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ABSTRACT

Unions and employers currently operate in an environment that does not support investment in skill development. However, competitiveness demands that both work and the way workers are educated and trained be radically restructured. In high-performance workplaces, participatory labor-management approaches to job-linked basic skills development are necessary. The following are suggested union strategies in response to workplace redesign: (1) ask for a briefing on the company's business position; (2) assess management's plan for change; (3) insist that the plan be sufficiently comprehensive; and (4) ensure that any training is part of a broader education program. When faced with proposed workplace changes and corresponding training needs, unions should consider the following assumptions: (1) Is the change necessary to solve the problem? (2) Is a job-linked basic skills program the key to implementing the change? (3) Is the union or management more of an obstacle to worker training and skill development? (4) What labor relations reform is essential to work force development? and (5) Is competitiveness the compelling reason for worker education and training? To be successful, job-linked training must be worker centered, reflect an equal partnership between union and management, and be part of a comprehensive view of the future. (MN)

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**A Job-Linked Literacy Program for SPC:
Are We Talking About Worker Training,
Work Reorganization, or More Equitable Workplaces?**

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Work In America Institute

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The National Advisory Committee on Job-Linked Literacy Programs for the Work in America Institute gave the authors the following assignment:

Your paper will propose solutions to a problem which, in my opinion, already exists and is likely to become widespread. The problem is as follows:

Plant X is unionized. Management and union have a history of traditional, more-or-less adversarial relations. Management has never devoted more than cursory attention to training blue-collar workers. Suddenly management wakes up to the fact that competition has caught up to such a degree that the plant's very future may be at stake unless quality can be improved sharply and quickly. Management decides that it must adopt statistical process control. Management calls in the union, proves the need for SPC, and asks for union support of a job-linked basic skills program to ensure that everyone affected by SPC will be able to master the new job skills.

Questions:

*How should the union respond? Should it tell management to get lost until overall union-management relations have been straightened out? What *quid pro quo*'s should the union require in exchange for support? How might the emergency be used as a launching pad for a reform of union-management relations?*

This hypothetical scenario illustrates -- perhaps in more ways than were intended -- the range of issues confronting unions, employers, and policymakers who are concerned about competitiveness, productivity, and equity. In this scenario, as in real life, the manner in which the problem is posed predetermines the response. But will that response achieve our real objectives, which include saving Plant X and these workers' jobs? If we want to find real solutions to the problems like those at Plant X, we have to step back and look at the entire situation. Is the issue how best to implement a job-linked literacy program for SPC, or are we talking about broader issues concerning worker training, work reorganization, or more equitable workplaces? The authors maintain that the problem described above represents a complex and tangled web of issues and assumptions that must be examined together.

In the authors' view, there is little evidence that managers, on their own, are implementing the kinds of changes in jobs and work organization that are essential if we are to meet the skill development needs of the future. But in numerous workplaces, labor unions have taken the initiative in creating the conditions that will lead to a more highly qualified workforce. In situations like the one in Plant X, we're unlikely to find true solutions until unions have a similar opportunity to be full partners with management in framing the problem as well as developing solutions.

As requested, the first part of our paper examines specific union responses to the introduction of statistical process control and related training.

But in the second part of our paper, we present the case for a close and careful examination of how the problem has been defined and what might be inferred from the problem description. In our view, the underlying and fundamental question is: what's needed for unions and employers to work together as equals to plan for change which would benefit workers, employers, and the society as a whole?

The larger context of tax, trade, and labor laws and policies cannot be set aside in any discussion about worker training, whether inside or outside of unionized workplaces. At the very least, one must be ever mindful that in the United States, unions and employers currently interact in an environment which:

- rewards managers for achieving short-term financial goals and often penalizes them for pursuing long-term strategies;
- by law, does not require employers to inform or negotiate with their unions about the decision to implement technology and training, only about the impact of the decision;
- historically has embraced hierarchical, bureaucratic workplace organization that has no use for continuous skill development among front-line workers; and
- does not support unionization.

Given this current environment, it is not surprising that many employers are choosing to achieve flexibility in ways which avoid rather than embrace a trained and experienced workforce. Many of these employers are increasing their reliance on contingent workers: more part-time, temporary jobs and more "outsourcing" of work to contractors. The five million Americans who work part-time (including the million who work more than one part-time job) represent one of the fastest growing segments of the labor force. As *Kiplinger's Personal Finance Magazine* described a study of part-time workers by the University of Lowell:

"Their ranks are growing because many companies have decided that savings on health, disability, retirement and other benefits outweigh the hassles of dealing with constant turnover...By hiring part-timers, the company can staff up or down to meet economic demands while saving on benefits."

As the report *America's Choice: High Skills or Low Wages!* maintained, most employers are continuing to choose the "low wage," cost-cutting path, rather than the "high skills," long-term path to competitiveness. In a climate where workers are viewed as a disposable and contingent resource, can we expect employers to make training investments in people who they perceive are easily replaceable and interchangeable?

The essential problem facing unions, employers, and the entire nation is aptly stated in the opening paragraph of the lead story in the October 1990 issue of the *Business Council for Effective Literacy Newsletter*, which summarized *America's Choice* and the Office of Technology Assessment's report, *Worker Training: Competing in the New International Economy*:

"Work in the U. S. must be *radically restructured* throughout business and industry. *Along with that restructuring*, profound changes in the way the nation educates and trains workers must occur. Failure to act on these imperatives and to do so promptly will push the country further down its current path to a low skill, low wage, low productivity economy. The price for inaction will be an America unable to compete in the global marketplace, unable to preserve its

present standard of living, and unable to narrow the ever-widening gap between the nation's 'haves' and 'have-nots.'" (emphasis added)

Too many discussions about workplace literacy and worker training overlook or underestimate both the importance of restructuring and the profound extent ("*radically restructured*") that workplaces must be reorganized. We believe, as the BCEL story implies, that more emphasis should be placed on changing workplace policies rather than concentrating exclusively on changing the worker.

At the center of restructuring workplaces is the question of how authority is redistributed between workers and supervisors, unions and employers. If we wish to create high performance workplaces and a full employment economy, then we must do more than shift responsibility for product quality from supervisors to front-line workers.

Participatory rather than hierarchical management approaches demand an equal partnership between workers and employers. But partnerships between unequals are difficult to sustain. Strong and effective unions are required to maintain a system of checks and balances in a healthy and productive workplace. Without strong unions, it's doubtful that genuine worker participation can be sustained over time as a vital element of workplace redesign.

Part One. Suggestions for Developing A Local Union Strategy

1. **The union should ask for a thorough briefing on the plant's business position.**

Too often, gaining access to information is the first obstacle unions encounter and cannot overcome as they seek to participate in an informed way in regard to training, technology, and other matters. We recognize that management is under no obligation to provide such information. In contrast to the laws of many of our competitor nations, under current U.S. labor law, management has the exclusive right to matters of strategic business decision-making. Since our labor laws allow but do not mandate employers to involve unions in these matters, unions have no legal basis for

demanding that employers negotiate on issues like the introduction of technology or training. Unions can legally compel employers to negotiate only the impact or effects of decisions on matters like technology or training.

We also understand that, as a matter of de facto practice, some managers have forged successful partnerships with unions to create "high performance" workplaces and have adopted the principle of sharing complete business information with union leadership. With this information, union leaders are able to make informed decisions about how to participate in workplace transformations while protecting the union's institutional interests. Without this information, the union is precluded from acting as an equal partner with management in defining the problem and the solution.

2. **The union should make its own assessment of management's total plan for recovery, which may include expanded worker training in SPC and other areas.**

Assuming that management agrees to the principle of open sharing of what is often management's exclusive information, the local union may wish to obtain its own independent assessment of the employer's total plan for recovery. The local union's officers, shop stewards, and rank-and-file members who have experience and expertise in the production process should analyze management's plan. Such an assessment can also be supplemented by the research staff of the local union, its national union, or an outside consulting firm engaged by the union.

This will help ensure, as Lynn Williams, President of the United Steelworkers of America advocates, that management is not adopting a "least management solution" in the form of a "quick fix" and, in fact, is prepared to commit the total effort and resources required to regain or improve the company's position in the marketplace. In the Plant X scenario, what does management mean by improving quality "sharply and quickly" in order to save the plant? The union must evaluate whether management's plans are realistic and feasible.

For example, in the case of SPC training, lower level supervisory personnel are typically the key to making the process work, but are

often left out of the initial training process. In one plant the authors are familiar with, the supervisors -- and not the production workers themselves -- had the greatest literacy and numeracy needs. Consequently, the initial SPC implementation, which focused entirely on production workers and excluded supervisors from basic skills training, withered as production workers observed that supervisors failed to make use of the data and subsequently lost faith in the process.

3. **The union should insist that management's total recovery plan must be sufficiently comprehensive.**

Training should represent only one element of a comprehensive plan which enhances employment security as well as productivity over the long-term and to which labor and management are strongly committed as equal partners.

Elements of a comprehensive recovery plan might include:

- a. addressing the "demand" side of skill formation through a plan to redesign jobs which incorporates more opportunities for workers to use their initiative, experience and creativity to solve work-related problems;
- b. addressing the "supply" side of skill formation through education and training programs and other forms of work-based learning (e.g. job movement, special assignments and so forth) and other resources designed to support skill development;
- c. a compensation and incentive structure that rewards learning and performance, which might include links to total group and organizational performance, not just to the immediate job (e.g. group-based pay incentives as well as increased employment security, decent income and benefits, and so forth);
- d. plans for investment in leading-edge technology deployed in a worker-centered rather than worker-displacing manner;
- e. explicit recognition of the union's right to represent the workforce in the change

process and management's agreement not to undermine the union's role;

- f. commitment to provide the necessary resources to enable the union leaders and management personnel to prepare themselves to manage the change process, with each party able to make its own independent choices regarding consultation and training.

If the union remains unconvinced that the employer's plan is sufficiently comprehensive, it should formulate additional proposals and strongly consider withholding participation until agreement on a viable plan can be reached.

4. The union should weigh the opportunity to play an active role in helping its members to enhance their skills as well as the terms and conditions of employment.

Across the country, national unions such as the UAW, the Communications Workers of America, the International Association of Machinists, the United Food and Commercial Workers, American Federation of State, County, and Municipal Employees, and the United Steelworkers, among others, are leading the way toward redesigning work and providing work-related training for their members. Union apprenticeship training programs are now touted as "the" model for work-related training programs, second to none.

Increasingly, local unions are negotiating similar efforts into local collective bargaining agreements. Union-initiated education and training programs succeed in part because they enjoy secure financing through labor contracts and are therefore sheltered from the whims of public and corporate funding patterns. But equally importantly, they succeed because the learners themselves - directly and through their union - have a bona fide voice in the design and governance of the programs. And, as has been well established in the literature on adult learning, learner participation in all phases of the educational process promotes effective learning.

Union-initiated workforce education and training programs have the advantage of close coordination with larger workplace policies and practices governing areas such as:

- job classifications, career ladders and lattices, and job posting requirements;
- employment security, layoff provisions, and seniority;
- pay and compensation;
- restrictions on contracting out or "outsourcing" work;
- consultation on automation and new technology; and
- other terms and conditions of employment governed by the collective bargaining agreement.

Being a part of the broader labor agreement provides the basis for the kind of integrated, comprehensive approach to creating high performance workplaces. The following contract language from one industry-wide agreement illustrates the point:

"In establishing this program, the union and company are implementing a shared vision that workers must play a significant role in the design and development of their jobs, their training and education, and their work environment."

The union will also want to ensure that SPC training is part of a larger, broader, and universal training and education program made available for all interested workers. If all workers cannot be served, then a fair and equitable selection process must be developed.

Part Two. What Exactly is the Problem?

A careful examination of the way the hypothetical problem was presented to us further illustrates the difficulty faced by unions, employers, and others concerned about worker training, competitiveness, and equity. We wish to address a number of assumptions contained in the way the problem is formulated.

1. Is SPC essential to solving the problem in Plant X?

It is unclear whether the implementation of SPC implies a definitive indication that management is committed to the kind of work restructuring described in reports like *America's Choice*. SPC can be and is implemented in a variety of ways -- there is no single standard and universal process. It is our view that SPC, like workplace training and literacy programs, can be implemented to reinforce traditional, hierarchical

structures or it can represent one element of a larger strategy to redesign the workplace.

W. Edwards Deming, the American statistician known as the "father" of the statistical quality control movement, recently expressed great skepticism concerning American managers' ability to redesign their organizations in order to promote continuous improvement. Deming's "fourteen steps to quality production" constitute an integrated systemic approach to improving performance; no single element of the plan implemented independent of the rest can be expected to produce much gain. "I am not encouraged," says Deming, "management in this country still doesn't seem to understand that idea and is not taking ultimate responsibility for the performance of their company."

Instead, many managers seem to believe that they can successfully implement SPC without any additional modifications to the existing production system, such as giving more authority and decision-making to front-line workers. Yet the evidence suggests that foreign competitor nations' more "competitive" production systems are, in large measure, the result of production systems and work organization built around workers' capacities for learning and problem-solving. As Rogers and Streeck point out, "The failure of the present [U.S.] training system to assure even basic skills and skill upgrading means that it provides little support for even modest changes in work organization (e.g. widespread introduction of statistical process control) . . . let alone the more ambitious restructuring of entire production systems now common among U.S. rivals."

There is some evidence that work redesign in and of itself leads to quality improvements independent of SPC and other types of training. For example, in a study of small and medium manufacturing facilities in Michigan (both union and nonunion), modifications to the production system to incorporate some form of employee participation in decision-making was associated with higher quality in both union and nonunion facilities. It is important to note that in unionized facilities, quality improvements were related to the active involvement of the union in the work redesign process.

Where the union was not involved, either by choice or because management excluded it, there was no substantial quality improvement. This is

because the union gives workers a mechanism to express their opinion and views without fear of reprisal, and the collective bargaining relationship ensures that a worker's ideas will be given serious consideration and possible implementation.

In addition, since the nature of production jobs typically fails to make use of workers' present level of skill and knowledge -- let alone encourages the formation of new competencies -- introducing simple modifications to tap workers' existing knowledge cannot produce significant gains in both efficiency and quality without recognizing that an equal partnership between labor and management is essential.

We would agree that SPC might play an important role as part of a strategy for improving the performance of manufacturing facilities. But when implemented independently of any other changes in work organization, jobs, or training, it is unlikely to provide the significant dividends needed to help save Plant X.

Furthermore, we wonder how management "proves the need" for SPC. Instead, the union should insist that management backs up a step and includes the union as a full partner in framing the problem and developing a joint strategy for regaining the employer's competitive position.

2. Is a job-linked basic skills program the key to implementing SPC?

We question this assumption for many of the same reasons that we questioned singling out SPC from the broader systemic strategy of which it should be an integral part. While we are not advocating Deming's approach per se (for it tends to reinforce the existing power arrangements between managers and workers), we nevertheless concur with Deming's basic conclusion that quality cannot be improved without altering the production system, including the nature of jobs.

In addition, the job-linked literacy approach represents only one strategy for assisting workers in need of basic skills education. Targeting critical elements of the job to serve as the basis for curriculum design can encourage and reward learning, but only in those workplaces where workers believe they are valued and respected by their employer.

Too often, job-linked literacy assumes that the existing division of labor is the right one, and that the task of training is simply to identify and rectify the critical skill gaps between existing (or slightly modified) job demands and job incumbents' skills. At Plant X, rather than serving as the launching pad for learning, job-linked education and training serves to maintain the status quo - albeit at a slightly higher level -- as well as limit what subjects or skills are to be taught. Strictly-defined job-linked literacy programs, including many funded by the U. S. Department of Education's national workplace literacy program, are being used to prop employers who have chosen the "low wage" rather than "high skill" strategy.

Furthermore, job-linked literacy programs are no substitute for technical training for front-line workers. As Mikulecky as asserted, successful workplace literacy programs tie into the specific occupational training available in the workplace. Unfortunately, formal job training is rare for most workers in most workplaces in the United States.

The best available data estimates that \$30 billion to \$44 billion is being spent each year on formal training. But upon closer examination, researchers have found that only a handful of employers provide any formal training, and that training is focused almost entirely on managers and highly-skilled technicians, not front-line workers.

Other findings illustrate the scarcity of training in American workplaces today:

- * Only one of every twelve front-line workers receives any formal training on the job.
- * Applied across the total number of American workers, investments in formal training average, at most, \$385 per worker per year.
- * Almost twice as much is spent on coffee breaks, lunch, and other paid rest time for employees as is spent on formal training, according to the U.S. Chamber of Commerce.
- * A handful of companies spend amounts equal to four or five percent of their total payroll on formal training while others

spend nothing.

- * 90% of the total training expenditures is being spent by about one-half of one percent of all employers.

Thus, however massive these training budgets may appear, the reality behind the billions is that the vast majority of employers don't care about working smarter. They are more concerned about working cheaper. As the American Society for Training and Development has observed, most companies still view their workers as a cost to be controlled instead of an asset to be developed.

According to the Commission on the Skills of the American Workforce, only five percent of employers surveyed expressed concern about a skills shortage and few expected to encounter increased skill demands in the future. Several authors have recently concluded that employers were more likely to adjust their business strategies to conform to existing skill levels, thus limiting new product/service options, rather than consider new business possibilities and correlated skill development strategies.

Gowen's evaluation (Teachers College Press, 1992) of one of the first projects funded by the U.S. Department of Education's national workplace literacy program describes what occurs when educators attempt to implement a narrowly-defined functional context approach in a hierarchical workplace which provided little job training to its workers. Although many workers were highly interested in improving their basic skills, their dropout rate was high because the curricula were tied to jobs that workers perceived to be menial and a workplace that workers saw as rigid and unjust.

A worker-centered approach to literacy (as outlined in the AFL-CIO's *Worker-Centered Learning: A Union Guide to Workplace Literacy*), views the workplace as only one possible domain to engage learners. Since theories about adult learning recommend building on what the adults already know and care about, one should not assume that job-linked literacy is always appropriate, particularly when most workplaces are antithetical to learning or treat workers more as children than adults.

3. Is the union, rather than management, more often the obstacle to worker training and skill development?

The problem at Plant X is presented in a way which implies that the union must be persuaded of the need for SPC and a related basic skills program. This may be true on one level, since as we said, we believe that unions should obtain more information about management's total strategy in order to make an informed decision about participation and support.

But it is false on another level, for unions have historically viewed education as one avenue to stronger job security, career advancement, and the development of increased pride and self-worth. Consequently, American unions have fought hard for enhanced general educational opportunities -- both in the workplace and in the larger community -- not just narrow, job-related training for their members.

According to a recent study by the American Society of Training and Development, there is significant investment in the non-managerial workforce at unionized firms:

"Unions are fast becoming leaders in providing career-related training to individual employees. Training programs jointly administered by unions and management now spend more than \$300 million per year and represent the fastest-growing segment in the nation's learning system."

Thus, while it is highly likely that the union in Plant X will need to be convinced about the wisdom and efficacy of management's proposal, their skepticism will not stem from a lack of commitment to advancing the education and training opportunities of their members. Instead, the skepticism is likely to be rooted in questions concerning management's commitment to work as an equal partner with the union. In the scenario we were given, management defined both the problem and the solution. To get cooperation in the training program, the union must be involved in framing the problem as well as the response.

4. What reform in labor-management relations is essential to workforce development?

The scenario implied that adversarial labor relations is the same as acrimonious labor relations, and that the implementation of SPC and basic skills education requires reform of the relationship. We believe this assumption is false on both counts - at least as stated.

The U.S. collective bargaining system rests on the notion that employers and employees, labor and management have at least partially conflicting interests. It provides a mechanism for the lawful settlement of both congruent and conflicting interests through a combination of distributive (win/lose) and integrative (win/win) bargaining. Over the years, a number of exemplary education and training programs have been instituted through tough adversarial bargaining. One thinks immediately of the major workforce education programs in the auto, steel, and communications industries -- all of which emerged from the collective bargaining process.

While we might agree that, in general, win/win strategies are preferable, the facts are that some issues are inherently distributive in nature. Whatever one party gets, the other doesn't. Education and training have historically represented such a distributive issue.

Management has viewed resources spent on workforce development as resources lost to other "more strategic" activities. Even the much-heralded joint training funds in the automobile, telecommunications, and construction industries are understood as foregone wages that the workforce has agreed to invest in their own education and training, rather than as an employer investment. There is little evidence that managers are changing their views, and therefore education and training are likely to remain a distributive, adversarial issues. Managers will push for narrow, job-related training, while unions advocate broader general education and skill development.

5. Is company "competitiveness" the compelling reason for worker education and training?

We agree completely with the MIT Commission on Industrial Productivity that "to live well a nation must produce well." This statement underscores that work-based education and training programs, while certainly intended to improve an employer's performance, cannot be viewed merely as a means to maximizing

competitiveness at the firm level. The macro factors affecting the competitive position of a firm or facility are too complex for such a simplistic view.

A national economic strategy or industrial policy built on maximizing competitiveness of firms and dependent entirely on market forces leads to unbridled competition, reduced investment in long-term initiatives and lowered wages -- the "low wage" path described in *America's Choice*. We believe a broader definition of "competitiveness" must serve as the vision guiding a national strategy for economic and social development, such as "the degree to which a nation's economy can produce goods and services that meet the test of international markets while maintaining or expanding the real incomes of its citizens."

Such a vision demands a "high skill, high wage" strategy which in turn demands a restructured workplace and a highly skilled workforce. Narrow investment in job-related skills, while an important tactic in some instances, cannot in the long run produce such a workforce. Knowledge and skill, as Dan Bell pointed out twenty years ago, cannot be a strictly private good in the "knowledge society." Instead, Ray Marshall suggests that education should be a public good in the U.S. as it is in virtually all the nations with which we compete. Workers are highly unlikely to cooperate with work design efforts that they believe will lead to improving company performance at their expense through deskilling, lower wages and ultimately displacement.

It is worth recalling John Dewey's thesis that "the ultimate problem of production is the production of human beings. To this end the production of goods is intermediate and auxiliary."

Dewey's statement calls attention to the "functional context" of the production system as a whole: its technical features, social structure, distribution of opportunities to exercise independent and interdependent judgement, allocation of "intellectual" versus "manual" tasks, rewards, resources and so forth. He understood that the narrowly specialized functional division of labor in "scientifically managed" workplaces and schools emerging around him would eventually create a deterrent to developing the

broadly educated citizenry he believed essential for social well-being.

6. Is this scenario of Plant X likely to become widespread?

In some respects, the scenario of Plant X is all too typical. Despite the demands of new technology, global competition, or workforce demography, employers are not rushing to provide more workers with training. Coupled with the prevailing short-sightedness found in many American firms, it's not unreasonable to expect that "suddenly management wakes up" to the need for SPC and what it represents.

But if we assume that SPC is a clear indication of a restructured workplace, we do not agree that the scenario of Plant X is becoming increasingly widespread. Production systems are not changing rapidly, even in manufacturing. Despite the high media attention given to employers implementing continuous improvement, total quality management, and the like, we are not on a precipice of a workplace revolution. Reports like *America's Choice* and studies of worker training by the Office of Technology Assessment and the National Association of Manufacturers argue that workplace restructuring is not occurring widely enough. High performance workplaces are not inevitable: automation and increased use of contingent workers can provide employers with flexibility to respond to changes in the market, at least in the short run.

Furthermore, the Plant X scenario is typical in the way it implies an exclusively management-driven and management-led initiative ("Management decides that it must adopt SPC..Management calls in the union..."). As we outlined in our previous discussion about current U.S. labor law and the persistence of hierarchical workplace structures, it's highly likely that many workplaces implement SPC in a top-down manner which reinforces management prerogatives and provides no vehicle for worker input in the implementation process.

Conclusion: Creating More Equitable Workplaces by the Year 2000

As our remarks make clear, we think a narrow strategy which focuses on exclusively management-led corporate competitiveness

through job-linked skill development will fail to produce a workforce which can produce world-class quality goods and services and enjoy world-class living standards. While job-linked training has its place in an overall plan for economic development, it must be worker-centered, reflect an equal partnership between the union and employer, and be situated in a more comprehensive view of the future.

The AFL-CIO has suggested that we embrace a vision of a more equitable workplace and society. These workplaces would no longer require the majority of workers to spend their energies in highly repetitive work cycles embedded in hierarchical work structures. Instead, jobs would be developed - with employees' views fully represented at all levels of the decision-making process - that would allow and encourage the use of judgement, critical thinking and self-management skills. Formal and non-formal learning opportunities would be incorporated into the structure and functioning of the production system. Employment security would form a bedrock principle of the employment relationship. And workers would be afforded an independent source of power - a union and collective bargaining agreement - to represent their interests in the employment relationship.

Exactly how do we achieve our vision of an equitable workplace and society? There are important lessons to be learned by recalling how management practices have changed in the past. How did workers come to enjoy a forty-hour work week, safer working conditions, paid sick leave and vacations, retirement and health insurance? A better understanding of how these workplace improvements were obtained might indicate how training opportunities for workers might be expanded. Progress in the workplace has been neither inevitable nor irreversible, as indicated by both our past and present. Perhaps we need to become more literate about workplace change as we promote workplace literacy programs.

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