coopers and Lybrand (1993).

Levi Strauss, plants in Stony Creek and Brantford, Ontario

Union: Amalgamated Clothing and Textile Workers
Innovation: worker involvement and empowerment program, community involvement to deal with workplace diversity, teamwork for a predominately female workforce that speaks over a dozen languages
Sources: Jain (1989), and Globe and Mail, Change page, July 28, 1992, updated June 15, 1993.

Dofasco plant, Hamilton, Ontario

Union: not unionized
Innovation: increased employee involvement in decision making
Sources: Jain (1989).

Shell Canada plant, Brockville, Ontario

Union: appears not unionized
Innovation: workers organized into three self-managed 'job families'

Sources: Globe and Mail, Change page, February 2, 1993.

Cardinal River Coal/Lusar Ltd., Alberta

Union: United Mine Workers of America

Innovation: union took the initiative to cooperate with management to lead a dramatic corporate turnaround, relationship by objective

Sources: Public Policy Forum (1993) and Labour Canada (1993).

Honeywell Ltd., Scarborough, Ontario

Union: Canadian Auto Workers

Innovation: learning for life literacy, basic skills

Sources: Labour Canada (1993) and Globe and Mail, Change page, May 18, 1993.

Great Western Brewery Co. Ltd., Saskatoon, Saskatchewan

Union: United Food and Commercial Workers

Innovation: employee ownership

Sources: Labour Canada (1993).

Zehrmart Inc, Ontario locations

Union: United Food and Commercial Workers

Innovation: joint training initiatives

Sources: Labour Canada (1993).

Miramichi Pulp and Paper, Newcastle, New Brunswick

Union: Canadian Paperworkers

Innovation: joint training

Sources: Labour Canada (1993).

MacMillan-Bloedel, Chemainus, British Columbia

Union: International Woodworkers of America

Innovation: employee assistance programs, team work

Sources: Labour Canada (1993) and Globe and Mail, Change page, September 15, 1992.

PetroCanada Lubplex Division, Clarkson Refinery, Clarkson, Ontario

Union: Energy and Chemical Workers

Innovation: improved cooperation attitudes and efficiencies

Sources: Labour Canada (1993) and Mac Roberts (1993).

Suncor Oil Sands Group, Fort McMurray, Alberta

Union: Energy and Chemical Workers

Innovation: joint problem solving, Productivity Improvement through Labour Expertise (PILE) program to develop direct communication between managers and employees, aims to develop mutual understanding of project scope, procedures, budget constraints, etc.

Sources: Labour Canada (1993), Canada Awards for Business Excellence 1985 finalist for labour-management cooperation.

International Forest Products, British Columbia

Union: International Woodworkers of America

Innovation: health and safety improvements

Sources: Labour Canada (1993).

AGT Ltd. (Telus Corp.), Edmonton, Alberta

Union: International Brotherhood of Electrical Workers
Innovation: mutual gains bargaining
Sources: Labour Canada (1993).

Alcatel Canada Wire and Cable, Leaside, Ontario

Union: United Electrical Workers
Innovation: development of a joint health and safety process along with a new Adult Education Program, improved dialogue, introduction to change, dramatic improvements in quality and customer service
Sources: Mac Roberts (1993) and Labour Canada (1993).

Ontario Hydro

Union: Canadian Union of Public Employees
Innovation: use of problem solving techniques in the collective bargaining process, diffusion of the issue of contracting out, implementation of continuous improvement and total quality management, employee involvement
Sources: Mac Roberts (1993) and Labour Canada (1993).

Saskatoon Chemicals, Saskatoon, Saskatchewan

Union: Communications, Energy and Paperworkers Union
Innovation: partners started with problem solving in continuously improving all aspects of the business, sustained continuous improvement process
Sources: Mac Roberts (1992).

Dupont Canada Inc., Mississauga and Whitby, Ontario

Union: union not known
Innovation: development of employees around processes aimed at improving quality of thought and action, self-management, customer-market orientation
Sources: Mac Roberts (1993).

Westbridge Computer Corp., Regina, Saskatchewan

Union: Energy and Chemical Workers
Innovation: self-management and customer orientation
Sources: Mac Roberts (1993) and Canadian Business Magazine, July, 1990.

PPG Canada, Beauharnois, Quebec and Clarkson, Ontario

Union: unionized, union not known
Innovation: continuous improvement processes, work teams
Sources: Institute for International Research (1993).

General Motors Trim Plant, Windsor, Ontario

Union: Canadian Auto Workers
Innovation: joint quality challenge, received for quality in 1991
Sources: Canada Award for Business Excellence 1991 for quality, and Institute for International Research (1993).

Ford Electronics Manufacturing Corporation, Markham, Ontario

Union: International Association of Machinists and Canadian Auto Workers
Innovation: self-learning challenge in a team environment

Sources: Institute for International Research (1993) and Globe and Mail, Change page, September 22, 1992.

Polysar, Sarnia, Ontario

Union: Energy and Chemical Workers

Innovation: team work

Sources: Institute for International Research (1992).

TRW location not known

Union: Amalgamated Clothing and Textile Workers Union

Innovation: moved toward a self-directed workforce

Sources: Institute for International Research (1992).

Budd Canada Inc. frame plant, Kitchener, Ontario

Union: Canadian Auto Workers

Innovation: quality through teamwork, use of relationship by objectives program

Sources: Institute for International research (1992) and Canada Awards for Business Excellence 1984 silver medalist for labour-management cooperation.

Stelco, Hilton Works, Hamilton, Ontario

Union: United Steelworkers of America

Innovation: multiskilling and pay for knowledge

Sources: USWA project on work reorganization.

Walker Exhaust, Cambridge, Ontario

Union: United Steelworkers of America

Innovation: continuous improvement

Sources: USWA project on work reorganization.

Costeel-Lasco, Whitby, Ontario

Union: United Steelworkers of America

Innovation: management systems

Sources: USWA project on work reorganization.

Ball Packaging, Richmond, British Columbia

Union: United Steelworkers of America

Innovation: team approach

Sources: USWA project on work reorganization.

Tafelmusik Baroque Orchestra, Toronto, Ontario

Union: not unionized

Innovation: Drucker sees orchestras as models for information-based businesses of the future as they are small and cooperative, have flat organizational structures, and use strategic planning

Sources: Globe and Mail, Change page, May 25, 1993.

Challenger Motor Freight Inc., Cambridge, Ontario

Union: not unionized

Innovation: employee involvement through creation of a quality training program

Sources: Globe and Mail, Change page, April 6, 1993.

Marine Atlantic, based in Moncton, New Brunswick, operates ferries in Atlantic Canada

Union: unionized, union not known
Innovation: performance management program to reinforce employees good work
Sources: Globe and Mail, Change page.

EBA Engineering Consultants Ltd., Edmonton, Alberta

Union: not unionized
Innovation: focus on customer service and employee initiative
Sources: Globe and Mail, Change page, March 16, 1993.

Whistler Mountain Holdings and Blackcomb Skiing Enterprises, Whistler, British Columbia

Union: not unionized
Innovation: stress on employee innovation and initiative
Sources: Globe and Mail, Change page.

General Motors assembly plant, Ste. Therese, Quebec

Union: Canadian Auto Workers
Innovation: quality improvements, union commitment to synchronous manufacturing
Sources: Globe and Mail, Change page, June 16, 1992, updated June 15, 1993.

Hydro-Quebec, Montreal, Quebec

Union: several unions
Innovation: performance challenge initiative to lift utility out of its crisis of public confidence, use of teamwork, imposition of wage controls by the provincial government lead to union boycott of the initiative
Sources: Globe and Mail, Change page, September 8, 1993, updated June 15, 1993.

Fedmet, Hamilton, Ontario (steel processing)

Union: not known if unionized
Innovation: increased worker self-motivation and self-direction, continuous learning and improvement teams, first used raucous town meetings with all workers for communication and to produce crisis mentality, meetings no longer necessary as workers and managers have taken over the process of change
Sources: Globe and Mail, Change page, September 1, 1992, updated June 15, 1993.

Avon Canada Inc., Point Claire, Quebec

Union: not known if unionized
Innovation: flexible production runs based on work teams, appears to be doing well
Sources: Globe and Mail, Change page, August 18, 1992, updated June 15, 1993.

Industries Couture, Chicoutimi, Quebec

Union: Confederation des syndicats nationaux

Innovation: firm did everything right (invested in technology, trained employees, organized teams) but no demand for its product
Sources: Globe and Mail, Change page, October 27, 1992.

Schukra of North America Ltd. and Electronic Systems Ltd., adjacent auto parts plants in Windsor, Ontario

Union: not unionized
Innovation: continuous improvement and work teams
Sources: Globe and Mail, Change page, May 11, 1993.

Toronto Plastics Ltd., Toronto, Ontario

Union: not unionized
Innovation: certified under ISO 9000, an international quality assessment program, which leads to greater worker concern with quality, increased emphasis on work teams, better quality products
Sources: Globe and Mail, Change page, June 30, 1992, updated June 15, 1993.

Milliken and Co., Deseronto, Ontario (carpet maker)

Union: not unionized
Innovation: self-managed work teams, plant killed by FTA
Sources: Globe and Mail, Change page, June 1, 1993.

Multilin, Markham, Ontario (machinery manufacturer)

Union: not unionized
Innovation: scraped assembly line in favour of work cells of multi-skilled workers
Sources: Globe and Mail, Change page, June 8, 1993.

L.E. Shaw Limited, Lantz, Nova Scotia

Union: International Brotherhood of Boilermakers
Innovation: general educational development program (grade 12 equivalency)
Sources: Labour Canada (1993).

Bestar Inc., Lac Megantic, Quebec

Union: Fraternite nationale des charpentiers-menuisiers, forestiers et travailleurs de l'usine
Innovation: programme de gestion participative
Sources: Labour Canada (1993).

Weston Bakeries, Longueuil, Quebec

Union: Le Syndicat des salaries des Boulangeries Weston
Innovation: partenariat syndical-patronal
Sources: Labour Canada (1993).

Camco Inc., Montreal, Quebec

Union: Communications, Energy and Paperworkers Union
Innovation: health and safety program, responsibility for quality control given to production staff
Sources: Labour Canada (1993), Canada Awards for Business Excellence 1987 bronze medalist for both productivity and labour-management cooperation.

Les Tourbieres Premier Ltee, Riviere-du-Loup, Quebec

Union: Fraternite national des charentiers-menuisiers, forestiers et travailleurs de l'usine

Innovation: programme de gestion participative

Sources: Labour Canada (1993).

Brock Telecom Limited, Brockville, Ontario

Union: Communication and Electrical Workers of Canada

Innovation: employee involvement and quality improvement

Sources: Labour Canada (1993).

Canadian Standards Association (CSA), Rexdale, Ontario

Union: Canadian Union of Public Employees

Innovation: teamwork, changing corporate culture

Sources: Labour Canada (1993).

Terra Footwear Ltd., Harbour Grace Newfoundland

Union: not unionized

Innovation: factory with state of the art production, design and communication equipment, one of Newfoundland's few success stories in manufacturing

Sources: Globe and Mail, Change page, July 14, 1992, updated June 15, 1993 and Atlantic Journal of Opportunity, Spring/Summer, 1993.

Pan Canadian Petroleum Ltd., Calgary, Alberta

Union: not known if unionized

Innovation: continuous improvement program with work teams in the production division, lead to tighter cost controls and higher volumes, downside too many meetings

Sources: Globe and Mail, Change page, August 25, 1992, updated June 15, 1993.

Prevost Car Inc., Ste-Claire, Quebec

Union: Canadian Auto Workers

Innovation: innovative pre-negotiation formula to deal with key issues before collective agreement expires, has led to all-time highs in labour relations and productivity

Sources: Canada Awards for Business Excellence 1990 winner for labour-management cooperation.

Stelwire (Stelco subsidiary), Lachine, Quebec

Union: United Steelworkers of America

Innovation: plant turnaround due to policy of openness where management decided to go out to the production floor and get to know their employees

Sources: Canada Awards for Business Excellence 1989 gold medalist for labour-management cooperation.

National Sea Products, Halifax, Nova Scotia

Union: Canadian Seafood and Allied Workers Union and Canadian Brotherhood of Railway, Transport and General Workers

Innovation: unions and management worked successfully together to introduce Canada's first factory freezer trawler

Sources: Canada Awards for Business Excellence 1989 silver medallist for labour-management cooperation.

Bombardier Inc., Valcourt, Quebec

Union: Office Workers Labour Relations Committee (in-house employees association)

Innovation: labour relations committees and management succeeded in turning around a major loss to a profit through the development of a training program and the implementation of an employee productivity participation program

Sources: Canada Awards for Business Excellence 1989 bronze medallist for labour-management cooperation.

Triple E Canada Ltd., Winkler, Manitoba (recreation vehicle maker)

Union: employees' association

Innovation: firm committed itself to a policy of full-time employment and employees responded by helping bring about the technical changes needed to make the system more efficient, problems solved by a task force approach between labour and management

Sources: Canada Awards for Business Excellence 1988 gold medallist for labour-management cooperation.

Waltec Sinkware, Midland, Ontario

Union: Sheet Metalworkers International

Innovation: gainsharing and quality circle programs implemented, supplemented with training programs, joint productivity council set up as a key decision-making unit, employee attitudes very positive

Sources: Canada Awards for Business Excellence 1988 silver medallist for labour-management cooperation.

Shermag Inc., Sherbrooke, Quebec (furniture maker)

Union: United Steelworkers of America

Innovation: transformed a troubled plant into a model establishment through increased employee involvement, unfortunately the firm has since gone bankrupt due to the PTA

Sources: Canada Awards for Business Excellence 1988 bronze medallist for labour-management cooperation.

Lamford Forest Products, New Westminster, British Columbia

Union: International Woodworkers of America

Innovation: management and the union bought the company and turned it around, all employees required to own shares

Sources: Canada Awards for Business Excellence 1987 gold medallist for labour-management cooperation.

H.E. Vannatter, Wallaceburg, Ontario (auto parts maker)

Union: Canadian Auto Workers

Innovation: increased employee participation through 'creating, motivating and maintaining a team of people that trust and respect each other, and understand the changes that are required in order to succeed'

Sources: Canada Awards for Business Excellence 1987 silver medallist for labour-management cooperation.

Edwards, A Unit of General Signal Ltd. (fire alarm maker), Owen Sound, Ontario

Union: appears not unionized

Innovation: joint committee formed to respond to technological change and joint apprenticeship committee formed to give training

Sources: Canada Awards for Business Excellence 1986 gold medallist for labour-management cooperation.

H.A. Simons Consulting Engineers, Vancouver, British Columbia

Union:

Innovation: firm developed joint initiatives to avoid long-term unemployment and keep employee hardship to a minimum

Sources: Canada Awards for Business Excellence 1986 silver medallist for labour-management cooperation.

City of St. John's, St. John's, Newfoundland

Union: Canadian Union of Public Employees

Innovation: union management given the opportunity to assess whether work could be done under normal collective agreement rules by union members or contracted out

Sources: Canada Awards for Business Excellence 1986 finalist for labour-management cooperation.

Firestone Textiles Company, Woodstock, Ontario

Union: appears not unionized

Innovation: transitional problems of plant expansion solved by a cooperative joint team that successfully integrated two seniority groups, agreed on work-week flexibility, ensured special benefits for senior displaced employees and provided training

Sources: Canada Awards for Business Excellence 1985 gold winner for labour-management cooperation.

Continental Can Canada Inc., plants in Montreal, Toronto and Edmonton

Union: not known if unionized

Innovation: renovation and expansion of three plants through the 'boardroom on the floor approach' which had employees participate in every stage of the switch-over

Sources: Canada Awards for Business Excellence 1985 silver winner for labour-management cooperation.

Lakeland Mills Ltd., Prince George, British Columbia (lumber mill)

Union: International Woodworkers of America

Innovation: retraining of workers for new technology, heavy union Involvement

Sources: Canada Award for Business Excellence 1984 gold winner for labour-management cooperation.

B.C. Forest Products Ltd., Vancouver, British Columbia

Union: International Woodworkers of America

Innovation: use of a Manpower Assessment Incentive Agreement which takes into consideration employee ideas on all areas of change, including job design, training, technological innovation and staff reduction

Sources: Canada Awards for Business Excellence 1984 finalist for labour-management cooperation.

Britex Limited, Bridgetown, Nova Scotia (elastic fabrics maker)

Union: appears not unionized

Innovation: establishment of joint labour-management committee, which lead to increased employee involvement, profit sharing introduced

Sources: Canada Awards for Business Excellence 1984 finalist for labour-management cooperation.

Other Workplaces Where Details Not Available

The Task Force on the Organization of Work of the Ontario Premier's Council on Economic Renewal recently conducted a telephone survey of 18 innovative workplaces (see Kaplan and Rankin 1993). While many of the workplaces are included above (Ault Foods, GSW Water Heating, General Electric, Inco, Levi Strauss, Manitoba Telephone system, Saskatoon Chemicals, Ford Electronics Manufacturing Corporation, Shell Canada), others were Beaver Lumber, Consumers Glass, Department of National Defence, Glaxo Canada Inc., Molson's Brewery, and Phillips Cable Ltd.

Mac Roberts and Associates, a consulting firm specializing in organizational development and improvement, has implemented programs in the following organizations: Celanese Canada, Saskatchewan Housing, Saskatchewan Liquor Board, Prince Albert Pulp and Paper (Weyerhaeuser), Forbo-Arborite, Atomic Energy of Canada Ltd., Saskatchewan Parks-Recreation and Culture, Saskatchewan Hospital Board.

Praxis and Coopers and Lybrand Consulting Group organized a conference in Toronto July 15-16, 1994 on Building the Learning Organization. Organizations featured include the Institute for Learning of the Bank of Montreal; The Royal Bank of Canada; Xerox Canada Inc.; Northern Telecom's Global Leadership Forum; Rogers Cantel (implementing rapid business process reengineering); Ault Foods (creating power structures to facilitate organizational learning); the Human Resources Branch of the Ontario Ministry of Health; Spar Aerospace (learning in cross functional teams).

The Steelworkers are currently undertaking a project on work re-organization. The project is funded by Labour Canada and the Ontario TARP program and includes a number of case studies. Some of the case studies have been outlined above. Others include Inco Mining and Smelting Operations, Thompson, Manitoba; Canadian Electrolytic Zinc, Montreal, Quebec; Iron Ore Canada, Labrador City, Newfoundland. In the last half of the 1980s, the Canada Awards for Business Excellence, sponsored by Industry, Science and Technology Canada (ISTC), included a category for business-labour cooperation. The category was merged with the total quality category in the early 1990s. A list of all the winners and runners-up in the business-labour cooperation category, the total quality category, and all other categories has been supplied by ISTC. Descriptions of all winners in the labour-management category are also available.

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