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## COMMISSION FOR LABOR COOPERATION

### High Performance Work Systems in North America

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## Preamble

The evidence that is available for evaluating the diffusion of high performance work systems (HPWS) is different for each country. In Canada, systematic reviews of studies that address the issue are based on surveys that have been undertaken by government offices and by academic institutions. These surveys include analyses of the economic impact of HPWS, as well as their effects on working conditions and labor unions (Kumar, 1998, 2000).

These issues have received a great deal of attention in Canada, where pertinent information has been carefully gathered from companies, unions and workers. In the United States, reviews of HPWS are more narrowly focused on the strictly economic impact of the systems' implementation. The U.S. studies cited in the reviews try to determine whether the use of HPWS results in gains in corporate productivity or profitability. U.S. research has attempted to analyze the role HPWS has played in transforming production methods to achieve the goal of improving companies' economic performance. The information evaluated by those reviews (Kling, 1995; Adams, 2000) and by research such as that carried out by Osterman (1994) is taken mostly from corporate surveys rather than from surveys of unions or workers.

In Mexico, there are no systematic reviews of studies concerning HPWS. Only the National Survey on Employment, Salaries, Technology and Training [*Encuesta Nacional de Empleo, Salarios, Tecnología y Capacitación*—ENESTYC), undertaken periodically by the Ministry of Labor and Social Security (*Secretaría del Trabajo y Previsión Social*-STPS), has collected data of some interest on organizational changes and on work practices. Also, case studies of the flexibilization of work in some plants provide information indirectly concerned with HPWS. Even less information is available about the perceptions of unions or workers on the matter.

The paucity of research in Mexico requires that the paper's approach toward Mexican implementation of HPWS remain focused on the policy context – trade liberalization, the privatization of state-owned companies and labor deregulation – rather than on company-specific explanations. Since 1982, Mexico undertook structural economic changes, and several financial crisis. These elements, among others, have created conditions for the introduction of HWPS that are specific to Mexico and very different from the conditions that attended the introduction of

HWPS in Canada or the United States. As a consequence, the rationale behind the introduction of HPWS in Mexico is quite distinct from that set forth in the Canadian and U.S. cases. It is also worth mentioning that little has been documented regarding High-Performance Work Systems (HPWS) in Mexico due to the fact that, some of the principles of this working-methods restructuring, go against what is dictated by the current Federal Labor Law (FLL), such as the principle of employment stability.<sup>1</sup>

The paper therefore underscores the limitations that preclude an exhaustive consideration of the subject within North America or a comparative analysis among the three countries. The purpose here is then, simply, to summarize the existing literature on the topic, which is mainly qualitative in nature, and, whenever possible, to compare and contrast the situation described in the three countries.

The paper is organized around three themes. First, it is noted that the transition from low performance work systems (LPWS) to HPWS is closely related to the transition from mechanical technology to electronic technology (Jacobi, 1985; Parks, 1995; Harper Simpson, 1999). Second, the characteristics of restructuring and transition between economic models in North America over the 1982-2005 period are presented. Finally, the HPWS in the three countries are examined, with close attention paid to national differences. A conclusion briefly evaluates the results of HPWS in North America.

Before beginning the in-depth discussion and in order to understand the conceptual context, it should be mentioned that under high-performance work systems we understand those systems which involve reorganization of work, away from the Taylorist model of direct supervision of employee tasks to autonomous teams focused on problem solving or quality improvement. Workers make assessments about job tasks and methods of work and then communicate their insights with other workers, managers and experts. (ILO 2005).

## **I. Introduction: The Evolution of Work**

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<sup>1</sup> The reform bill to the FLL, submitted in the Chamber of Deputies on December 12, 2005, consists on establishing several measures that would support the establishment of high-performance work systems without undermining workers' fundamental rights, such as new ways of hiring, training and productivity. Nevertheless, the lack of these reforms has hindered the complete implementation of HPWS in Mexico.

1. Development of the factory system of production and its impacts upon the authority system, the organization of workers and payments systems.

From the end of the 19th century to the 1970s, industrial work systems centered on the growth of a permanent work force that had job tenure and received regular salaries, fringe benefits and social security and health benefits regulated by collective contracts that were administered by unions and regulated by government institutions (Social Security, national healthcare systems, etc.).

During that period, work systems generally were located in large manufacturing plants that were managed according to industrial management rules (often known as Taylorism and Fordism). Under those rules, workers and management developed an antagonistic relationship, because management tended to subject the workforce to rigorous discipline without necessarily allowing for union participation in the administration of work systems. Factory life was characterized by constant pressure to increase efficiency and by regulations concerning vertical and horizontal mobility at the plant level, seniority systems for advancement and other procedures that insured managers that workers would respond in predictable ways to the priorities of the employer (Bendix, 1963; Jacoby, 1985, 1991; Parks, 1995; Harper Simpson, 1999). The origins of this work system can be traced to the economic dislocation caused by the financial panic of the early 1890's. After the 1896 depression, employers searched for new ways in which to increase productivity. Following Taylor and his scientific organization of work recommendations (Taylor, 1911; Littler, 1978), the planning and the implementation of work were separated from each other. Vertical forms of organization of work systems were established. The separation of planning from implementation resulted in the creation of planning departments where specific types of work, such as job design and the organization of production lines, were developed. This division of labor also contributed to the appearance of narrowly defined jobs, most of which involved an unskilled workforce carrying out repetitive operations in a horizontal sequence. Shift work and the intensification of the pace of work were other characteristics resulting from this division of labor.

Shortly after Taylor's methods were adopted, Henry Ford introduced the moving conveyor, which allowed his Highland Park factory in Michigan to mechanically control the methods and intensity of work. In this manner, methods of production were largely determined by the speed of

the assembly line. Workers opposed the new methods. Ford countered with the “five dollar day,” which provided relatively high salaries to assembly-line workers. In this way, a virtuous circle was created that enabled workers to aspire to consume the products they made. This procedure, streamlined at Ford plants, eventually became the basis for Keynesian macroeconomic policies that sought to combat the impact of the Great Depression by creating aggregate demand for goods. At the same time, the rigid disciplinary methods associated with Taylorism were softened by the implementation of the human resources approach to work systems, largely the result of Elton Mayo's research at the Western Electric Company in the 1930's (Mayo, 1933). In addition, New Deal legislation served as the basis for collective bargaining and adversarial conflict resolution in the 1950's and 1960's (Parks, 1995).

Taylor's and Ford's organizational methods constituted the foundations of LPWS, which is identified with the creation and institutionalization of a large salaried, relatively unskilled work force that engages in repetitive tasks and frequently, but not always, benefits from collective bargaining contracts negotiated by unions and enforced through labor laws and public offices such as labor ministries. For most of the twentieth century, this was the predominant *modus operandi* of industrial capitalism.

Criticism of LPWS began to surface in the 1970's as a result of several events that called into question the demand-oriented Keynesian model and introduced supply-side economics as an alternative approach to macroeconomic decision-making (Braverman, 1974; Littler, 1978). At the same time, the 1973 oil crisis sparked a strong rise in energy prices that benefited countries belonging to the Organization of Petroleum Exporting Countries (OPEC). The recycling of petrodollars eventually opened a financial cycle that contributed to the 1982 debt crisis, especially in Latin America. In addition, violent reactions to Tayloristic practices in countries such as Italy (Fiat Motor Company) opened a debate among production engineers on the need to change the methods associated with LPWS, especially with respect to assembly-line production.

As a result, companies began to demand a more skilled work force, one that was highly trained, motivated, and professionally and geographically mobile. Skill levels had to accompany the fulfillment of jobs. Professional mobility became an imperative to ensure quality levels in production sites. Geographic mobility had to accompany relocation of plants away from

concentrations of domestic consumers to places where the needs of global consumers could be more easily met. The case of the steel industry was paradigmatic: in the 1970's, steel plants moved from their old locations to seaside locations so as to ensure both cheaper raw materials and easier transport for steel exports.

In some economic sectors, Tayloristic methods were progressively discarded because the focus on an increasingly skilled work force was dysfunctional and also because resistance at the plant level, manifested by high turnover and absenteeism, increased costs. In the 1960's, the number of strikes escalated dramatically in both European and non-European countries, as well as in some branches of the United States economy. Thus, Tayloristic methods had to be replaced because they were increasingly dysfunctional to variable demand and contributed to high inventory levels.

## 2.Characteristics of the transition between mechanical technology and electronic technology

Parallel to the questioning of LPWS, new technologies began to be included in production processes in many economic branches. Computerization helped to flexibilize production and contributed to profound changes in the organization of work loads, quality control and the creation of small units with small numbers of workers (quality circles). Japanese methods started to emerge production models as Japanese products, particularly cars and electronics, made substantial market gains in Europe and the United States. The five goals that were intrinsic to the Japanese production processes (zero stock, zero faults, zero useless paper, zero maintenance interruptions and zero delays) entailed significant changes in the participation of workers, which included the progressive replacement of bureaucratic for technical control.

In addition, technological innovations largely identified with computerization and new work systems close to Japanese practices contributed to developing a flexible work force whose volume and cost could be easily adapted to market fluctuations. Managers began to hire temporary workers and use specialized companies that provided workers with appropriate skills. Corporations outsourced their hiring and firing functions, which resulted in more workers getting paid by companies different from those for which they worked. These new workers did not receive social security or health benefits. Partly as a result of this, unions became progressively estranged from workers and lost representation. (Harper-Simpson,, 1999)

In the 1980's, during the Reagan and Thatcher eras, employers in the developed and industrialized countries began to institute new work practices that eventually became identified with high performance work systems (HPWS). HPWS involve a reorganization of work, away from the Taylorist model of direct supervision of employee tasks, to autonomous teams focused on problem' solving or quality improvement. The purpose of HPWS is to increase the participation of workers in decision-making. Workers make assessments about job tasks and methods of work and then communicate their insights with other workers, managers and experts. Active participation of workers in problem' solving committees is believed to raise productivity and numerous studies indicate that high-performance work systems increase productivity (Applebaum et. al. 2000 cited in ILO, 2005)

These practices were characterized by individual salary contracts (as opposed to collective bargaining agreements) and high technological, functional and employment volume flexibility. Thus, flexibilization, defined as the capacity of a system to adapt itself to its environment, became associated with: (a) highly automated, high-tech plants that allowed for increasing productivity levels; (b) a functional organization of work, where workers with multiple skills changed jobs or held various jobs instead of performing a fixed job on a permanent basis; (c) variable employment levels that allowed employers to hire or lay off workers in accordance with market fluctuations without being held accountable by public officials or labor laws; (d) the outsourcing of human resource management to ensure employment-volume flexibility; (e) variable salary levels that allowed remuneration to fluctuate according to labor supply and demand and in relation to worker productivity and corporate profitability.

Two principal types of flexibilization strategies can be identified. Defensive, external flexibilization allows companies to hire and fire, pay flexible salaries and manage human resources through externalization and subcontracting. Offensive, internal flexibilization focuses on training and horizontal mobility within the plant, limiting lay offs while underlining the importance of manpower for profit generation. According to market fluctuations and product, countries could apply either type of strategy and generate dualistic work systems in which labor markets were composed of a permanent and stable work force, on the one hand, and a precarious, temporary work force on the other.

While there is little consensus about the meaning of HPWS, one definition used in this paper identifies HPWS as systems that maintain a universe of stable and permanent workers who possess relatively advanced skills, belong to work teams and quality circles, and participate in defining and adjusting their own work processes. This conception stresses high-performance work organizations that organize work in new ways, rewarding performance and involving employees in decision-making. Personal development plans, business process reengineering, quality circles and the learning organization play a central role in this type of HPWS. Thus, the adoption of these non-Taylorist forms of work organization implies the adoption of new human resource management approaches, sets of practices and strategies that enhance economic performance, employee empowerment with high commitment and high involvement that contribute to mutual gains on the part of workers and managers, and strategic resource management. Overall, this definition of HPWS is based on the idea that profits can be obtained by investing in the high performance of workers. (Osterman, 2001)

Presumably, HPWS induce flexibility and complexity into the work environment and lead to the possibility of workers engaging in multitasking. They also contribute to improved employee qualifications, ongoing skill formation through enterprise training, fewer levels of hierarchy, greater horizontal communication and distribution of responsibility (teams), compensation incentives for performance and skills, and horizontal, inter-firm links for subcontracting and outsourcing. Numerical or external flexibility –identified with downsizing, re-engineering and outsourcing – implies the existence of functional flexibility and interdependency between HPWS and technological change.

The active participation of workers in solving problems stemming from the production process has contributed, according to some studies, to productivity growth. (Applebaum et. al., 2000 cited in ILO 2005, p. 198). Improvement in the training of workers is fundamental for the functioning of the HPWS, the Trade Union Advisory Committee of the Organization for Economic Co-operation and Development (OECD) has recognized the importance of promoting the implementation of the HPWS as mechanisms for strengthening work competence, taking into account the experience and insights of the workers. (OECD 2003).

### 3. The social and political dynamics underlying HPWS.

The implementation of HPWS is correlated with political development in the 1990's. New views and practices concerning the operation of democracy permeated other areas of social life. One of these was the climate governing in-plant relations between workers and managers. According to the classification of the elements of HPWS shown in Table 1, practices such as information sharing (IS), alternate work arrangements (AWA), joint labor management committees (JLMC) and self-directed teams (SDT) correspond more to political aspects of plant life than to any specific economic objective. In this respect, HPWS are new practices compared to the paternalistic policies put into practice at the beginning of the 20th century to decrease acute labor turnover. The construction of company towns – where housing, food, health care and other benefits were provided by companies seeking to establish stable workforces – is no longer a prevalent practice. It was thought that if workers had access to these benefits they would provide significant effort to comply with production priorities. In contrast to those strategies, HPWS are directly related to the productive sphere and search for commitment of the workforce, not only at the level of quality but also in relation to understanding the constraints under which companies are operating today. That is why IS, AWA, JLMC and SDT are measures that to be successful must be understood by workers in relation to the firm's overall and specific objectives as regards plant operations, market penetration and political environment. In the HPWS scheme, workers must commit themselves to the firm's overall mission as well as to specific managerial objectives. In theory, under HPWS, managers and workers build consensus in place of becoming traditional plant adversaries, and democratic interaction replaces typically conflictive labor relations. Thus, under these systems there is little room for labor representation through unions. The studies seem to conclude that HPWS must be introduced as a package in order to be effective, yet often the HPWS reforms are implemented in a piecemeal way.

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## **II. Economic Restructuring in North America: 1994-2005**

1. Trade liberalization, privatization and labor deregulation

The economies of Canada, United States and Mexico have all undergone restructuring, but they have done so in very different ways. Canada and the United States reformed their labor laws and regulations before 1994, with most of the changes occurring at the end of the 1970's and throughout the 1980's.

The Canadian and U.S. economies and labor relations systems increasingly focused on rapid adaptation to changing conditions in domestic and international markets (Reich, 1991). Events that occurred after the abrupt, post-1973 rise in energy prices ended a cycle of cheap oil and forced the adoption of new production methods. Massive lay-offs and changes in work and production systems forced firms in both countries to discard Taylorist and Fordist methods, as mentioned before. Significant job losses in traditional industries where unionism was consolidated and the replacement of manufacturing jobs by service sector jobs changed the nature of the labor movement in both countries. Non-union establishments proliferated. According to Michael Goldfield (1987), dramatic declines in union membership seriously weakened labor organizations. But, simultaneously, as Gregor Murray argues for the Canadian case (1995), unions began to "retool" the way in which they represented workers. Facing outsourcing, downsizing and relocation both within and beyond national borders, as well as the generalization of new technologies and competitive pressures in product markets, unions and firms searched for greater productivity gains and enhanced control of the quality of outputs. As a result, many firms sought new forms of collective agreements with unions that entailed less tightly specified work rules, greater flexibility in the management of internal labor markets and greater employee involvement in the control of quality.

Thus, all through the 1980's and especially during the 1990's, decisions concerning adoption of new technologies that substituted labor for capital, moves towards consolidation, mergers and acquisitions, together with the introduction of many if not all of the flexibilization procedures required to boost competitiveness in domestic and international markets contributed to profound changes in union operations. These decisions to restructure also promoted a shift in the skill mix in favor of more highly skilled workers and an increased use of contract workers (*Bank of Canada Review*, 1995, 2000).

In addition, in these two countries, restructuring did not have the same connotations as in

Mexico: indeed, while their economic structures did not change radically, employment suffered deeply: between 1977 and 1992, for example, the average number of U.S. auto workers per plant decreased from 2,440 to 1,200, while aggregate value per worker increased (in constant dollars) from \$95.3 million to \$234.2 million (Harper-Simpson 1999). The reduction of stable jobs impacted all precision jobs and jobs concerned with repair and maintenance.

In Canada, “between 1989 and 2000 manufacturing employment fell six percent, with the industry shedding 414,000 jobs during the initial four years of the Canada-U.S. Free Trade Agreement (CUSFTA), signed in 1989.” Moreover, “in industries undergoing the greatest Canadian tariff cuts, employment declined by 12 %, while industries receiving the largest U.S. tariff cuts experienced no employment gains or losses” (NAALC, 2004: 10-11). Paradoxically, downsizing took place from 1985 to 2000, a period of rapid economic expansion in the United States. U.S. flexibilization appeared to be a reaction to the market situation, changes in foreign demand, international competition, as well as other factors related to the economic recession. But part of that reaction to the new competitive context required the implementation of strategies which were based on flexible production.

Despite the public attention to the new methods of production introduced in manufacturing industries in the United States, evidence collected by Osterman and others (Osterman, 1994, 1999, 2001; Adams, 2002; ILO, 2005), shows that not many workers in industrialized countries are participating in HPWS. In the US, for instance, less than two percent of the workforce is affected by this type of work organization, a proportion that makes the change marginal for industrial manufacturing workers.

Mexico, on the other hand, had to delay economic restructuring in order to implement adjustment policies that were necessary if restructuring were to succeed. Therefore, restructuring was undertaken later than Canada and the United States. First, Mexico had to face dramatic economic turbulence in the 1980’s and again in 1994-1995. Also to be mentioned is the centrality of politics in the way the Mexican economy is managed (Babb, 2000). Any innovations in new work systems in Mexico emerged from the implementation of trade liberalization, privatization and labor deregulation reforms undertaken in response to Mexico’s 1982 debt crisis and not as a result of processes such as those we mentioned in Canada and the United States (Zapata, 2005).

In Mexico, several processes undertaken since 1982 contributed to the modification of the forms of articulation of the economy to society and to the political system. From 1982 onwards, adjustment policies were designed to confront the turbulent scenarios generated by the debt problem. Later on, the 1985 earthquake that destroyed entire neighborhoods in Mexico City, the stock market crisis of 1987, the devaluation of 1994 and the subsequent recession of 1995-1996 posed additional challenges. Answers to these challenges profoundly transformed the economic structure and the relations of Mexico with the rest of the world. Nonetheless, that the implementation of the North American Free Trade Agreement (NAFTA) was followed by the 1994 devaluation and the deep recession of 1995 has raised the question of whether those adjustment policies and the restructuring between 1982 and 1994 were well founded.

Thus, in spite of playing an important role in Mexico's new export-oriented economic model, these Mexican-owned plants have, in large part, not evolved towards HPWS.

This does not mean that median salaries, fringe benefits or working conditions have not improved in some of the "maquiladora" factories. Salary statistics for 2004-2005, for instance, are somewhat better than what they were prior to 2000, i.e. before the 2002-2003 slump that affected this industry. This derives in part from the increasing competition between "maquiladoras" for the best blue- and white-collar workers. The growing importance of engineers and technicians in assuring quality control at the "maquiladoras" is another change that has occurred in this economic sector (Contreras, 2004). At the same time, though, it cannot be argued that this relative betterment can be identified with the existence of the elements that constitute HPWS in the "maquiladora" sector. Indeed, HPWS's imply much deeper transformations of the labor force, as subsequently described in this paper (Quintero, 1995).

Nor has technological modernization provided the conditions for HPWS in Mexico. Only a handful of companies use modern technologies, and just a few economic sectors have penetrated the international market or have been able to align themselves with firms that have such links in their home markets. Technological change has therefore been concentrated in a few firms, notably those that produce for export markets. Recent research shows that it is often foreign capital inflow that prompts technological change in local firms (Partida Rocha, 2002). In other words, in the absence of technological and foreign capital transfers, it is rare to find endogenous innovation in

nationally owned private firms. Research and innovation is mostly done by research departments at public universities such as the several institutes at the National Autonomous University of Mexico (Universidad Nacional Autónoma de México-UNAM). Also, several key areas of pure and applied research are being pursued at the Instituto Politécnico Nacional (IPN); the Mexican Petroleum Institute (Instituto Mexicano del Petróleo), affiliated to Petróleos Mexicanos (PEMEX); the Comisión Federal de Electricidad (CFE), the state electricity corporation that in 2004 received the International Award for Quality in the Asia Pacific Region (IAPQA); and the Institute of Nuclear Research.

It is thus not possible to argue that the organization of work within plants adapts to the imperatives of technological modernization. Only some foreign-owned plants have quality control methods or have introduced working groups or consultation mechanisms that involve workers in improving efficiency and raising productivity. But, in general terms, there is a strong need for technological research at the level of firms, both in the nationally owned and in the transnationally owned economic sectors.

2) Institutional changes in the regulation of labor relations: the crisis of the labor movement.

The following factors together have helped transform North American labor markets while contributing to the current crisis faced by unions in the region: deregulation and segmentation of labor markets, substitution of computers for workers, atomization and isolation of workers, the increasing heterogeneity of the workforce, unilateral decision-making on the part of management, and the inability of the labor movement to recruit among outsourced workers.

These factors also have radically modified the institutional structure of labor relations. Some observers think that in Mexico, government institutions are no longer in a position to regulate labor-management relations in the way they did for many decades, when political control of unions by the government party was strong. In the best case, collective contract negotiations have increasingly become concentrated in direct relations between labor and management where the Ministry of Labor and Social Security plays the role of facilitating which contributes to the establishment of general policies that the government wants to promote in areas such as training, re-

training and mechanisms that link salaries to productivity. Also, the Federal Conciliation and Arbitration Boards (Juntas Federales de Conciliación y Arbitraje) and the Local Conciliation and Arbitration Boards continue their function of mediation, conciliation and conflict resolution.

In Mexico, the social dialogue has become an instrument through which the productive sectors have made contacts that allow the instrumentation of policies about training, the promotion of competitiveness and facilitation to the incorporation of high performance work systems at the work centers, as it can be seen in the successful case of TELMEX mentioned in this chapter. The Council for Dialogue with the Productive Sector (El Consejo para el Diálogo con los Sectores Productivos) is a mechanism that has consolidated the dialogue among the employers, employees, academics and the federal government, increasing the productivity and securing social peace.<sup>2</sup>

In Canada, work reorganization focused union action at the level of the plant, and relations between union locals and national union structures changed (Bourque and Roux, 2001; Kumar, Murray, Schategne, 2000). The focus on the plant altered what were the traditional sources of national union power, as they decreased their capacity to neutralize competition among plants of the same sector or belonging to the same corporation. This was due to the fact that salaries and work conditions at plant level became more and more important within the competitive advantage or disadvantage of corporations in the global scenario.

In addition, the Canadian government partnered with private business in 2004 to forge the Workplace Skills Strategy (WSS) focused on increasing skill levels by giving incentives to firms to promote trades and apprenticeship, foreign credential recognition, a sector council program, a workplace partners panel and a workplace skills initiative. The WSS offers public resources to promote pilot projects that try to establish innovative approaches for (a) the development of skills (literacy, management, supervisory and leadership, technical); (b) the support of policies that try to optimize recruitment procedures, human resource development and retraining, as well as retention of employees; (c) the monitoring of innovative approaches to skill identification, recognition and utilization through the creation of skills passports, talent portfolios, skill matching and inter-regional and inter-sector worker mobility; (d) the monitoring of approaches the promote

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<sup>2</sup> For more information see [http://www.consejoparaeldialogo.org.mx/CONTENIDO/d\\_cdsp\\_acuerdos\\_nacional.htm](http://www.consejoparaeldialogo.org.mx/CONTENIDO/d_cdsp_acuerdos_nacional.htm)

partnerships, networks and information flows within and across firms, as well as cross sectorally (see Overview of *Workplace Skills Initiative*: <http://www.hrsdc.gc.ca/ws/initiatives/wsi>).

Indeed, the WSS strategy points towards the provision of a new definition of productivity where the workplace acquires a centrality it did not have in the previous model of capitalist development. According to Gunderson (2002), productivity has to be associated with aspects related to job design, employee involvement, compensation, alternative time arrangements, training, diversity management and workplace well being programs. This means productivity has to reflect the technical capacity and the knowledge that each and every worker must have so as to not only provide fast and quality proof products but also to insert herself or himself into the design of innovative work procedures, to anticipate maintenance of equipment and to suggestions when clients ask for specific elements in the products they are buying. This had a secondary role in the old development model where workers were even asked not to think and focus exclusively on speed and manual ability. The transition from that model to the new one faces challenges derived from the uncertainty regarding the efficiency of the new procedures at the workplace level, from the resistance of managers and unions but also of rank and file workers and white collar workers, from legislative barriers as well as from other obstacles that are implicit in a strategy where established ways of producing are to be modified.

In this context, decentralization of authority structures and of collective bargaining in North America has to be justified not only in terms of the constraints and the regulation of salaries, and working conditions but also and principally in terms of human resource development at the plant level. It is because work reorganization is needed to face international competition that those structures of negotiation have to be decentralized. At the same time, as reorganization takes place and as permanent and professional employees are increasingly pressured to remain in the jobs they occupy through the deepening of their technical capacities, their relative power within companies increases even if union power as a collective force is rapidly decreasing.

In the United States, as a result of the changes we noted above in relation to types of employment, union power experienced a significant decline. It resulted not only from the incapacity to maintain recruitment levels but also from the development of new methods of hiring that do not involve union participation. Unilateral decision-making by management in relation to labor

relations and plant level decisions resulted in a profound weakening of union participation in collective bargaining. Recently, this expressed itself in the division that the AFL-CIO experienced at its 2005 convention.

In Mexico, lay offs, subcontracting or outsourcing do not explain the transformation of labor markets. They were transformed more as result of macroeconomic events experienced by the Mexican economy, which entered into deep recessions, than by managerial strategies geared towards international competition. For example, the rapid expansion of the informal sector, not open unemployment, is the central issue impacting Mexican labor markets. Informal-sector expansion has intensified as laid-off workers have had to survive by engaging in non-contractual jobs. Also, the entry of female workers into those markets resulted from the development of the *maquiladora* industry, which grew significantly precisely as result of the policies pursued in response to the 1982 debt crisis (Zapata, 2005).

Also, the structure of manufacturing employment in Mexico changed. After 1990, the number and the size of large and medium plants decreased, while the number of micro and small plants increased significantly. Small and micro business concerns represent a growing proportion of total employment. Again, they became the life saving device for many laid off workers in the former state owned enterprises or in large and medium sized factories that had to close during the “lost decade” of the 1980’s.

Public employment stagnated at levels that prevailed at the end of the 1970’s. Downsizing was a key element in the process of privatization of state enterprises and decreased the power of metallurgical and mining national unions where most of these companies were located. Changes in the economic geography of Mexico led to the development of new industrial sites, far from the concentration in the Mexico City Metropolitan Area, Guadalajara or Monterrey. In these green field locations (Aguascalientes, Chihuahua, Querétaro, Silao, Saltillo, Hermosillo), many new plants were built and new work systems and organizational structures were put in place by companies such as Nissan, Ford and General Motors (Juarez & Babson, 1998; Sandoval, 2003).

A comparative view of the three countries in terms of the transformation of the institutions of labor relations and in terms of the crisis of the labor movement indicates that we are witnessing a new scenario where new forms of organization of work are appearing.

Though Mexico's economic, political and organizational situation differs from that of Canada and the United States, some similarities can be found. In 1995 the President of the National Confederation of Mexican Entrepreneurs (*Confederación Patronal Mexicana – COPARMEX*), a future Mexican labor minister, introduced a concept described as “the new labor culture”<sup>3</sup>This concept emerged as the Mexican version of the general idea described above. Indeed, the new labor culture sought an accommodation between the Mexican government and the labor movement and advocated for worker participation in plant-level decision-making. The government promoted the concept both to business and labor, and it was endorsed by the then-secretary general of the National Labor Confederation (*Confederación de Trabajadores de México – CTM*). The “new labor culture” in Mexico exemplifies the flexible application of the HPWS in a piecemeal fashion that is almost exclusively targeted at implementing its economic (cost reduction) aspects. Something similar occurs when the Canadian Federation of Wood and Pulp Workers belonging to the National Labor Confederation (*Confédération des Syndicats Nationaux—CSN*) searches for ways in which to reshape local union action to commit it to the restructuring of that industry (Bourque, Roux, 2001).

### **III. Flexibilization as the Foundation for HPWS**

#### 1 The implementation of high performance work systems.

According to several surveys (Kumar, 2000: 15), organizational change in Canada affected nearly 90% of the workers employed in approximately 20% of all establishments. These workers were impacted by the following reform practices: downsizing, re-engineering, functional integration, delayering, functional flexibility, outsourcing, part-time work, training, total quality management programs, flexible job designs, information sharing, formal vocational training, alternate work arrangements, quality circles, joint labor-management committees, self-directed teams and team-based work systems, formal performance appraisals, formal and informal grievance procedures, job rotation, cross-skill training, knowledge-based pay and employee stock ownership plans, among others

Implementation of organizational change was the result of strategies geared towards the

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<sup>3</sup> See [http://www.contigo.gob.mx/index.php?idseccion=12&programa\\_id=97&](http://www.contigo.gob.mx/index.php?idseccion=12&programa_id=97&).

reduction of costs and was accompanied by the adoption of new technologies and innovation and renovated human resource management. According to Kumar (2000), it could be argued that the implementation of any set of those organizational changes was based upon the premise that “innovative human resource management practices can improve business productivity, primarily through the use of systems of related work practices designed to enhance worker participation and flexibility in the design of work and decentralization of managerial tasks and responsibilities,” and that “new systems of participatory work practices have large, economically important effects on the performance of the businesses that adopt the new practices.”

In the United States, HPWS-oriented work practices included training, profit sharing, participation in decision-making, changes in job design, teamwork, training communication, decentralized responsibility, problem-solving teams, incentives, employee involvement, job rotation, worker autonomy, skills motivation, quality awards, and organizational structures, according to a review of studies conducted by Kling (1995). Kling emphasized that the utilization of any set of these practices had a negligible impact if they were not part of a coherent work system. In addition, the reviews of both U.S. and Canadian work practices mentioned that guarantees of job security were a condition for their successful implementation. Case studies in the steel industry and in automobile manufacturing showed that the introduction of practices such as those mentioned above could result in a reduction in downtime, buffers or repair space, as well as in significant increases in productivity.

Table 1  
Classification of the Elements Comprising High Performance Work Systems  
Dimension

Production (efficiency)	Economy (cost reduction)	Social/political (plant level control)	Organizational (leadership)
re-engineering	downsizing	information sharing	functional integration
training	outsourcing	alternate work arrangements	delayering
total quality management	part time work	quality circles	knowledge-based pay systems
programs	delocalization	joint labor-management committees	
flexible design	decentralization	self-directed teams	
formal vocational		formal performance	

training	appraisals
job rotation	formal/informal grievance
cross-skill	procedure
training	employee stock ownership

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## 2. Methods to implement HPWS.

To present the characteristics of the process of the implementation of HPWS in Canada, United States and Mexico, we can distinguish some dimensions which will allow us to understand: (a) the spread and conditions of emergence of HPWS; (b) the impacts of HPWS on firms and workers; (c) the social dynamics underlying HPWS; and (d) the conditions of success of HPWS. The interaction between these dimensions and the national situation of each country forms the backdrop against which to evaluate their impact upon productive systems and the competitive status of the companies that put them into place.

### (a) Spread and conditions of emergence of HPWS.

In Canada, as a result of events such as the signature of the Canada-US Free Trade Agreement in 1989, pressures derived from the need for increasing competitiveness generated strategies to reduce production costs, innovate technologically and introduce new human resource management, so as to increase productivity. Canadian companies tried to adopt the so-called “high road,” identified with training and retraining, job re-engineering and functional flexibility to achieve the objective of being more productive. Downsizing and lay offs did occur; however, overall the high road predominated in the way companies proceeded to face the new challenges.

On the basis of Kumar's findings on the Canadian experience, HPWS produced the following results: (a) innovative human resource management practices can improve business productivity, primarily through the use of systems of related work practices designed to enhance worker participation and flexibility in the design of work and decentralization of managerial tasks and responsibility; (b) new systems of participatory work practices have large, economically important effects on the performance of the businesses that adopt the new procedures; (c) most of the studies on HPWS consistently associate the adoption of HPWS to strong or at worst, neutral financial performance. Although it is difficult to conclude unequivocally that firms can cause

improved performance by adopting HPWS, the powerful message that emerges from this body of literature is that there is virtually no evidence indicating that a firm is likely to suffer by adopting a well-planned set of HPWS and employment practices.

According to Appelbaum and Batt's analysis of the Fortune 1000 cases, most of them used HPWS but only five to ten percent of their workforces were affected. Among Dumaine's sample, while 68% of firms used HPWS, only ten percent of their work force participated (cited by Kerka, 1995). In general terms, in the United States one fourth to one third of U.S. firms adopted some of the elements comprising the HPWS package. But only two percent of the US workforce was involved in these practices. Companies on the high performance path continue to represent a small minority of American firms. Osterman (1994) concludes that a few highly publicized examples may distort the real picture concerning the degree of penetration of HPWS. This means that in very large firms, such as those surveyed on the Fortune 1000 list [which have been used as the basis for most surveys on HPWS, particularly by Osterman (1994)], use HPWS in very selective ways that involve only a very small minority of their total employees. It also means that HPWS are used strategically in very select locations on their production systems.

The limited diffusion of HPWS and its concentration in very small groups of workers within firms, however, does not imply that those reforms do not play a fundamental role in accounting for technological modernization, cost reduction or increases in wages. Indeed, according to reviews of studies made in the U.S., such as Kling's or many of Osterman's publications (1994, 1999, 2000, 2001, 2003), the emphasis on technological aspects in the process of introducing HPWS, as well as cost-reduction procedures, account for the introduction of some or all elements of the package. More recently, Osterman presented hard evidence demonstrating that, "for core blue collar employees in manufacturing, higher wages are associated to HPWS... [W]hile higher skill levels and computer based technologies are also associated with higher wages, these considerations are not the dominant channel through which work organization influences wages. Rather, the key mechanism appears to be productivity gains, independent of skill and technology, which are shared via various across-the-board wage payment systems" (Osterman, 2005).

As American industry began to introduce microprocessors into the production process, for example, new avenues for the reorganization of production were opened; indeed, this narrowed the

cost advantage of mass production and increased the capacity for customization and diversity in product design. Assembly lines of the traditional type, identified by repetitive operations carried out by unskilled workers, were replaced by flexible batch jobs where real time computer control could be applied.

Analytically, this meant that it became important to distinguish between two types of technological innovation: on the one hand, automation, which only mimics mass production systems and transfers repetitive manual tasks to automated equipment; on the other hand computerization, where decision-making capacity and skills are transferred to machines via pre-programmed instructions (Parks, 1995). Other influences behind the implementation of HPWS in the United States are related to changes in personnel management, where outsourcing very much permeates company strategy.

On the basis of an analysis of self-managed work teams and formal training procedures, Adams (2002) supplements these findings by concluding that the value of these practices depends on the characteristics of the firm's product market and its choice of other practices. Thus, self-managed teams increase the productivity of firms with substantial volatility in the type of orders produced by allowing faster decision-making and formal training programs increase the accuracy of team members' information, allowing them to make better choices. In other words, teams and training programs are complementary. Finally, Adams finds that employee involvement and training programs are vital to the production of high quality or customized products.

In Mexico, the process of economic restructuring was ignited in 1982 by the need to obtain hard currency to pay the foreign debt. This need led to policies promoting profound trade liberalization and production for export. Mexico entered the General Agreement on Tariffs and Trade (GATT) in 1986 and thereby oriented the economy towards the international market. Beginning in 1991, Mexico began to negotiate a series of free trade agreements that went in the same direction. This opening of the economy to foreign competition favored some companies, for example in the auto-parts sector, that were able to adapt themselves to the export strategy (Hoshino, Zapata, Hanono, 1990) by introducing total quality control, quality circles, re-engineering, and many Japanese methods such as just in time, job rotation, or plant redesign.

Nevertheless, data from the National Survey of Employment, Salaries, Technology and

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Training (*Encuesta de Empleo, Salarios, Tecnología y Capacitación – ENESTYC*) show that some companies (on average, around 14% of manufacturing establishments that were surveyed in 1992 and 1994, respectively) implemented changes in the organization (including the introduction of just in time, job rotation, increase or reassignment of tasks, statistical control of work processes, work teams, quality control circles, business unit organization, reordering of equipment, materials or installations, increase in supervision, decrease in supervision, in that order).

As of 1992, according to the ENESTYC results, the main organizational change introduced by large and medium-sized establishments was statistical control of the work process. In small and micro establishments, on the other hand, reordering of equipment, materials and installations was prevalent. This changed in 1994, when large and medium-sized establishments reordered equipment, materials and installations and small and micro establishments began to reassign tasks. One can see more details on these changes for the years 1992 and 1995 in Table 2.

**Table 2**

Principal Changes in Organization of Work by Manufacturing Establishment  
According to Size in 1992 and 1995 (ENESTYC 1992 and 1994)

Change	SIZE OF ESTABLISHMENT							
	LARGE		MEDIUM		SMALL		MICRO	
	1992	1995	1992	1995	1992	1995	1992	1995
Just/time	12.8	7.0	8.4	5.9	6.2	6.0	8.5	2.8
Rotation	7.3	5.8	13.5	6.9	15.3	9.1	20.1	1.2
Reassign.	4.0	12.1	5.9	16.1	3.9	16.2	15.3	18.7
Statistical	18.0	10.7	16.5	9.7	9.9	9.5	2.9	2.2
Teams	9.3	14.4	9.0	12.4	10.0	13.6	15.5	15.3
Circles	14.8	16.0	13.6	14.5	7.2	10.0	3.9	4.9
Organiz.	3.9	3.4	0.1	1.3	1.2	0.07	0.06	1.3
Reorder	17.6	19.4	18.9	17.9	24.3	13.7	22.9	17.6
+ Superv.	6.8	5.4	9.0	9.6	17.9	14.5	6.6	21.7
- Superv.	1.4	1.3	1.5	1.5	0.05	1.2	0.08	2.5
No infor.	0.02	1.3	0.02	--	0.08	--	0.08	--
Other	3.9	4.3	2.5	3.8	3.5	5.3	2.1	11.9
N=	1.389	1.043	1.709	1.098	6.266	5.397	9.990	25.106

Source: *Encuesta Nacional de Empleo, Salarios, Tecnología y Capacitación* (ENESTYC), Secretaría del Trabajo y Previsión Social (STPS, Mexico, 1992 and 1995: Table 30 as shown in [www.stps.gob.mx](http://www.stps.gob.mx))

Other data included in ENESTYC is related to the total number of manufacturing workers that received training in the year of the survey by size of establishment, a summary of which is presented in Table 3. It is to be noted that two cycles appear in the data, one for the period 1989-1991, and the other for the period 1994-1998. The results show that, in large and medium-sized establishments, the proportion of workers that underwent training increased between 1989 and 1991 and also between 1994 and 1998. But if one compares 1991 to 1994, one can see that large and medium-sized establishments trained fewer workers while, over the same period, small and micro establishments trained more workers. These differences support the highly cyclical pattern of activities undertaken by firms and the contrasting strategies adopted by the establishments of different size.

**Table 3**

Total number of manufacturing workers that received training by size of establishment 1989, 1991, 1994 and 1998. In percent.

Firm size	1989 %	1991 %	1994 %	1998 %	Percent variation 1991-1998
Large	60.8	62.9	51.4	55.7	-11.4 %
Medium	17.5	16.8	13.6	18.4	9.5 %
Small	17.2	14.9	20.5	19.7	32.2 %
Micro	4.5	5.3	14.5	6.3	18.9 %
N° workers	984.386	1.105.010	1.238.090	1.993.700	----

Source: *Encuesta Nacional de Empleo, Salarios, Tecnología y Capacitación* (ENESTYC), *Secretaría del Trabajo y Previsión Social* (STPS, Mexico, 1992 and 1995: Table 45 as shown in [www.stps.gob.mx](http://www.stps.gob.mx)).

b) The impacts of HPWS on firms and workers.

In Canada, studies are not conclusive about the impact of HPWS on company profits. Rather than focus on strictly economic results, some elements of HPWS were negotiated with local or national unions (Bourque, Roux, 2001). The degree to which the elements that were introduced succeeded in renewing organizational structures and plant management was dependent upon union collaboration and acquiescence. This reflects the comparatively strong Canadian labor movement in

relation to both its American and Mexican counterparts.

In the United States, HPWS can be identified with the introduction of Japanese methods in many plants. Thus, self-managed work teams, just in time production, the five zeros and specialization are the procedures that American companies implement. Also, according to Adams (2001), increasing skill levels by formal training and retraining contributed “to increasing productivity of firms with substantial volatility in the types of orders produced by allowing faster decision-making,” and workers in teams that participate in “formal training programs increase the accuracy of their information, allowing them to make better choices.”

As indicated earlier, ENESTYC data show that Japanese methods were part of the strategies followed by companies in Mexico to facilitate their adaptation to international competition spawned by trade liberalization. Many of the Japanese practices that were adopted were merely ways of adapting to external challenges. In other words, they were situation-specific answers to problems that arose when firms had to compete in the world market. In particular, this was the case with the *maquila* industry along the northern border (Lipietz, 1985).

(d) Conditions for success of HPWS

If the social and political dynamics of the implementation of HPWS are to achieve the creation of a collaborative work climate, then certain conditions must be fulfilled. When putting the package into practice, due attention must be paid to achieving an adequate balance between the four elements outlined in Table 1. Production, economic, social/political and organizational elements must be interrelated and internally consistent. For example, if only economic factors, i.e. cost considerations, are emphasized, the consequences from measures such as downsizing, outsourcing or subcontracting will be felt in the social/political dimension and in how production is organized.

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One way or another, the overall impact of the introduction of the HPWS package reaches the factory floor, which is where success or failure is ultimately determined. The degree to which the adversarial relationship between management and labor – developed in factory life during the period of LPWS, when unions represented the collective interests of workers – can be replaced by cooperative relations therefore becomes a critical factor. The HPWS package can only be expected to succeed if this conflictive atmosphere is overcome. Unions may continue to represent the

collective interest of workers, but they must also radically change how they view their participation in productive life. Unions must embrace elements of the HPWS such as decentralization, work teams, quality circles and change in organizational structures. To make this transition possible, it must be clear to the unions that more than just monetary compensation is at stake, even if increases in productivity should be accompanied by incentive payments or other forms of remuneration. Indeed, unions must feel they are authentically participating in decision-making and must become fully knowledgeable about their companies' competitive challenges. Ultimately, they must recognize that the interests of employees and employers coincide to a certain degree. All reviews of studies of HPWS reference these central issues. They indicate that management and unions must engage in new ways of conceptualizing the four dimensions that make up the HPWS package.

Successful implementation of the HPWS package must take into account national differences in the labor relations structure, the reasons that explain why restructuring took place in the 1990's and company strategies to face competition and globalization.

The diverse ways in which the HPWS package was implemented can be illustrated by examining the experience of three companies, one based in each country. Through these examples we will be able to underline the different ways each company approached restructuring, based essentially on its national and sectorial location.

(a) A Canadian example: Falconbridge Corporation (*Falconbridge Limited*, 2005 Annual Report).

Falconbridge is a Canadian multinational corporation that was created as the result of a merger between Noranda and Falconbridge Corporations that took place between 2003 and June 2005. Its experience exemplifies how a company that was initially very much identified with Canadian mining (Noranda) was restructured in accordance to two principal decisions: on the one hand, a decision to become global, as a result of its acquisition of Falconbridge and, on the other hand, a decision to reorganize work at all plants across the globe. As of 2005, Falconbridge illustrates an original way of putting into place the elements that make up a HPWS. Indeed, this example shows that competitive advantage does not rest only on the restructuring of the organization of work and production at the plant level (according to the manufacturing model of production) but also in the reconstruction of productive relations between different plants and

productive facilities, located very far away from each other, even on different continents. Thus, competitive advantage, high performance work systems and globalization of production combine to modify the usual conception of economies of scale. The new Noranda, now Falconbridge, has designed a new way of organizing production and work through growth, the generation of reciprocal synergies between several units around the globe, and the implementation of new work procedures in the plants in those units.

As described in its 2005 Annual Report, Falconbridge's mining operations (located in Northeastern Canada, the United States, Peru, Chile, Argentina, Brazil, the Caribbean, Australia, New Guinea, Malaysia and China), put into place elements of the four dimensions of HPWS – efficiency, cost reduction, plant level control of operations and leadership decentralization – because of the challenges posed by geography (altitude, distance between mine and smelter, impact of altitude on workers' health, weather conditions).

For example, Falconbridge's Chilean operations introduced new ways of organizing shift work in two-week cycles instead of by the hour. In other words, workers remain at the mine for two weeks and then spend the following two weeks at sea level while their bodies recover from the time spent at high altitude. While working, miners are organized into teams that address the implementation of several connected tasks which make up a series of sequential operations where individual effort is not central. Teams, technological sophistication, decentralization, alternate work arrangements and other elements of the HPWS package have been put together successfully.

In addition, the coordination of its extraction facilities with its globally distributed smelting and refining plants depends on a system of transportation has been restructured to more flexibly link the different stages of the production process. Through so-called "Brownfield projects," the company seeks to optimize existing production mechanisms, instead of solely pursuing "Greenfield projects," which are identified with new investments (for details see pages 15-21 of the company's 2005 Annual Report).

What is to be underlined here is that HPWS are not be identified exclusively with manufacturing, where most of the case studies we have referred to in this document have been evaluated. The Falconbridge case, as a global mining company, shows that the implementation of HPWS can be also applied in a very particular context, where it is not easy to put together a

productive operation that has to conciliate multiple objectives in far away locations.

(b) A US example: The *Saturn Corporation* (Rubinstein, 2000).

In the United States, restructuring of production systems was directly linked to the intensification of international competition. This process implied rethinking human resource management, industrial relations and employment practices. In the automobile industry, given the complexity existing between markets, suppliers and assemblers, this rethinking led, in a case such as General Motors Corporation (GMC), to the creation of the Saturn Corporation. Full partnership between the union and management was established in areas such as product, technology, suppliers, retailers, site selection, business planning, job design and manufacturing systems, and the construction of a system of co-management where workers and management shared decision making.

According to Rubinstein, the Saturn experience at GMC showed that one of the key elements of the success of the Saturn project was related to increasing communications among the elements comprising the production system. The new organization had a very efficient communications system that permitted information to circulate very fast among departments and plants. This was reflected in a high degree of organizational commitment, strong horizontal communication and coordination between managers and union leaders. It also led to first time quality control that resulted from a commitment on the part of the union to motivate workers in this direction and on the part of managers to involve themselves both in production management and in time spent managing personnel problems. All this resulted in increasing and reliable quality in Saturn.

The Saturn experience shows how union commitment in production and managerial processes can increase competitiveness. This commitment results from a very intense communications network among unionized workers filling managerial roles. Thus, according to Rubinstein, “the communications fostered within this network and the supporting union governance processes are presented as an organizational model of the impact unions can have on firm performance in labor-management partnerships with team based manufacturing... This system of co-management breaks new ground in industrial relations and organizational design, offering an alternative vision of labor, management and policy makers interested in solutions to global

competitiveness that are rooted in a robust trade union movement” (Rubinstein, 2000: 214).

As an illustration of how some of the elements of HPWS can combine in a very creative way, the Saturn experience includes the participation of organized labor. Contrary to other examples of the introduction of HPWS in the United States (or, for that matter, in many other countries where unions are far removed from companies’ decision-making processes) the Saturn example shows that full union participation in production (as opposed to only representing grievances to management) can help fulfill company objectives and address international competition.

(c) A Mexican example: the TELMEX Corporation (Clifton, 1997)

The 1989-1991 process of privatization of Teléfonos de México (TELMEX) exemplifies a case in which a company restructured and introduced practices identified with the HPWS package for reasons other than globalization and its competitive challenges. In this case, an important union (the National Telephone Workers’ Union (*Sindicato de Telefonistas de la República Mexicana*—STRM) and the buyers of TELMEX (the CARSO Corporate Group, associated to Mr. Carlos Slim, one of the richest men in Latin America) negotiated, through the mediation of the Mexican government (at that time, the Salinas administration (1988-1994)), a trade-off between the need to restructure and reorganize, which figured in a central place in the prospective buyer’s objectives, and the solution to telephone workers’ anxieties concerning the privatization process. The fact that it was the union that announced the elements of the trade-off between economic, social/political and productive elements was something unusual.

Nevertheless, as privatization took hold in 1991, the transition arrangements worked to the satisfaction of all actors involved. The union proposal essentially traded off job stability and employment security in exchange for radical changes in the collective contract geared towards across-the-board horizontal and vertical flexibilization. In the implementation of this trade-off, initiatives such as the establishment of a technological institute where workers could retrain for new jobs created by the restructuring played a central role. The change from analog to digital technologies eliminated the role of telephone operators. But instead of being laid off, many were retrained to take sales jobs with TELMEX. As a result, the TELMEX union leaders succeeded in maintaining the support of this mainly female workforce, whose employment has remained stable

to the present. Also, geographic horizontal mobility permitted skill levels to be upgraded in many parts of the country. This trade-off was successful in ensuring that privatization of TELMEX could take place in a context of negotiation. All four dimensions of the HPWS package were present in some form, and in a balanced way, in the TELMEX privatization deal. For fifteen years (1991-2005), the arrangement has worked very well for all concerned. The TELMEX example shows that institutional arrangements can be adapted to challenges such as privatization in a country like Mexico. In other Mexican industries where unions did not play the proactive role played by the TELMEX union, such as steel or copper mining, this process was traumatic. The TELMEX example suggests that the successful implementation of HPWS requires that production, economic, social/political and organizational goals be compatible. Partial or piecemeal implementation of the HPWS package, on the other hand, is a recipe for failure, given that it is necessary to balance the advantages and disadvantages of each element to ensure the success of the overall package.

#### **IV. Conclusions**

A variety of factors help explain the different results achieved in implementing high performance work systems in North America.

One factor is the national situation in which HPWS are implemented. Indeed, structures that are peculiar to a particular nation, such as the labor relations system or the rationale for transforming labor markets and its impact on the labor movement, are fundamental to understanding the differences between Canada, the United States and Mexico. In addition, the different way that each country has confronted the transnationalization of domestic markets and the globalization of trade relations has meant that the connotations imputed to HPWS have also differed. It is also possible that each specific installation of HPWS is a function of how each economic sector has faced the globalization challenge. Specific elements of the HPWS package appear to be introduced according to the particular characteristics of those economic sectors.

Also to be taken into account are the specific pressures that each of the North American countries experienced during the last twenty years and the policies that were put in practice to counter them. Global competition was addressed differently by companies based in Canada, the

United States or Mexico. Government decisions on trade liberalization, foreign exchange reserves, levels of import protection, and positions taken in international organizations such as the World Trade Organization have conditioned the reactions that entrepreneurs had in relation to those pressures in each country.

In the case of Mexico, events shaped the particular way in which trade liberalization was understood, focusing exclusively on the impact it would have on the capacity of the country to honor its foreign debt commitments. Only after this objective had been fulfilled did Mexico relate trade liberalization to other objectives, such as the competitive advantage it might achieve in certain sectors of the global economy.

This paper does not demonstrate the causality involved in the introduction of specific elements of the HPWS package. Did HPWS help shape the inception of a new economic model or did the economic model call for implementing HPWS in the productive system? If we take the Mexican case, it is relatively clear that the elements of the typical HPWS package have been more oriented to increasing the level of supervision than to providing more worker autonomy in decision-making or involvement in achieving company objectives. This contrasts with the Canadian case, where the labor movement – locally and nationally – has sought to establish a partnership with business on these matters, with the active participation of government institutions. The United States exemplifies yet another way to evaluate HPWS: HPWS elements have been introduced primarily to increase profits and ensure the bottom line. In each specific context, the rationale behind the introduction of HPWS is shaped by particular objectives. There is no general argument for the adoption of HPWS.

Linking specific elements of the HPWS package to specific performance measures remains an analytical challenge. The specific contribution of HPWS to productivity increases or to corporate financial performance remains unknown. Nor is there yet a good basis upon which to judge the rationales used by firms that adopt HPWS and those that do not adopt them. Conjectural factors, such as modifications of the cost structure of firms, the appearance of competitors such as the Southeastern Asiatic countries in the 1980's and of China in the late 1990's, trade liberalization and state enterprise privatization are part of those rationales, but we cannot yet identify the exact link between conjectural factors and the introduction of HPWS.

It could be argued that the transition from LPWS to HPWS – that is to say the transition from traditional work practices to alternative work practices, or from Taylorism-Fordism to Japanese methods of organization of work and production – is merely a restoration of work attributes that existed prior to the inception of LPWS. This case is argued convincingly by Parks (1995), who notes that HPWS are very much related to the phase of the professional evolution of work that preceded the inception of LPWS. Many of the elements of the HPWS package resemble what once were the attributes of craft production. In HPW, workers recover some of the autonomy they had in that earlier phase and lost with LPWS. From the management perspective, the elements that constitute HPWS are answers to the conflicts that were generated by the implementation of the ideas of Taylor and Ford.

As they did at the end of the 19<sup>th</sup> century, plant managers and corporate officers at the outset of the 21<sup>st</sup> century are seeking worker involvement in the general dynamic of production. They train and retrain workers, flexibilize the way in which jobs are defined, introduce multitasking, flatten the organizational structure to eliminate hierarchical decision-making and accelerate the decline in the proportion of unionized workers by generating agreements that frequently go beyond what collective bargaining had achieved. In this way, working relations have come full circle over the past century.

As a result, some reflections about HPWS are very critical of their substantive effects on working life. In many cases, HPWS elements demand voluntary contributions of employee knowledge to plant operations without necessarily committing the firm to reciprocate. They also often make monitoring by peers the rule rather than the exception, thus exerting pressure for conformity to team decisions without the intervention of supervisors or managers. And they tend to shift risks to employees without providing accompanying returns in benefits or incentive pay, while helping prevent union action at the plant level (Edwards, 1979; Barker, 1993; Kunda, 1992).

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### **High Performance Work Systems**

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