

CHIPPING AWAY AT LABOUR RELATIONS: LEGISLATIVE POLICY IN THE AGE OF THE MICROCHIP

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The judicial regime is simply not adapted to a technological civilization. It has not registered the essential transformation of our times.¹

I. Introduction

Much has been written on the wonders of the microchip. A group of academics known as futurologists have pioneered a whole new field of study based on the brave new world that the silicon chip will create. Sociologists, feminists, ecologists, and economists have all joined the computer scientists and the engineers in their study of the new technology. Business, Labour and Government studies have all speculated on the future of the post-industrial society. Yet the law has been strangely silent on the subject. Those legal studies that have been done have tended to concentrate on such topics as copyrighting computer software, privacy regulation, and computer theft.

The purpose of this paper is to explore the impact of the microelectronics revolution on the legal framework of our present system of industrial relations. We will focus on office automation because it is the major catalyst for the post-industrial society, and the federal public service because it is the largest part of the information economy.

Part II of this paper looks at the technological assumptions underlying the present collective bargaining regime and considers how these assumptions are fundamentally challenged by the new technology.

Part III deals specifically with those issues which have arisen because of office automation, and show how they undermine some of the basic assumptions of the *Public Service Staff Relations Act*² (hereinafter referred to as the *PSSRA*).

Part IV examines how academics, Royal Commissioners, and legislators have attempted to solve the problem of technological change by amending the present legislative framework for the private sector. It is suggested that these amendments are insufficient measures for amending the *PSSRA* because of the way microtechnology can be used to undermine the foundations of the collective bargaining regime itself.

Part V considers the advantages of joint consultation over collective bargaining when dealing with technological change in the workplace.

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1. *The Technological Society* (New York: Alfred A. Knopf, 1964) at 261.

2. *Public Service Staff Relations Act*, R.S.C. 1970, c. P-35, as amended.

Part VI, my conclusion, suggests that only a legislative framework which requires joint consultation over the introduction of technological change will be sufficient to solve the problem. Any solution which relies solely on collective bargaining will not suffice. I recommend an amendment to the *PSSRA* which will establish joint committees to deal with the introduction of new technology in the workplace.

The appendix to this paper contains two case studies which illustrate some of the points made elsewhere. The case studies consider the efficacy of statutory provisions imposing a duty to bargain and the relative effectiveness of collective agreement provisions in dealing with the introduction of microtechnology into the workplace.

II. Janus: The Two Faces of the New Technology

In the (few) short decades between now and the twenty-first century, millions of ordinary, psychologically normal people will face an abrupt collision with the future. Citizens of the world's richest and most technologically advanced nations, ... will find it increasingly painful to keep up with the incessant demand for change that characterizes our time. For them, the future will have arrived too soon.

Alvin Toffler³

The microchip lies at the heart of the modern technological revolution. Its development has resulted in an amazing increase in the memory capacity and processing power of computers, coupled with an equally phenomenal decrease in their cost. On the factory floor, it means that machinery can be instantly reprogrammed to perform an endless variety of tasks. In the office, individual workers now have the ability to store and manipulate information in a way formerly available only to governments and large corporations. The technology has held out the promise of the "paperless office." Mail can now be instantaneously electronically received, sorted and filed. Records can be created, stored, recalled and amended from the same work station at the push of a button. Reference libraries can be searched by using a "modem" to access commercial data bases. Reports can be designed, written, copied, distributed and filed without leaving one's desk.

What impact will the new technology have on the law? There are two possible conclusions. The conventional view sees technological change as an incremental, ongoing process requiring concomitant adjustments in the laws governing privacy, lay-offs, health and safety, and working conditions in general. A second view will be espoused here: it will be suggested that the advent of the new technology represents a difference in kind — and not merely in degree — in the way work is performed. This technological revolution will require radical adjustments to our present system of in-

3. A. Toffler, *Future Shock* (New York: Bantam Books, 1972) at 36.

dustrial relations. To see why, we must examine the foundations of the present system.

Our present system of industrial relations has its roots in the industrial revolution. Originally, goods were produced by craftsmen who controlled the means and mode of production. The industrial age brought with it the factory. Each worker became a link in the chain of production; various tasks were simplified, specialized and synchronized so that each worker performed one task in the complex process of production. This meant that work had to be performed sequentially, and so predetermined rules were used to co-ordinate tasks. To ensure proper synchronization, predetermined rules were used to co-ordinate tasks and a cadre of supervisors was established to monitor worker performance. Managers and office staff provided the inventory and budget control necessary to support efficient production.⁴

Eventually, unions came to accept this system. Unionists saw it as a means of preventing petty despotism in the shop, and of protecting their own members. The definition of work rules, job descriptions and working conditions for each job (all based on a highly specialized and regimented division of labour) offered union members a standard against which the arbitrariness of management's actions could be measured. This made possible a grievance process governed by an impartial arbitrator who could judge if management's actions were reasonable. A system of rigid job classifications provided the basis for bringing the rule of law to the shop floor.⁵

The key element underlying the entire arrangement of labour-management relations was the fact that the technology governed the way work was organized. The requirements of the assembly line determined the skill levels, job classifications and number of employees required. These areas were not subject to managerial influence since the process of production was a result of the technology. The bargaining power of unions was built upon the premise that improvement in technology could not replace the need for the technical skills of the worker. As one author noted:

In spite of all the improvements in machine tool technology in the last 100 years, a machinist who worked in a machine shop in 1880 would have no trouble getting used to today's conventional machines ... the amount of control of the operator remains unchanged [and] managers still have to talk to the worker before they talk to the machine... The division of labour and mechanization did not give management complete control or make worker's skills and judgement unnecessary.⁶

Because the process of production was a result of the technology, and technological change was largely a function of the economic environment

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4. A. Toffler, *The Third Wave* (New York: Bantam Books, 1980) at 46-56.
 5. R. Reich, *The Next American Frontier* (New York: Times Books, 1983) at 67.
 6. H. Shaiken, "Numerical Control", (1981) 15 *Canadian Dimension* 26 at 27.

and scientific development, North American unions have allowed management to govern the introduction of technological change. Technological change is seen as a series of small, technical changes to a fixed production process; unions have accordingly allowed management to govern this area as part of the managerial prerogative.

This view, commonly called "technological determinism," is not applicable to the new technology. The microchip operates as a digitized memory — a memory which can be used to store skills formerly employed by workers or to enhance a worker's ability to perform his work by providing him with new resources. The new technology poses the question, "Will the electronic brain enhance or replace the human brain?" In the past, technological developments have allowed the replacement of physical labour by mechanical labour, a change looked upon with favour by all parties involved. Will such consensus continue if technological change means the replacement of mental labour by the microchip?

Furthermore, technology can now be used to change the locus of power in an organization. As one consulting engineer put it:

[The new technology] can exert a permissive impact upon the location of activity, rather than a determinative one (as before). People employing these technologies can do so in many ways with quite different effects; their selection of specific uses and modes will depend upon the goals they are pursuing. Those goals will in turn be influenced by all the other causal forces in their environments.⁷

An example of this can be found in the introduction of numerical control (NC) drill presses into the factory, which has often resulted in a separation of the task of programming the new machines and the supervision of the machine's operation. From a purely technical point of view, integrating the two tasks allows a more appropriate use of the technology.⁸ It allows a faster turn around time when new production runs are required and makes the corrections of defective programming an almost instantaneous process. The saving in labour cost is also considerable. However, as one management consultant noted:

From the perspective of management dealing with a unionized production work force, the creation of specialized programming jobs may be desirable because it can lead to an increase in the proportion of white collar, non-production jobs not covered by the terms of collective bargaining agreement (i.e. outside the jurisdiction of the production workers union). Thus, regardless of the extra costs associated with that form of work organization, the designation of programming as a technical function to be performed by supervi-

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7. Mitchell Moss, as quoted in A. Downs, "Living With Advanced Telecommunications," (1965) 23 *Society* 26, at 26-27. Downs goes on to say that "people employing these technologies can do so in many ways with quite different effects; their selection of specific uses and modes will depend upon the goals they are pursuing. Those goals will in turn be influenced by all the other causal forces in their environments."
 8. In Sweden, the unions and employers association already has an arrangement with respect to productivity sharing. See: S. Aguren, ed., *New Factories* (Stockholm: Swedish Employers Association, 1960) at 47: "... the person operating the NC machine often is better placed to judge the machine's potentials and limitations than anyone else. Therefore, it is in the company's interest to give workers a large degree of influence in programming the machines."

sory personnel, programming specialists or engineers may be understood as a strategic move on the part of management which is consistent with a labour unionized work force.⁹

Made possible by programmable silicon chips, NC machines allow management to make deliberate changes in the way work can be organized. They show how technology can now be used to undermine unions by replacing workers or by distributing work to other non-unionized workers. Proper union initiatives, however, can forestall these effects; this was dramatically illustrated by a 1981 dispute in the English aerospace industry when machinists demanded, and won, the right to do their own editing of NC machine programmes.¹⁰

Although some studies suggest that management deliberately uses technology to undermine the power of the bargaining agent,¹¹ a more common phenomenon is that management itself is not aware of the choices presented by the new technology. Managers share the old view of "technological determinism" and simply hire consultants to institute the most "efficient" system for their organization. These "efficient" systems are often preprogrammed applications software which have, as an unintentional side effect, a negative impact on workers.¹²

Either through design or ignorance, workers may be drastically affected by the new technology. Is there any sign that a dramatic change is occurring?

A. Job Loss

Every time the cost of labour goes up by one dollar, one thousand more robots become economical.

Roger B. Smith¹³
Chairman, *General Motors*

The labour movement's most immediate concern is over job loss. In the past, jobs lost because of technological change were more than compensated for by an increase in demand in other sectors of the economy. Workers displaced in the agricultural sector found jobs in the manufacturing sector. The post-war growth in the service sector has compensated for the loss of jobs in the manufacturing sector. Now the new technology threatens to upset this trend. The labour-intensive service sector is a prime target for the use of microchip technology but no new sector is in sight.¹⁴

In contrast to previous technologies, the new technology operates primarily on the supply side of the equation. New methods of production

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9. M. Kelley, "Computer-Controlled Machines and the Disruption of Workplace Productivity," in H. Brooks, ed., *Technology & the Need for New Labor Relations* (Cambridge, Mass.: Harvard University Press, 1963) at 25.
 10. *Supra*, note 6 at 29.
 11. D. Noble, "Social Choice in Machine Design," in A. Zimbalist, ed., *Case Studies On the Labor Process*, (New York: Monthly Review Press, 1979) 18 at 49-50.
 12. See for example, D. Buchanan et al., "Advanced Technology & The Quality of Working Life," (1962) 55 *Journal of Occupational Psychology*.
 13. New Democratic Party Policy Paper, "Program For a Fair Recovery" (Ottawa: Jan. 27, 1984), at 7.
 14. Clive Jenkins et al., *The Collapse of Work* (London: Methuen, 1979) at 34.

have traditionally been accompanied by new market demands. For example, consumer demand for durable goods, like cars and stoves, coincided with the advent of the assembly line that produced them. The microchip revolution has not spawned any such concomitant markets aside from a small videogame and home computer industry. As one study puts it:

Most technological changes have been applied directly to the goods or services, and have directly stimulated the availability and production of new ones. This has enabled economies to expand and provide employment at one and the same time. However we are now standing on the threshold of a new breakthrough which, at present, acts primarily on the process side alone.¹⁵

Because the new technology operates on the supply side, predictions about the job loss to result from automation are staggering. The French government estimates a reduction in office staff by about 30% over the next ten years.¹⁶ West German estimates see four out of every ten office jobs eliminated by the end of the century.¹⁷ *Bell Canada* has already experienced a 35% reduction in staffing, thanks to its new computerized "Traffic Operator Position System" (TOPS).¹⁸

B. Job Degradation

He who first shortened the labour of the Copyists by the device of movable type was disbanding hired armies ...

Thomas Carlyle
Sartor Resartus

Unions also complain of the deteriorating quality of employment for those workers who manage to keep their jobs. Job degradation, or "deskilling," is the major concern. Just as the assembly line took away the need for the worker to perform several tasks in the process, so too the computer. Today's "smart" technology has the potential of removing the need for several job skills because the microchip has a built-in memory.

"Deskilling" is not inevitable. The personal computer, for example, could allow a secretary to research a report by accessing commercial data bases and illustrate the finished report using graphics-generating software. With new software, a secretary could design a personalized word processing program without having to become a computer programmer. Used in this way, the computer is a creative tool which allows the secretary to do more things than would be possible on a typewriter. This is the way the Apple computer company markets its personal computers to the commercial sector. Unfortunately, the personal computer is more commonly used as an assembly line message writer. A specialist writes the software so that the code sequence for specific document formats is predetermined; all the sec-

15. *Ibid.*, at 34-35.

16. Public Service Alliance of Canada (PSAC), "Submission to the Task Force on Microelectronics & Employment," (1982) at 2.

17. S. Nora and A. Minc, *The Computerization of Society* (Cambridge, Mass.: MIT Press, 1981) at 34-35.

18. Science Council of Canada, *The Impact of the Microelectronics Revolution on Work and Working* (Ottawa: Minister of Supply and Services 1980) at 32..

retary has to do is fill in the blanks. Documents are "pre-designed" and only have to be recalled by the computer's memory. Secretaries do not even have to know how to spell because dictionaries are integrated into the software. With the voice recognition terminals presently being developed, secretaries may not even have to type. The job may be replaced entirely because managers will be able to dictate directly into a machine.¹⁹

One of the largest computer companies markets its products with deskilling built into the system. Their system segregates word processing from other non-clerical tasks performed by secretaries, like answering the telephone, scheduling appointments, ordering supplies and keeping records. The company's brochure states that these tasks will be automated separately.²⁰ The secretary is reduced to a "word processor operator," whose sole task is to operate the machine, while a microchip measures productivity in terms of keystrokes per minute.²¹ This is an example of how deskilling can be incidental to automation. The company in question designs their systems so that managers with even the lowest skilled secretaries can purchase them. Managers buy from the company because they have a known name and a reputation for servicing and upgrading their products. Deskilling is just an unforeseen by-product of this decision.

C. Electronic Monitoring

It's totally plausible to have the scenario where everybody in the workplace is under complete and total surveillance [and yet] the new electronic monitoring just falls into a legislative and legal abyss.²²

The silicon chip adds a memory to a machine. A built-in memory means that an employee's input can be recorded. Such monitoring has now become standard practice. Electronic cash registers at grocery stores measure the exact number of goods processed by the cashier. Bell Canada's TOPS system measures the number of calls handled by the operator. Word processing programs record the number of keystrokes inputted by the typist. This type of continual supervision has been found to cause stress in even the most diligent worker.²³ Office workers find that they are in the same type of machine-paced jobs that have traditionally been associated with factory work. In fact, researchers have found a striking parallel in the levels of stress between the two groups.²⁴

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19. See J. Stinson, "When the Chip Hits the Fan" in Patti Schom-Moffat, ed., *The Women's Workbook* (Toronto: Between the Lines, 1983) 97 at 99
 20. R. Russel, *The Electronic Briefcase* (Montreal: Institute for Public Policy, 1978) at 24, 32.
 21. One American Bank has "scientifically set" a minimum of 50,000 keystrokes per hour, see P. McDermott, "The New Meaning of Work," (1981) 16 *Canadian Dimension* 34 at 36.
 22. Professor Flaherty's comments are found in Lorne Slotnick, "Workplace Surveillance Tactics Irk Employees," *The [Toronto] Globe & Mail*, (7 March 1985) A3.
 23. *Ibid.*
 24. B. Cohen, "Psycho-Social Factors Contributing to Job Stress of Clerical VDT Operators," in *AFIPS Office Automation Conference* (Arlington, Virginia: AFIP Press, 1982) at 127.

D. Job Mobility

Automation might lead to a two-tier society, with satisfying and well-regarded work for some, while the rest are left to grapple for unskilled jobs.

David Rockefeller²⁵

Electronic monitoring can make supervisors redundant. The traditional bureaucracy was organized as a system of control and as a system for processing information from its collection, collation and interpretation. Because computers make data collection so much easier, middle management is already threatened. Electronic monitoring also takes away the supervisory aspect of the job. The result is an organization with a "vanishing middle"; organizations will be divided between "information workers" who simply collect and input data into a central data base and "knowledge workers" who interpret that data. Computer systems will perform data collation and manipulation tasks formerly performed by middle management. Electronic monitoring thus simultaneously threatens the survival of supervisors and managers and the routes of promotion for employees.²⁶

E. Shift Work

The new technology often becomes obsolete long before it wears out. This has led management to add extra shifts to recoup its financial investment as quickly as possible. Extra shifts also allow the company to serve its market twenty-four hours a day and keep its records up to date. Empirical evidence suggests that evening- and night-workers rarely participate in trade union or other social activities and that continual night shift work leads to isolation and stress.²⁷

F. Part Time Work

Because the new technology has a built-in memory, information need not be processed and relayed by the same person who received it. Computerization not only allows employers to determine their peak hours of activity (through electronic monitoring) — it also allows them to hire part time staff to enter data during the peak hours and then let the full-time staff recall the data from memory and "number crunch" in the slow periods. The net effect is to avoid "slack" periods, and to make the cost of labour vary with the demand for it. The result is that some full-time workers will be shifted to part-time employment and the remainder will have their informal rest periods removed. Statistics Canada reported that in 1985 there

25. Per B. Rohan, "Rockefeller Sees Dangerous Split," [Detroit] *Free Press*, (7 Oct. 1960) 36.

26. The introduction of machine intelligence into the manufacturing and service sectors is leading to a division of workers into those who are highly skilled and those who are unskilled. This process eliminates the intermediate skills range that is vital for both actual and perceived upward mobility." Science Council of Canada, *The Uneasy Eighties* (Ottawa: Minister of Supply and Services, 1980) at 40-1. See also, *supra*, note 18 at 28-9 and 65.

27. CUPE, *Submission to the Task Force on Microelectronics & Employment*, (Ottawa: CUPE Research Dept. 1982) at 16-17; B. Mather, ed., *The Implications of Microelectronics for Canadian Workers* (Ottawa: Canadian Centre for Policy Alternatives, 1981) at 5

were 400,000 fewer full time jobs than in the previous decade. However, these jobs have been replaced by more than 200,000 part time jobs.²⁸

G. Health Hazards From VDT's

A Visual Display Terminal (VDT) is a television-like screen attached to a computer terminal or word processor. The health hazards are predictable if one sees the problem for what it is: a person sitting two feet away and staring at a T.V. screen for up to eight hours a day. Regular and prolonged exposure to VDT's have resulted in visual, physical, psychological and radiation-related problems. Ergonomics, or the science of improving man's relationship with his tools, will provide technical solutions to most of the present day problems.²⁹ Some of these problems could be eliminated if the employee was not "chained" to the machine, since continual, long term exposure is the source of most of the difficulties. Job variety (for example, answering the telephone or going to meetings) would eliminate much of the problems.

An interesting feature of VDT studies is that electronic monitoring seems to exacerbate the problem. Monitored workers complain about health effects approximately twice as frequently as non-monitored ones.³⁰

H. The Electronic Cottage

A key part of the new technology is the vast improvement in telecommunications. A personal computer equipped with a modem can be hooked up with other computers or data bases all over the world. Transmission of data occurs over the telephone lines. This makes "telecommuting" possible. Instead of having to go to work every day, the employee can work on his home computer terminal and transmit the data over the phone to the company's mainframe computer. Electronic monitoring can provide the required supervision.

The potential advantage to the employer is enormous. If a large percentage of his work force works at home, he does not have to buy or rent facilities to house them. The savings in terms of the cost of heating and maintaining office space alone makes the "electronic cottage" an attractive proposition for any employer.³¹

The industrial revolution swept workers from their homes and sheds and into the office and factory. Telecommuting could reverse the process. The dangers inherent in this process become obvious once we recall that it was the massing together of workers that facilitated the unionizing of the work force.

Telecommuting is an excellent way to break up unions or preventing them from starting. If company employees are isolated at home instead of

28. *Supra*, note 13 at 4. Cf. R. Russell, *The Electronic Briefcase* (Montreal: Institute for Public Policy, 1978) at 24 and 32.

29. CUPE Research Dept., ed., *Further Reading on the Occupational Hazards of VDT's and Recommendations for Collective Bargaining*, (Ottawa: mimeograph, 1982) 11.

30. See S. Zuboff, (1982) *Harv. Bus. Rev.* 142.

31. A. Downs, "Living with Advanced Telecommunications," *supra*, note 7 at 31-32.

aggregated at the office, the opportunities for collective action are greatly reduced. Work in the home, or the "electronic cottage," will have its greatest impact on interest disputes. Picket lines will no longer prevent workers from working. Workers can covertly work at home without the knowledge of the union. Contracting out work would be infinitely easier. These possibilities could single-handedly make white collar collective bargaining obsolete.³²

Unions fear that the "electronic cottage" industry could bring back preindustrial practices as well. First, there is a fear that piece-work will replace wages as the major method of remuneration. A study at New York Telephone showed that piece-work encourages employees to overwork. The company found that workers worked maximum weekly hours as they "put in a few extra hours after dinner" every night. Moreover, it was not uncommon for a spouse or elder child to replace the employee at the terminal.³³ The comments of piece-work garment workers in 1840 may be repeated in the future "electronic cottage" industry:

We are under such enormous pressure to produce garments that we spend all our days working. The wife works as long as she can and then falls into bed, and then her husband takes her place. The children are forced to work too, even though they are too young. Far better for people to leave the house for the day to work and return at night.³⁴

The AFL/CIO has passed a resolution calling for a ban on piece-work. Union officials believe that telecommuting will allow employers to circumvent minimum wage and child labour laws. Moreover, by contracting out piece-work and hiring employees part time, employers may deny workers pension rights and other benefits, and force them to buy office equipment once paid for by the company.³⁵

Telecommuting, combined with deskilling, leaves the labour movement with a sense of *deja vu*. The movement is already familiar with the shift of traditional society assembly line jobs to the third world because of cheaper labour. Telecommuting makes the same phenomenon possible for office work. National Demographics & Lifestyles, a leading American research firm, first transformed secretaries and clerks into keypunch operators, and then moved 104 keypunch operator positions to the Barbados. The operators punch in the results of the 10,000,000 questionnaires the company handles each year, and the information is transmitted back to the company's headquarters in the United States over the telephone lines. The company saves 10% on its total costs because of a 30% saving in its wage bill. One service sector economist suggests that deskilled jobs will be

32. M. Townson, "Are Computers Destroying Your Home?" (Fall, 1984) *Goodwin's* 16 at 17.

33. *Ibid.* at 18.

34. *Ibid.* at 17.

35. *Ibid.*

exported, because "jobs that require simple training will find their cheapest homes anyway."³⁶

I. The New Technology and Women

Of special importance is the fact that many of the jobs that are susceptible to "telecommuting" are presently occupied by women. In Bell Canada for example, about half of the 18,000 clerical jobs held by women could be done on home terminals. A spokesperson for Bell Canada said that senior management promoted homeworking because it would provide an expedient way of avoiding the expense of day care.³⁷

Some futurists see the home terminal as a way of rebuilding the family unit. Women's groups speculate in a different direction. They see the segregation of women from the office as a barrier to promotion because women will not be able to make a personal impact on their employers. They will also be isolated from the informal routes of communication that typify the office environment, making collective action more difficult.

J. Conclusion

From this analysis we can see that although the new technology holds out the promise of improving work without threatening employment, in many cases it is used, or could be used, by management as a tool for imposing the production line mode of labour into the office via electronic monitoring,³⁸ and/or using the "electronic cottage" as a means of avoiding trade unionization. On other occasions, job degradation is an unforeseen or unplanned result of employer adoption of a new technology. Either way, job security, job classification, work content, and employee supervision are all susceptible to employer manipulation through the introduction of new technology. What say does the union have on these issues in the public sector?

III. Technological Change and the *PSSRA*

The short answer is that the bargaining unit has no say on these issues under the collective bargaining regime established by the *Public Service Staff Relations Act* (afterwards referred to as the *PSSRA*). Under the Act, the employer is free to introduce any new technology at will, without even giving the union advance notice. Technological change affects job security, employee transfers, job classifications, and wages, yet these subjects cannot be the subject of an arbitral award or a conciliation board report.³⁹

Section 7 of the Act protects the right of the employer to assign duties and classify positions. Subsection 56(2) provides that there shall be no

36. J. Berger, "The False Paradise of a Service Economy," (March 3, 1986) *Business Week* 81.

37. *Supra*, note 32 at 18.

38. *Supra*, note 18 at 25.

39. B. Hill, "Government and Union on Collision Course," *The [Ottawa] Citizen* (8 February 1986) B4.

term in a collective agreement which is dealt with under another statute. In our case, the *Public Service Employment Act*⁴⁰ (afterwards referred to as the *PSEA*) "covers the field" with respect to most terms of the employee's contract of employment. These matters can neither be the subject of a conciliation board's report or an arbitral award because of subsections 70(2) and 86(2) of the Act. In addition, the standards, procedures or processes governing the appointment, promotion, transfer or lay-off or release of employees cannot be the subject of an arbitral award or a conciliation board report because of subsections 70(3) and 86(3). In total, these provisions have the effect of preventing unions from bargaining on the types of issues which the new technology raises. We shall examine each issue in turn.

The issue of job loss, or lay-offs, is dealt with by the *PSEA* and s.56(2) of the *PSSRA*. Under s.29 of the *PSEA*, firing remains a prerogative of the employer, subject to the regulations of the Public Service Commission (hereinafter referred to as the PSC). Standards, procedures or processes governing lay-offs are protected from union influence by ss. 7, 70, and 86 of the *PSSRA*. This is not to suggest that the employer has abused its prerogative. The Treasury Board's policy, in fact, is to offer comprehensive assistance to laid off employees. Financial assistance is offered to workers seeking new employment and/or retraining or relocation. The government itself offers a counselling service and gives a priority to rehiring laid off employees.

The PSC encourages departments to re-employ workers within the department. If this is not possible, efforts are made to re-employ elsewhere in the public service. Because transfers come within the jurisdiction of the PSC, bargaining with respect to transfers is barred under section 56(2) of the *PSSRA*, as well as sections 70(3) and 86(3).

Issues concerning the working environment receive similar treatment under the *PSSRA*. They are non-arbitrable and cannot be the subject of a conciliation board report. The training and re-training of employees is subject to the *PSEA* and is thus protected by section 56(2) of the *PSSRA*. Job classification is reserved to the employer under section 7 of the Act. In the *Postal Operations*⁴¹ case of 1975, the Public Service Staff Relations Board tried to alleviate the harshness of this provision by holding that where a position was re-classified because of technological change, the incumbent's fate was referable to a conciliation board. The Board also made a recommendation where re-classification due to technological change occurred during the open period. On the other hand, it held that the employer was entitled to introduce new technology that required re-classification while a new collective agreement was being negotiated, notwithstanding section 51 of the Act (which prohibits unilateral changes in working conditions during the negotiating period).

We may conclude that when it comes to technological change, the Board is sympathetic to the employees' plight but is either unwilling or un-

40. *Public Service Employment Act*, R.S.C. 1970, c. P-32, as amended.

41. (1975) Conciliation Board File 190-2-43 (P.S.S.R.B.).

able to protect employees from the exercise of the managerial prerogative. This despite their acknowledgement in one case that:

[T]he issues that are raised by these [technological change] proposals are indeed of grave concern to the employees of a bargaining unit. They reflect the fear of employees that their future welfare may be affected, seriously and detrimentally, by technological innovations... [This fear] hangs like a pall over deliberations of the Conciliation Board ... If it were not discussed openly, it would insinuate itself in some fashion into the discussion of the other items...⁴²

In order to ensure that the bargaining agent's concern over technological change does not "insinuate itself ... into the discussion of the other items," the employer can introduce the change while a collective agreement is in place. Sections 101 and 102 of the *PSSRA* enforce the "peace obligation" during the term of the collective agreement. How can the *PSSRA* be changed to remedy this situation? For the answer to this we must look at the history of private sector collective bargaining in this area.

IV. Technological Change In The Private Sector

[A] situation in which a party to a collective agreement can unilaterally change one or more fundamental assumptions on which an agreement was negotiated and concluded without a remedy existing in the hands of the other party is a situation that is fundamentally unfair and cries out for redress.⁴³

By the time unions' full collective bargaining rights had been received by the *National Labour Relations Act* and P.C. 1003,⁴⁴ technology in the workplace had been fully established on a mass production basis and technological change was only incremental. Technological change was consequently not an important issue in negotiations and few collective agreements had terms covering its introduction. Unfortunately, this meant that most disputes over technological changes during the life of a collective agreement were settled by the residual rights doctrine.

Under the residual rights doctrine, anything not explicitly included as a term in the collective agreement was automatically assumed to be within the exclusive province of the employer as part of the managerial prerogative.⁴⁵ The fundamental flaw in this arrangement can be seen when one couples it with the "peace obligation" required by law. In Canada, an employer cannot be required to negotiate on any issues while a collective agreement is in force, and in all jurisdictions except Saskatchewan, a strike during the terms of a collective agreement is illegal. Thus a union may, in

42. (1972) Conciliation Board File 190-2-19 (P.S.S.R.B.).

43. R. Mitchell, "The Problem Posed by Technological Change in Industrial Relations," (1972) 18 McGill L.J. 593 at 596.

44. A. Craig, *The System of Industrial Relations in Canada* (Scarborough: Prentice-Hall, 1983) at 113-118.

45. For a discussion of the history of the residual rights doctrine, see A. Manson, "Technological Change & the Collective Bargaining Process," (1973) 12 Western Ont. L. Rev. 172 at 187-194.

good faith, negotiate a collective agreement based on the technology presently in use. During the term of the collective agreement the employer may decide to introduce new technology which will require the dismissal of three-quarters of the present workforce. Under the old regime in the private sector (and under the *PSSRA*) the trade union had no lawful, formal recourse.⁴⁶ It could not legally require the employee to bargain over it, or even discuss it. It could not use its economic sanctions because it is not in a legal strike position until the collective agreement had expired. The employer was free to implement the change and the unions' only recourse was to ameliorate some of its harsher consequences once the "open period" (the period beginning with the expiry of the collective agreement) arrived and negotiations commenced.

Because of the relatively stable nature of technological change during the post-war period, situations such as the one outlined above did not arise often enough to warrant new legislative provisions.

The CN "runthrough" dispute of 1964⁴⁷ made it clear that the "peace obligation" was not practicable when major technological changes were being implemented. Academics and Royal Commissions alike studied the problem. We shall look at some of the proposed solutions to the problem.

A. Woods Task Force

The Woods Task Force⁴⁸ looked at collective bargaining as only part of the process. It recommended that the parties, by mutual agreement, be allowed to opt out of the prohibition on strikes and lockouts during the term of the collective agreement. It would further require the parties to establish machinery for the settlement of disputes resulting from the permanent displacement of personnel occasioned by industrial conversion during the open period.

Considering the employer's already favourable position, it is difficult to see why it would agree to opting out of the peace obligation. The establishment of dispute-settlement machinery to deal with technological change during the open period means that the parties would have to set up joint consultation committees or agree to voluntary arbitration over technological change. More will be said on this later.

B. Freedman

To treat [technological change] as an unfettered management prerogative will only promote unrest, undermine morale and drive the

46. See, e.g., *Grain Workers' Union, Local 333 C.L.C. v. Prince Rupert Terminal Ltd.* (1984), [1985] 16 C.L.L.C. 14,063 (C.L.R.) [hereinafter *Prince Rupert Grain Terminal*]. See also P. Weiler, *Reconcilable Differences* (Toronto: Carswell, 1980) at 106.

47. For a history of the dispute and its aftermath, see P. Antymnuik, "Technology & Labour Relations: The Railway Experience," (1974-75) 40 *Sask. L. Rev.* 63.

48. Canada, *Report of the Task Force on Labour Relations* (Ottawa: Privy Council Office, 1968) (Chair: H.D. Woods) [hereinafter: the Woods Task Force Report].

parties farther apart. By placing [it] within the realm of negotiation, a long step will be taken towards the goal of industrial peace.⁴⁹

Judge Freedman, in his report on the CN "run-throughs,"⁵⁰ recommended that either side should have the right to refer technological change to arbitration. The issue to be resolved would be whether a proposed technological change amounted to a material alteration of the working conditions which were in effect when the collective agreement was last renegotiated. If it was, the employer would be required to withdraw the plan until the next open period, unless the parties renegotiated their agreement before that date.

On the surface, this is an attractive strategy for protecting unions from unilateral change during the life of a collective agreement. Freedman would give the bargaining agent a *de facto* temporary veto over major technological changes.

This would clearly give the union greater power to win concessions from the employer during the life of the collective agreement. But this also makes Freedman's proposal dangerous. In an era of rapid technological change, many changes will be required during the life of the collective agreement. Veto power would give the union no incentive to negotiate realistically and the employer would have to wait until the open period. Arbitrators faced with the possibility of injuring Canadian industry's competitiveness by slowing the rate of technological change, would become less likely to rule that such a change materially affects the conditions of employment. Veto power leans too heavily in favour of union security and thereby disregards productivity considerations in an era of fierce worldwide competition.⁵¹

Even if this were not the case, the Freedman proposal still limits negotiations to the open period where the parties have to bargain over an uncertain future. It prevents the kind of ongoing negotiations that will be required for the continual introduction of technological change that is now occurring.⁵²

C. Weiler

Professor Paul Weiler has proposed another strategy for dealing with technological change during the closed period.⁵³ His solution is simply to hold the duty to bargain in good faith open during the term of the collective agreement. He proposes to do this by recommending that the compulsory no-strike clause should be deleted from the statute. In effect, he is recommending the American position, with a major difference. In the

49. Canada, *Report of the Industrial Inquiry Commission on Canadian National Railways "Run-Throughs,"* (Ottawa: Queen's Printer, 1965) (Commissioner: Samuel Freedman) at 135. [hereinafter: the Freedman Report].

50. *Ibid.*

51. H. Woods, "Technological Change & the Right to Strike," *27 Industrial Relations* 718 at 732.

52. *Ibid.*

53. P. Weiler, *Labour Arbitration and Industrial Change* (Ottawa: Dept. of Supply and Services, 1968).

U.S., technological change has been held to be a voluntary, rather than a mandatory subject for bargaining.⁵⁴ Weiler's proposal would make it a mandatory subject and be a *de facto* repeal of the residual rights doctrine in so far as the doctrine applied to technological change.

This arrangement has certain advantages. It induces management to seek to extend, rather than limit, the coverage of the collective agreement because, if the "rules of the game" concerning technological change are not specified in the collective agreement, the union can re-open the agreement and renegotiate it. It undoes the present management advantage of combining the peace obligation and the residual rights doctrine.

The ability to opt-out of statutory protection still leaves the possibility of a union agreeing to opt-out in exchange for extra wages and benefits, and then being faced with a technological change during the life of the collective agreement.

D. Statutory Solutions

Rapid change has become a fact of everyday life and we must recognize it as such. This government's position is clear that it must encourage technological change if Canadians are to compete successfully in the years ahead in the world's rapidly changing economic environment. On the other hand, the government recognizes that technological change ... adversely affects those employees directly involved and that such effects ought to be minimized ... What we are seeking in these provisions is to encourage management and labour to deal with the impact of technological change ... by working co-operatively. Labour and management can produce major technological change harmoniously.⁵⁵

Martin O'Connell,
Minister of Labour, 1972

The goal of labour peace has been pursued in various ways throughout the western world. A uniquely Canadian solution has been to impose a ban on lockouts and strikes during the term of the collective agreement. This labour "peace obligation" is found in all jurisdictions in Canada except Saskatchewan.⁵⁶

It has proven to be unrealistic where technological change is involved. Because technological change can disturb the foundation of assumptions upon which an extant collective agreement is based, several statutes allow a collective agreement to be re-opened under a defined set of circumstances. As the then Minister of Labour pointed out, the introduction of technological change through "harmonious" collective bargaining was the new strategy for attaining the goal of labour peace in an era of rapid technical innovations.

The circumstances under which a collective agreement would be re-opened are most broadly defined in the labour relations statutes of B.C.

54. *Supra*, note 45 at 183.

55. Canada, *H.C. Debates* at 3579 (June 27, 1979).

56. I. Christie, "The Trade Union Act & the Technological Change Rationalization Act, 1972," (1972) 37 Sask. L. Rev. 136 at 138.

and Saskatchewan, where technological change includes changes in the employer's work, undertaking or business relating to equipment, materials or manner of performance.⁵⁷ *The Canada Labour Code* and Manitoba's statute focus on the introduction of new equipment or material likely to detrimentally affect a significant number of employees.⁵⁸

The means of settling disputes over technological change also vary. The B.C. *Labour Code* requires every collective agreement to have a clause governing such issues as notice, retraining, severance pay to cover people displaced by reason of technological change.⁵⁹ Therefore, a dispute over technological change is settled by arbitration without a work stoppage. This amounts to simply overturning the residual rights doctrine, while still leaving the issue in the hands of an arbitrator.

In the other statutes, collective bargaining with the right to strike is allowed; the federal and Saskatchewan labour boards are empowered to delay the introduction of technological change if the statutory notice periods are not complied with.⁶⁰ The resort to strike action can be obtained only after an extensive examination by the Board of the particular technological change in question. Canadian Boards rarely grant permission to strike over the issue, and the right to strike is, according to Professor Weiler, "largely symbolic."⁶¹

Finally, it should also be noted that the federal and Manitoba statutes allow the parties to opt-out of the statutory provisions provided they do so by a term covering technological change in the collective agreement.⁶²

E. Comment

Clearly one of the variants of the private sector schemes will have to be adopted under the *PSSRA* in order to prevent the "peace obligation" from undermining the foundations of a collective agreement through technological change. All the proposed strategies amount, in varying degrees, to imposing a continuing duty to bargain over technological change.⁶³ The statutory provisions represent a conservative variation of Professor Weiler's approach. He recommended an end to the peace obligation where there was the introduction of a technological change. The statutes also theoretically permit this, but only after intensive scrutiny from the Board. The complex and vague prerequisites required for Board approval have meant that statutory provisions are rarely used.⁶⁴ In the federal sector

57. *Labour Code*, R.S.B.C. 1979, c. 212, s.78; *Trade Unions Act*, R.S.S. 1978, c. T-17, s. 43(1).

58. *Canada Labour Code*, S.C. 1983-84, c.39, ss. 149(1) and 150(1); *Labour Relations Act*, S.M. 1972, c.75, s.72(1).

59. *Labour Code*, R.S.B.C. 1979, s.76(1). Cf. *Labour Relations Act*, S.M. 1972, c.75, s. 73.

60. *Trade Unions Act*, R.S.S. 1978, c. T-17, s. 43(5); *Canada Labour Code*, S.C. 1972, c.18, s.150(3)(a).

61. P. Weiler, *Reconcilable Differences: New Directions in Canadian Labour Law* (Toronto: Carswell, 1980) at 108.

62. *Canada Labour Code*, S.C. 1972, c.18, s.149(2) and (3); *Labour Relations Act*, S.M. 1972, c.75, s.75.

63. But cf. Weiler, *supra*, note 53.

64. See *supra*, note 58. The Canada Labour Relations Board has received only 19 applications since 1972, with 16 being withdrawn before a hearing. See also *Prince Rupert Grain Terminal*, *supra*, note 46, and *United Transportation Union v. Cape Breton Development Corporation* (1985), [1985] 16 C.L.L.C. 14,175 (C.L.R.B.).

there has been a noticeable trend towards suggesting unions trade away their statutory protection under the opt-out provisions in exchange for wages and benefits.⁶⁵

In this light, are the various legal strategies for imposing a continuing duty to bargain sufficient to protect the workforce? Is collective bargaining alone enough to protect employees? A Harvard study comparing American and Norwegian labour relations found that collective bargaining was often the source of the problem, not the solution:

Adversarial labour relations, however shaped in the past, strongly influence on the management policies that govern the way new technology will be utilized. For example, *when labour relations are strongly adversarial, it is more likely that:*

- (a) management will use technology in a way that *decreases skill requirements* and makes the company less dependent on critical skills;
- (b) management will develop applications that *increase control over the workers* who operate the technology and that decrease worker decision-making and discretion;
- (c) management will resolve ambiguity or uncertainty about which employee groups should perform certain tasks (such as programming) in favour of *placing those tasks with groups outside the bargaining unit.*

In turn, these management practices, whether or not they reflect conscious policies, increase worker and union distrust and resistance, strengthening the adversarial nature of the relations.⁶⁶

The adversarial nature of collective bargaining not only encourages employers to use technology to circumvent unions, but the nature of the negotiations themselves thwarts a proper resolution of the problem. One commentator describes the typical scenario:

Both parties treat the work force issue associated with new technology strictly within a familiar collective bargaining format. The union attempts to negotiate into the contract guarantees and rights addressing as many of the work force issues as possible. Management, for its part, resists most of these guarantees and rights because they appear to constrain its ability to reap the business advantage of new technology. Management then shares only information about its technology that it is obligated to share. Once the new technology is implemented, the union members and officials utilize the grievance process and other forms of influence to minimize any adverse work force effects, while management, in its turn, tries to minimize the union's influence. The process is basically reactive: the union reacts to management's implementation, and management reacts to union's influence attempts.⁶⁷

65. See W. Lapointe, "Breathing Life Into the Law" in F. Bairstow, ed., *The Direction of Labour Policy in Canada* (Montreal: McGill Industrial Relations Centre, 1977) at 146-147.

66. R. Walton, "New York Technology and Its Work Force Implications" in *Technology and the Need for New Labour Relations*, *supra*, note 9, 13 at 17 [emphasis in original].

67. L. Schneider, "Technology Bargaining in Norway" in *Technology and the Need for New Labour Relations*, *ibid.* at 11-12.

This in turn further encourages the employer to circumvent the union with technological changes not covered by the collective agreement. Therefore, even if the PSSRA were changed to give unions the ability to negotiate job content, collective bargaining would still be an inappropriate forum for discussions. And what good is collective bargaining to a weak union which cannot impose sanctions? And what of unorganized workers?

F. The Carrothers Report

Changes in the technical environment promote (or provoke) changes in people's attitudes... In determining the attitude people will take to a system, the process of designing it and implementing it is as important as the characteristics of the system itself ... Successful change depends on attitudes.

*Institute of Electrical Engineers*⁶⁸

The *Report of the Commission of Inquiry into Redundancies and Lay-offs*⁶⁹ specifically disavowed making recommendations regarding technological change. This does not affect its relevance of the study to the problem, for it correctly defined the problem and part of the solution.

The Commission identified the problem as attitudinal, not legal or institutional. The reasoning is straight-forward: the adversarial relationship existing between employers and unions had led to a mutual distrust and hostility, an atmosphere which is not conducive to constructive problem solving. Unions are kept out of the decision-making process as much as is legally possible because management fears union obstructionism.⁷⁰ Unions, in turn, will react negatively whenever a change is proposed because of a fear of negative consequences not disclosed by management.⁷¹

The Commission sought to encourage "basic changes in attitudes" on the part of employers and unions by changing the process from a predominantly adversarial posture to one of co-operation in joint problem solving. Although it suggested that the problem was not legal, the Commission took the view that changes in attitude would be helped by a significant change in the then-existing law, a new requirement for "joint consultation" when lay-offs were pending. Although such consultation would be compulsory, failure of the parties to reach agreement on the way the change would be carried out would not prevent the employer from implementing it and proceeding with the lay-off. The bargaining agent would have no veto over the change, and no binding impasse resolution would be available if the joint consultation ended in disagreement.⁷² This lets management feel less threatened during the consultation process. Third party intervention also discourages the parties from working together (the "narcotic effect"). The

68. Per H. Farrow in Institute of Electrical Engineers, *Colloquium on the Sociological Impact of Computers* (London, England: 2 E.E. mimeograph, 1979) at 1.

69. *Report of the Commission of Inquiry Into Redundancies and Lay-offs* (Hull, Quebec: Labour Canada, March 1979) (Chair: A.W.R. Carrothers).

70. *Supra*, note 9 at 27.

71. *Ibid.*

72. This was not adopted in the amendments to the *Canada Labour Code* which were to follow the Commission's Report, S.C. 1972, c.18 as am. 1980-81-82-83, c.89, s.60.14.

Commission recommended against intervention through compulsory arbitration.⁷³ Voluntary arbitration could be used should third party intervention be required.

This proposal covered employees whether they were unionized or not and regardless of whether the applicable labour relations statutes allowed them to take strike action.

V. Collective Bargaining and Co-Determination

Don't assume that the interests of the employer and employee are necessarily hostile — that what is good for one is necessarily bad for the other. The opposite is more apt to be the case. While they have different interests, they are likely to prosper or suffer together.

*Louis Brandeis*⁷⁴

The Carrothers Report should be put in the context of previous legal developments. The "peace obligation" during the term of the collective agreement was a device to ensure the goal of labour peace. The "continuing duty to bargain" suggested by the learned commentators was seen as a way to help labour-management relations adjust to rapid technological change instead of exploding in crisis during the negotiating periods. It is submitted that the Carrothers Report takes the analysis one step further in pursuit of the goal of industrial stability.

If one accepts the premise that technology can be used to undermine a union's bargaining power and thereby exacerbate an already adversarial relationship, the only way to maintain labour peace is to give unions a greater say in the way new technology is designed and introduced into the workplace. In addition to using collective bargaining as a vehicle for compensating employees for the negative impact of technological change, there should be joint labour-management committees involved in the planning and implementation stages.

Collective bargaining is one device for obtaining co-determination in the workplace; worker participation through consultation is another. The differences between the two are striking,⁷⁵ and there are numerous advantages to the latter approach when it comes to technological change. The first advantage of the committee approach is an educational one. Union input at the design stage makes management aware of the flexibility of the new technology and its ability to integrate union demands with its own requirements. At the same time, the union becomes aware of what changes are contemplated at an early stage. The result is that both parties learn more about the goals and plans of the other without having rigid notice

73. For discussion of this point see G. McCaffrey, "Technological Change and the C.L.C." 27 *Industrial Relations* 737, at 739.

74. *Per* Mark Green, *The Challenge of Hidden Profits: Reducing Corporate Bureaucracy and Waste*, (New York: William Morrow & Co., 1985) at 102.

75. *See* J. Finkelman et al., *Collective Bargaining in the Public Sector*, (Montreal: Institute for Public Policy, 1983) 241 ff.

requirements. In a collective bargaining setting, sharing of information is kept to a minimum so as not to reveal a bargaining position. Committees are more inclined toward the sharing of information as the negotiations become more a process of persuasion than coercion.⁷⁶

Second, union involvement at this stage allows work force issues to be integrated with strictly technical considerations, for the mutual benefit of both parties. For example, a machine with 1% greater speed is not a greater boost to productivity if it creates 5% greater absenteeism because of stress. Kenneth E. Walton believes that the new technology offers a greater opportunity for integrating worker productivity and job satisfaction (contrary to the tradeoff on the factory floor) provided that they are both built into the system's design.⁷⁷ For example, CUPE now has 11% of its locals with joint labour-management change committees, and a survey stated that 77% of these locals have reported integrative solutions to a number of technological changes. These include the upgrading of some jobs, management agreement to increase training provided to workers and limits to electronic monitoring. More importantly, locals are reporting a surprising degree of decision-making by consensus and avoidance of grievance filing.⁷⁸

The third advantage of committees is a product of the first two. Increased information from management encourages an atmosphere of trust, while integration in design encourages an atmosphere of co-operation. Together the process promises to change, however incrementally, the attitude of labour and management toward each other.

Joint consultation also solves some of the weaknesses inherent in the collective bargaining approach. Non-unionized workers would be protected as would those who were in jurisdictions which prohibited strikes during the term of the collective agreement. Moreover, standing committees would provide a more appropriate forum for discussion. The former President of the *Canadian Labour Congress* explained:

A great many of the issues arising from automation and other forms of technological change do not lend themselves to crisis bargaining, or negotiating against a deadline. The shot gun, take-it-or-leave-it approach on the part of either labour or management, is not a solution in this type of problem.⁷⁹

Standing committees also provide the time necessary for both parties to educate themselves and each other.⁸⁰ Joint problem solving can only

76. L. Schneider, "Technology Bargaining in Norway," *supra* note 67 at 11; *Communication Workers of Canada, Policy Document on Technological Change* (Ottawa: Allied Printing, June 1982).

77. Walton, *supra*, note 66, at 13.

78. C.U.P.E., *Computer-Related Change in the Workplace: Results of A Survey of C.U.P.E. Locals* (Ottawa: C.U.P.E. Research Dept., 1985) at 81.

79. C. Jodoin, (1966) 11 *Canadian Labour* 1 at 19.

80. *Supra*, note 18, at 51: We found many industry-wide committees, in particular, that were filling the gaps left by government leadership in the education and persuasion of management and labour toward consultation. One such committee works exceedingly well within the Coast Forest Industry in British Columbia. Over 30,000 members and several forest companies are involved. The success in continuous labour-management consultation rests with the maturity of both the industry and union leadership. They provide a good balance of power, and they deal with many problems, including technological change and manage to carry out an adjustment process with very few permanent lay-offs.

take place when both parties are secure in their knowledge of the issues. In this regard, the joint committees should be supported by study groups at the corporate or industry level. General Motors and the United Auto Workers have a joint study group at the corporate level, and the B.C. pulp and paper employers' association and unions have one at the industrial level. The Canada Labour and Productivity Centre also serves as a research centre on technological change for the private sector. In the public sector, the National Joint Council and the joint consultation committee of the Public Services Commission have acted as a surrogate research resource on technological change. Labour Canada also performs this service for both sectors when called upon to do so. These structures have arisen because the necessity for research and planning for the design of work content is anathema to collective bargaining. As one academic put it:

It is questionable whether the bargaining table is the best place to deal with automation [because] it is not a straightforward question like ten cents an hour. Bargainers employ more feeling than knowledge [because] bargaining involves emotions, intransigent positions and a necessity for immediacy, none of which provides the best help for resolving a complex question.⁸¹

The joint lay-off committees set out in sections 59.7 to 60.15 of the *Canada Labour Code* have proven to provide more integrative solutions on the handful of occasions that they have been utilized.⁸² In the footwear industry, where joint consultation committees coupled with arbitration have been the norm for years, the problem of technological change has been handled without incident.⁸³ In fact, Canadian joint committees are the envy of our American counterparts.⁸⁴

VI. Conclusion

The new technology now allows for a considerable latitude in the organization of the work place and the work force. The same productivity levels can be achieved through different organizational configurations on the macro level, and job content levels on the micro level. Given this, we recommend that a public employer should not be able to fundamentally change the work environment during the life of the collective agreement and be protected by the "peace obligation." It has been suggested that a "continuing duty to bargain" over technological change should be imposed in accordance with Professor Weiler's approach.

By itself, this will be insufficient. Considering the fact that job content is now a social choice and not a property of the technology itself, it has

81. A. Pentland, (1967) 67 *Labour Gazette* at 173.

82. For a discussion of joint consultation arrangement under the P.S.S.R.A., see *supra*, note 75 at 232.

83. See E. Armstrong, "The Conciliatory Negotiation of Change," (1982) 13 *Industrial Relations Journal* 43.

84. W. Batt, "Canada's Good Example with Displaced Workers" (July/Aug. 1983) *Harvard Business Rev.* 6 at 16.

been suggested that joint consultation over designing and implementing technological change precede collective bargaining to allow for joint problem solving. This will allow for thorough discussions over job content and will relieve the pressure to amend the restricted scope of bargaining as it presently exists under the *PSSRA*. These are necessary first steps in preparation for an era which will require much more management-labour co-operation if Canadians are to maintain their place in the international division of labour.

A. Recommendation

In this paper we have concluded that collective bargaining by itself is a deficient instrument to provide adequately for technological change. The legislative scheme we envisage would require employers to engage in ongoing discussion and consultation with employees or their representatives, in anticipation of technological change, and there is some authoritative support for this conclusion.⁸⁵ Therefore we recommend the following amendments to the *PSSRA*:⁸⁶

An Act Amending the PSSRA With Respect to Technological Change

WHEREAS it is desirable to encourage employees and employers to respond to technological change, on the basis of meaningful consultation and full sharing of information, in a manner that will protect employees against adverse consequences while enhancing productivity and competitiveness;

Therefore, Her Majesty, by and with the advice and comments of the Parliament of Canada, enacts as follows:

1. In this Act,
 - (a) "Board" means the Public Service Staff Relations Board;
 - (b) "Institutional forums for consultation" means the National Joint Council and the Joint Consultation Committee of the Public Service Commission;
 - (c) "committee" means a joint technological change committee established under subsection 3(1);
 - (d) "employee" and "employer" have the same meanings as in the *PSSRA*;
 - (e) "technological change" means the introduction into an employer's business or undertaking of equipment, material or a process that is in any way materially different from what was previously used in the business or undertaking;
 - (f) "significant technological change" means a technological change that significantly affects the terms and conditions or se-

85. Labour Canada Task Force on Microelectronics in Employment, *In the Chips*, (Hull, Quebec: Labour Canada, 1982).

86. Cf. *Bill 110*, 32nd Legislature, 4th Session, Ontario, 1984 (1st reading June 18, 1984) and *Canada Labour Code*, S.C. 1980-81-82-83, c.89, s.59.7 to 60.15.

curity of employment of the employer's employees or alters significantly the basis upon which the collective agreement was negotiated;

- (g) "significant" in clause (f) is a question of fact, but any change affecting 20% of the bargaining unit shall be deemed significant. (cf. Sask. Reg. 171/72, Schedule A, para 3, made under Trade Union Act, R.S.S. 1978, c. T-17, s.43)
2. This Act applies despite any agreement to the contrary, unless the Board, on the joint application of the parties to a collective agreement, consents to the inclusion of a provision stating that this Act does not apply to the parties during the term of the collective agreement.
3. (1) The employer shall establish and maintain a committee,
- (a) at the written request of ten employees; or
 - (b) where a trade union represents the employees, at the trade union's written request.
- (2) A committee shall consist of at least four persons, half of whom shall be selected by the employer and half of whom shall be selected by the employees they are to represent, or, where a trade union represents the employees, by the trade union, and shall be employees who do not exercise managerial functions.
- (3) A committee shall be chaired jointly by an employee representative and an employer representative.
- (4) A Committee shall meet,
- (a) at least once every two month period,
 - (b) at the call of either holder of the chair.
- (5) A member of a committee selected under subsection (2) is entitled to such time from work as is necessary to attend meetings of the committee and to carry out his or her duties under subsection 6 (1), and the time so spent shall be deemed to be work time for which the member shall be paid by the employer at the regular or premium rate as may be proper.
4. (1) Where a committee has been established under subsection 3(1), the employer shall,
- (a) report to the committee,
 - (i) at the request of the employee representatives, and
 - (ii) at least once in every four month period, on,
 - (iii) any change in government plans or policy for technological change, and
 - (iv) any possible technological change that the employer is considering; and

- (b) consult with the committee on a long-range strategy for the employer's undertaking to plan for the introduction and use of new technologies, and the development and implementation of a human resources plan to prepare for said technological changes.
- (2) Where a committee has been established under subsection 3(1), the employer shall, as soon as it has made a decision to implement a technological change,
 - (a) inform the committee fully of,
 - (i) the nature of the technological change contemplated,
 - (ii) its potential effect on the employers' employees, and
 - (iii) its potential contribution to the productivity and competitiveness of the employer's business or undertaking; and
 - (b) consult with the committee with respect to devising alternative means of implementation in order to protect employees against adverse consequences while enhancing productivity and competitiveness.
- 5. (1) Where an employer's undertaking is carried on at more than one workplace or consists of more than one department or division,
 - (a) subsection 3(1) applies to each workplace, department or division; and
 - (b) where committees have been established representing 50 per cent or more of the employer's committees, the employer shall establish and maintain an umbrella committee,
 - (i) at the written request of employee representatives from two or more committees, or
 - (ii) at the written request of a trade union or trade unions representing employees in two or more workplaces, departments or division.
- (2) Subsection 3(2), (3), (4), (5) and (6) and section 4 apply to an umbrella committee.
- (3) An umbrella committee shall,
 - (a) consult with committees and with the employer on technological changes and possible technological changes affecting more than one workplace, department or division; and
 - (b) assist committees in co-ordinating their work.
- 6. (1) Where an employer informs a joint committee of a decision to make a technological change, the committee shall develop a plan for,

- (a) informing all the employer's employees specially those who may be directly affected by the technological change, of the decision;
 - (b) implementing the technological change in a manner that will minimize displacement, reassignment, lay-offs, transfers, downgrading and deskilling of employees; and
 - (c) providing employees directly affected by the technological change with,
 - (i) preferential access to alternative employment with the employer, at the same or at another workplace,
 - (ii) preferential access to alternative positions for women, if the change should have a discretionary impact on women;
 - (iii) training for alternative employment, at the employer's expense,
 - (iv) any other assistance that the committee considers desirable to assist the employees' adjustment.
- (2) The employer shall consult with the committee in developing a plan under subsection (1), shall consider alternative means of implementation of the technological change and shall give the committee full access, on a confidential basis, to the employer's personnel records, to information about the technological change and to the technical or management staff or consultants responsible for planning or implementing the technological change.
- (3) The committee may consult with the employees directly affected by the technological change on changes in,
 - (a) equipment and methods;
 - (b) work practices and job content; and
 - (c) training; that may be desirable to maintain employment security and to enhance the productivity and competitiveness of the business or undertaking.
- (4) The committee may request the assistance of any institutional forum for consultation in developing a plan under subsection (1) or clause 4(1)(b).
- (5) A plan under subsection (1) may deal with more than one technological change.
- (6) The employee representatives of two or more committees established by the same employer may require an umbrella committee established under clause 5(1)(b) to develop a joint plan on behalf of those committees, and where an umbrella committee is required to develop a joint plan, subsections (1) to (5) apply to the umbrella committee with necessary modifications.

- (7) Any disputes in the formulation of a plan may be referred to an adjudicator upon the joint agreement of the employers' and employees' representatives. Subject to sections 8 and 9, the employer is otherwise free to implement the change.
7. Institutional forms of consultation shall,
- (a) assist committees, on their request, in developing plans and consulting with employers under section 6 or clause 4(1)(b);
 - (b) conduct research into,
 - (i) matters relating to the employment and economic effects and human impact of technological change,
 - (ii) the effects of technological change on the health and safety of employees, and
 - (iii) methods of minimizing the disruptive effect of technological change on workers and improving the effectiveness of adjustment policies.
8. Where a committee has been established under subsection 3(1), the employer shall not implement a technological change before a day 120 days before the day the committee was informed under subsection 4(2).
9. Notwithstanding sections 101 and 102 of the *PSSRA*, a collective agreement may be reopened at the request of the bargaining agent before the 120 day period, or earlier where the terms of section 8 have not been complied with, where there will be a significant technological change, as determined by the adjudicator. Both the arbitration and conciliation/strike routes for bargaining shall be available, pursuant to the terms of the *PSSRA*.
10. This Amendment shall come into force on a day to be proclaimed by the Governor General in Council.

B. Future Legislation on Technological Change

The sun in dim eclipse,
Disastrous twilight sheds
On half the Nations,
And with fear of change
Perplexes monarchs.

John Milton

The law serves as a crucible for the policy choices made by government. As governments stand poised in the "twilight" between the industrial and information ages, they will no doubt consult business and labour for advice concerning the proper legislative framework for technological change. In the context of the public sector, labour groups would be satisfied if the current technological change provisions in private sector legisla-

tion were incorporated into government employees' statutes.⁸⁷ On the other hand, management is only too happy to accommodate statutory provisions like those in the *Canada Labour Code* because they deal only with the effects of technological change and leave the managerial prerogative intact:

Management holds the view that the union should play its role in an *ad hoc* fashion, protecting employees against any harmful effects of technological change ... [O]nly management possesses the required economic and technical knowledge to make [the proper] decisions with regard to the feasibility of operational changes. Rational decision making benefits not only the particular enterprise, but also the employees and the economy, in the long run. Unions should restrict themselves to the short run considerations resulting from technological change, and negotiations should be limited to methods of mitigating adverse effects.⁸⁸

Therefore we can predict that the recommendations in this paper are not likely to be adopted and that some variant of the private sector legislation will find its way into the *PSSRA*. Statistics in one Labour Canada report show that such amendments are not likely to radically affect public sector bargaining.⁸⁹

However, this does not necessarily rule out joint consultation. The private sector Acts all use similar language which suggests that the parties, where a collective agreement has been re-opened, can (1) change existing terms or add new terms to the agreement, so long as they "relate to terms and conditions or security of employment," and (2) can bargain over "such matters [as] assist the employees affected by the technological change to adjust to the effects of the technological change."

In the House of Commons, the Minister stated that the bargaining was to be restricted to the effects flowing from the change, and not over the impending change itself.⁹⁰ Given the restricted definition of technological change in the *Canada Labour Code*, a restrictive approach to the scope of bargaining is also understandable.

There is, however, an argument to be made under the expansive definitions of technological change which exist under some of the provincial statutes.⁹¹ As we have pointed out, some of these definitions would include corporate reorganizations and restructuring. Does this indicate a willingness on the part of the provincial legislature to expand the scope of bargaining over what is allowed under the federal statute? Does not the expansive definition also suggest that the union may also query the wisdom of introducing the change in the first place, or at least suggest alterna-

87. Ontario Public Service Employees Union, *Submission to the Royal Commission on Economic Union*, (Toronto: mimeograph, Nov. 1983).

88. *Supra*, note 45 at 174.

89. Labour Canada, *Provisions in Collective Agreements in Canada* (Ottawa: Labour Canada, 1981) at 141)151. See also *supra*, note 85, at 77-78.

90. Canada, *H.C. Debates* (29 March 1972) at 1271.

91. J. Kinsie, "Arbitration and Technological Change," in M. Hickling, ed., *Current Problems in Labour Arbitration* (Vancouver: Continuing Legal Education Society of B.C. 1978) at 144)145.

tives in place of a change? As the American Supreme Court said in *Fibreboard*:

The facts of the present case illustrate the propriety of submitting the dispute to collective negotiation. The Company's decision to contract out the maintenance work did not alter the Company's basic operation ... The Company was concerned with the high cost of its maintenance operation. It was induced to contract out the work by assurances from independent contractors that economies could be derived by reducing the work force, decreasing fringe benefits, and elimination overtime payments . . . Yet, it is contended that when an employer can effect cost savings in these respects by contracting the work out, there is no need to attempt to achieve similar economies through negotiations with existing employees or to provide them with an opportunity to negotiate a mutually acceptable alternative. The short answer is that, although it is not possible to say whether a satisfactory solution could be reached, national labour policy is founded upon the congressional determination that the changes are good enough to warrant subjecting such issues to the process of collective negotiation.⁹²

If the union is allowed to negotiate about management's decision to make a technological change, the managerial prerogative will be weakened. As a result, joint consultation about technological change may arise. Considering the statistics which show the correlation between levels of consultation and productivity, management may accede to joint consultation without a formal statutory requirement.⁹³

Appendix: Case Studies of Technological Change.

The Efficacy of Existing Legislation

The OC Transpo⁹⁴ case provides us with a good opportunity to compare the operation of statutory provisions seeking to impose a continuing duty to bargain versus the joint consultation approach. In that case, all the classic symptoms of technological change were present and yet the *Canada Labour Code* proved entirely ineffective for the reasons suggested by this paper.

The facts of the case were quite straight-forward. The invention of the silicon chip had already allowed OC Transpo to commence the "560" phone service, and it wanted to build on its success. To use the "560" service a caller dialed "560" and the four numbers of his bus stop; a computer would then activate a voice tape announcing the *scheduled* arrival time of the next two buses at his stop. The employer wanted to further increase customer service by introducing a sophisticated computerized communi-

92. *Fibreboard Paper Products Corp. v. N.L.R.B.*, 57 L.R.R.M. 2609 at 2616 (U.S.S.C. 1964).

93. For statistics noting the correlation between increased productivity and legislation requiring joint consultation and co-determination agreements, see J. Hoerr, "America's Business Laws Weren't Written for a Global Economy" (January 13, 1986) *Business Week* 38.

94. *Amalgamated Transits Union, Locals 279, 1502 v. Ottawa-Carleton Regional Transit Commission* (1982), 82 C.L.L.C. 446 (C.L.R.B.).

cations system which would allow the "560" service to tell the customer the *actual* arrival time of the next two buses that day. Because the system monitored the actual progress of each bus, managers would also be able to quickly respond to schedule deviations.

In February, 1980, OC Transpo requested proposals from qualified consultants. In September, 1980 two firms jointly submitted what was to be the accepted proposal for a "Transit, Information, Communication and Control System" (TICCS). An implementation plan was initiated in December, 1980. December, 1980 was also the expiration date for OC Transpo's two collective agreements with locals 279 and 1502 of the Amalgamated Transit Union. Local 1502 signed a new agreement in February, 1981. Local 279 signed on April 23, 1981. "Co-incidentally" five days later, on April 28, the employer called a meeting with the union and informed it, for the first time, of its intentions to introduce the TICCS. The information provided did not meet the notice specifications provided for under the *Canada Labour Code*⁹⁵ and the union applied to the Board in May, 1981. Local 279, the dispatchers' union, were joined by Local 1502, the inspectors' union, in the application.

The details of the scheme entailed many of the negative consequences that the microchip revolution can bring. The new system allowed the entire system to be monitored by a few console operators in headquarters. They would supervise the system by direct communications with the drivers. This meant job loss for the dispatchers because of redundancy.

Inspectors fared no better. The new automatic bus sensors which came with the new system meant inspectors would be deskilled into simply monitoring driver adherence to dress and operating protocol. Their job classifications and descriptions were changed. Experienced inspectors usually were advanced to dispatchers, but now that the dispatchers were becoming redundant, the inspectors' promotion route was blocked. The new console operators, whom management described as an "elite group who would have excellent future possibilities of advancement" were to be "outside any existing bargaining unit" and applications would be open to *all* employees of OC Transpo. In total, the inspectors "would lose independence and historically guaranteed avenues of advancement," at the same time as the middle ranks of management were vanishing.

Despite these drastic changes, the employer argued, *inter alia*, that the change was not "significant" enough for the Act to apply because less than 10% of bargaining units' employees were affected.

The Board decided that in light of the difficulties inherent in defining various aspects of the statute, the Board would settle each dispute on a case by case basis because:

The inherent contradictions in the understood purpose and restrictive language of the Code combined with the uncertainties of the effects of change and the adversarial emphasis of the parties on

95. *Canada Labour Code*, S.C. 1972, c.18, s.150.

the long term or short term impact of change leave the Board with a difficult judgement. It is heightened by tensions and differences between the macro-view of the change from the seat of the general manager and the micro-view from the seat of the individual employee. So often the decision would be reduced to whether the Board should exercise its discretion.⁹⁶

Despite the drastic changes involved, the Board refused to allow the union the right to strike.

The Board decided that the parties needed more time to discuss the issue. Although consultation was the right solution, it came too late in the process. The employer used the subsequent negotiations to offer the "carrot" of console operator jobs to first the dispatchers, and then the inspectors. By playing one local off against the other, the employer split the union and installed the system with only trivial alterations.⁹⁷

Contrast this result with the installation of the Toronto Transit Commission's transit control system (known as "RUCUS") in 1976. Joint consultation was utilized at the planning stage before the consultants were called in, and continued throughout the process. The TTC's general manager of operations described the process at the conference in the following way:

We chose our Queensway division, which had 250 buses, to test and demonstrate RUCUS capabilities. The union was invited to join RUCUS ... By April '75 we were satisfied that we had workable programs and spent the summer months evaluating and comparing RUCUS to the manual system. After a number of adjustments and improvements, we ran RUCUS in parallel with the manual system, and finally decided that the results were sufficiently favourable to proceed with a gradual implementation of RUCUS over the next two and a half years. It was decided to proceed with full implementation in the Queensway division in October 1975, but some union resistance was encountered. After some give and take on both sides, the union took a rather more positive approach to RUCUS and, I believe and hope, now agrees that the system is a valuable tool for both union and management. We expect to implement RUCUS this fall in the Birchmount and Danforth divisions, which will involve a further 450 buses and 800 men.

It should be possible to refine RUCUS even more, in such areas as reducing data input at the front end, and increasing at the output end computer-produced off-day boards and integration with the sign-up and payroll systems. We are implementing an education program for operators so that they can come to understand the advantage of the RUCUS package for both union and management. This should pave the way for easier implementation of the package throughout the whole TTC system.⁹⁸

96. *Supra*, note 94 at 189.

97. K. McGuire, *Coping with Technological Change: The Need for Legislative Reform* (Ottawa: Canadian Labour Congress, 1982), 9.

98. J. Kearns, "New Concepts in Transit" in *Telemove Automated Monitoring Conference Proceedings* (1976) 37 at 45-6.

This system of advance consultation avoided most of the problems encountered in the *OC Transpo* case. The union was able to protect its workers through input into the design and implementation of the scheme, rather than being forced to deal with the negative effects of a technological already built into the system, as the statutes contemplate. Management was also rewarded. Michael Warren became known as the public sector's leading expert for introducing technological change in a unionized environment, and he was soon appointed to head the newly formed Canada Post.

In *OC Transpo* the collective bargaining approach encouraged the employer to keep the technological change a secret until he had a new collective agreement. It knew that the union might want to delay, stall or altogether prevent the technological change. The employer therefore introduced the technological change and left the union faced with a *fait accompli*. Present statutory provisions have not prevented these abuses because they are designed only for allowing union input into the "effects" of technological change. As one study put it:

Workers are usually kept in the dark until the date of implementing a specific change draws near. By this time it is very difficult to make changes in the nature of the technology or to develop new methods of organizing production. Unfortunately, [under our present] system, unions must try to pick up the pieces. They can only attempt to minimize or counteract the adverse effects of technological change.⁹⁹

Some have suggested that this can be avoided if a union negotiates a comprehensive clause on technological change for their collective agreement. In the next part of this paper we will consider the effectiveness of just such a clause.

B. The Efficacy of Collective Agreement Provisions

Some unionists have argued that collective bargaining can provide adequate protection for their workers, if a suitable clause is inserted in the collective agreement. The classic example cited is the Canadian Union of Postal Workers agreement. In fact, the CUPW agreement is the best evidence for the proposition that collective bargaining alone is not the answer. Article 29 of the agreement is the most comprehensive clause in both the private and public sectors, supported by arguably the strongest union in Canada.¹⁰⁰ Yet it has proven to be a failure in practice. The *Code Tray*

99. Boris Mather, Jane Stinson & George Warkett, *The Implications of Micro-Electronics for Canadian Workers: A Discussion Paper* (Ottawa: Canadian Centre for Policy Alternatives, 1981) 1.

100. Clause 29 of the Canadian Union of Postal Workers collective agreement defines the meaning of "technological changes" broadly to include changes in equipment, procedures and work methods (29.01). The clause requires that the Corporation eliminate all adverse effects of technological changes, and requires that the Corporation give notice of changes (29.02 and 29.03). Notice is defined so that it requires "pertinent information" about the nature, time and effect of the change (29.04). After notice of a change has been given, clause 29 requires labour and management to meet and, if no agreement is reached, to refer the matter to arbitration (29.05 - 29.07). The union is given the right to grieve arbitration settlements (29.08). Finally, the Corporation agrees to a number of provisions designed to protect employees covered by the collective agreement, including guarantees regarding employment, job classifications, pay and the re-training of displaced workers (29.11).

See also: *supra*, note 75 at 325: "This clause [clause 29], granted by the employer under considerable duress, goes far beyond the permissible scope of bargaining [provided by] the PSSRA and beyond the protection provided in any other agreement negotiated under that Act."

Rectification case¹⁰¹ is a typical example, and it reflects the types or problems suggested by this paper.

The fact situation giving rise to the arbitration first began in October of 1980 when the employer decided to investigate the possibility of a technological change in one of its Toronto installations. On June 2, 1982 the employer gave as little notice as it thought the collective agreement required because it feared the union would oppose any change at all.¹⁰² The union responded with tactics of its own. It replied to the employer's letter seven days later; afterwards it denied sending the reply. Then, on August 3, it requested more information. On November 3, the employer gave a little more information in response to this request. On November 26, the union asked for more information. And so on. It got to the point where the union's request for information, had it been complied with, would have required the employer to supply twenty-nine boxes of documents. The arbitrator acknowledged that this was "excessive and far beyond what the collective agreement required."¹⁰³

In the meantime, the employer's staged introduction of technological change was continuing on schedule. The preliminary design was completed on March 31, 1982. The final design was completed a few months later and the design was implemented by the end of the fall of 1982. The union's grievance, lodged on January 18, 1983, complained about a lack of notice and asked for a declaration of relief in the face of the employer's *fait accompli*. The net effect of the union's protests was negligible. It was able to prevent the use of the implemented system for 120 days (due to the notice requirement), but the thirty employees in question still lost their jobs.

Clause 29 of the agreement results in gamesmanship, and not the "constructive consultation" that the words of the provision imply. The employer tries to use the notice and information requirements *as devices* to relay the inevitable. The process becomes quite child-like. In other cases, the employer has given the union the same information as in a previous letter but in a different order, or the union has denied receiving information which was hand-delivered.¹⁰⁴

Clause 29 provoked some rather legalistic arguments concerning *res judicata*,¹⁰⁵ and limitation periods.¹⁰⁶ Furthermore, arbitrators tend to apply a legalistic approach to the provisions themselves.¹⁰⁷ The overall result of these cases has been that no jobs have been saved because of clause 29 (except the jobs of the arbitrators), and there have been numerous delays

101. (1983) CUPW file no. N-1000-CG-32 (Kenneth Swan).

102. *Ibid.* at 13.

103. *Ibid.* at 20.

104. As was the case in the *Phantom Codes* case, (1984) CUPW file No. N-1000-CG-44 (Kenneth Swan) at 2.

105. See: (1979) CUPW file no. SA-62-GG-30 (D. Beatty); No. 1000-GG-12 (G. Dulude); No. 1000-GG-19 (R. Blouin).

106. *Supra*, note 101 at 20.

107. *Ibid.* at 11.

in the implementation of new technologies. Job security does not appear to have been enhanced by the agreement.¹⁰⁸

Procedural disputes and legalistic conflicts have taken precedence over the "constructive and meaningful consultations" described in clause 29. A better solution is the one advocated herein: the union would not have the power to delay or impede changes, but a standing committee could have dealt with the issues of technological change when they arose. In the *Code Tray* case, the employer's only reason for the change was to improve customer service,¹⁰⁹ and so the union could have integrated its needs with the employer's by asking that computer programming tasks be done by workers in the bargaining unit, perhaps even by those who became redundant. If this had been agreed to in October of 1980, the displaced employees would have had eighteen months to retrain.

Joint standing committees are used in the American and British post offices and appear to be quite successful. With productivity-sharing agreements and joint consultation "even the labour unions are clamouring for the Postal Service to adopt electronics technology."¹¹⁰

The contrast with our own post office is obvious. Resistance to technological change will mean that other types of the new technology (in this case the direct communication of computers through electronic mail) will be used to by-pass the high cost of the postal service, and CUPW will suffer the same fate as the British newspaper unions who refused to allow technological change.¹¹¹

108. See "The Crown Corporation" in *Special Tabloid* (CUPW: March 1981) at 3:

The CUPW collective agreement already has a clause regarding technological change ... We have protections concerning guarantees of employment classification and wages, retraining ... However, in the past, we have seen that these protections and guarantees have not stopped automation and will not prevent future changes. ... [We have hitherto been unable to] enforce the provisions of the collective agreement dealing with the solutions to the problems arising from technological change.

109 *Ibid.* at 13.

110. T. Forrester, *The Microelectronics Revolution* (Oxford: Basil Blackwood, 4th ed., 1982) at 329 and 394 ff.

111. See, e.g., *ibid.* at 330 where the President of the U.S. National Association of Letter Carriers stated: "I am firmly convinced ... that if we do not soon become ... comfortable with the [new technology] we will be literally out of business."