

Unions and Contemporary Innovations in Work Organization, Compensation, and Employee Participation

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Introduction

The 1980s have been a decade of experimentation in work organization, compensation systems, and labor-management relations. These experiments represent efforts to increase productivity and improve firm financial performance. Many of these innovations seek to tap worker knowledge and energy in the service of these goals.

It is the purpose of this paper to describe the nature of these efforts, and to document their growth and significance in both the union and nonunion sectors. In doing so, we make the case that on balance U.S. unions have not been hindrances to innovations in the management of human resources, but in the 1980s have facilitated the implementation and healthy functioning of such programs. It's not that changes in work organization or compensation are always appropriate or desirable; elsewhere we discuss why workers and their labor organizations have sometimes opposed programs which undermined collective bargaining, excessively speeded-up production, or were otherwise detrimental (Eaton and Voos 1989). It appears from the evidence discussed here, however, that such opposition has not resulted in a significantly lower quantity of innovation in the union sector, but instead shaped programs to meet worker as well as corporate goals.

We also argue that contemporary union support for innovative work practices is consistent with a long tradition of productivity bargaining in this country in which unions have agreed to productivity enhancing technologies and methods while protecting the economic security of members. Traditional union protections lay the groundwork for more extensive forms of genuine participation with a greater potential for improved work methods and increased productivity.

Types of Programs

The innovations in human resource management take a variety of shapes, most prominent of which are various types of employee participation (including quality circles and other group efforts), team concept plants with new forms of flexible work organization, worker participation in strategic management decisions, gain-sharing, profit-sharing, employee stock ownership and some other miscellaneous productivity improvement programs.¹ It should be noted that these categories are not mutually exclusive. For example, teams involve both work reorganization and employee participation. In the following section we will briefly describe the major types of programs, their rationale, and what is now known about their effectiveness.

Employee Participation Programs. Variouslly labelled quality circles (QCs), quality of work life (QWL) programs, and employee involvement (EI) efforts, employee participation programs attempt to increase worker involvement at the point of production through group meetings. Programs vary greatly both in the degree of final authority accorded groups and in the range of issues open to discussion. The former can range from suggestions to final decisions, the latter from a narrow topic like product quality to almost anything of concern to the enterprise or its employees. Groups may consist of all members of a functional work group including supervisors or include representatives of one or more functional work groups; participation may be either voluntary or mandatory; and while time spent in meetings is usually paid, it can be uncompensated.

Although many of these programs are referred to as QWL, the primary goal is often to increase firm performance. In a recent General Accounting Office (US GAO 1987) survey of employee involvement programs, managers stated that a major reason for implementation was "to improve productivity" (cited by 70% of all respondents as being true to a great or very great extent). The other most frequently cited goals were "to improve quality" (72%), "to improve employee motivation" (58%), and "to improve employee morale" (54%). There are a variety of mechanisms through which participation supposedly stimulates efficiency. Primarily, it is believed that through participation workers will share, with each other and with management, their ideas on how to "work smarter." In addition to changing actual work practices, workers may become more satisfied and/or may identify more with the company and therefore work more productively. A final hypothesized mechanism for increasing productivity is through reduced conflict (Katz, Kochan, and Gobeille 1983).

Quantitative evidence that employee participation actually increases productivity is sparse, although most newer studies report at least small positive effects on specific dimensions of firm performance; the earlier literature tended to indicate that participation typically has little or no positive impact on productivity, but does improve employee job satisfaction (Locke and Schweiger 1979). For instance, in a well-designed longitudinal study, Marks et al. (1986) found a quality circle program to have positive and significant effects on participants' productivity and absenteeism; Rosenberg and Rosenstein (1980) reported a positive relationship between the actual degree of participation and productivity gains. Griffin (1988) found that quality circles indeed had positive effects on performance evaluations, job satisfaction, and organizational commitment for a period of about 18 months after program implementation, but that these gains tended to diminish over time, a phenomenon also frequently mentioned in the non-quantitative literature (Lawler and Mohrman 1985). Katz et al. (1983), however, found that General Motors plants with high QWL activity had more improvement in product quality, but not labor efficiency, than low QWL plants. On the other hand, Voos (1987) and Cooke (1988) both reported positive productivity effects of employee participation programs generally, based on perceptual evidence from a number of companies. Lawler (1986) summarized the more recent qualitative literature on a whole range of programs. Of the programs examined, quality circles, semi-autonomous work teams, and "new design plants" were found to have enhanced quality and increased productivity through improving work methods.ⁱⁱ

"Autonomous" or "self-managing" work teams. These can be thought of as one type of participative program typically characterized by a high level of involvement over a wide range of issues. At the same time, teams represent a new, flexible form of work organization and involve a range of organizational changes. These typically include a reduction of job classifications, the cross-training of individual workers for most or all jobs in a work group, and team responsibility for such previously separated functions as material handling, maintenance, and quality control. The basis of compensation may also be changed from wage rates tied to particular job classifications to a "pay for knowledge" system in which wages progress with each job mastered by an individual.ⁱⁱⁱ

Critics of team systems point out that workers may find themselves working harder as well as smarter (Parker and Slaughter 1988). This is accomplished by reducing the amount of individual idle time. In consequence, the work pace is an important source of the intra-union debate surrounding team systems, especially in the auto industry. However, it is important to understand that productivity gains do not come solely from "speed-up" under the team approach; an important avenue is the elimination of whole

classifications of indirect labor, including the reduction of supervisory labor consequent to greater self-management on the part of the workforce.

Most evaluations of team production systems agree with Lawler that these efforts can yield much better results than limited participation programs like quality circles. For instance, Robert McKersie and Janet Klein (1985), conclude that team production systems, or other socio-technical approaches to large-scale work reorganization, have much larger potential productivity payoffs than less-extensive efforts which focus primarily on greater worker involvement--with estimated increases of 30-40% over a period of several years, as opposed to perhaps 10-20%.

Participation in strategic management decisions. This option represents an innovative type of union-management cooperation. Examples of strategic decisions would be those involving capital investment, technology, or product design (Kochan, Katz and McKersie 1986: 178-205). Perhaps the best known form is union representation on a board of directors, although this in and of itself does not guarantee a high degree of union influence (Weyer 1988). More commonly, management consults informally on a regular basis with union leaders regarding the current financial health of the business and the prognosis for the future. Sometimes this occurs through a standing joint committee.^{iv}

A well-documented case in Rochester, New York, illustrates how strategic participation can yield important gains to both workers and firms (Cutcher-Gershenfeld 1988). In October 1981, the Amalgamated Clothing Workers faced a potential loss of about 180 jobs if the Xerox Corporation went ahead with its plan reduce costs by subcontracting the assembly of wire harnesses.

The Union asked Xerox to set up a Joint Study Team of six affected employees, one engineer, and one manager, to determine if sufficient cost savings could be achieved to save the jobs. The company agreed. It had built up a good working relationship with the union based on considerable mutual trust; more recently they had gained valuable experience in the operation of employee participation groups. The team found sufficient savings (over \$3 million) through physical redesign of the work area, upgraded equipment, and massive work reorganization to convince the company to agree to retain the work in house. Further extensions of cooperation eventually produced a company commitment to build a new toner plant in the Rochester area, rather than constructing it in the South as the initial company study suggested.^v

This example demonstrates that while major gains from strategic participation typically accrue to unions and their members, management may also benefit to the extent that union leaders and workers 1) gain a more realistic understanding of actual problems, bringing extensive indirect benefits to the company insofar as it affects union decisions in current and future collective bargaining, and 2) bring another constructive voice or viewpoint into the decision-making process, resulting in cost-saving or revenue-enhancing innovations. (See Klingel and Martin, 1988 for other examples of joint cost saving efforts). Furthermore, the example suggests an interrelationship between workplace innovation, strategic participation, concession bargaining, and the 1980s climate of economic adversity, a connection we will discuss at greater length in a later section.

Gainsharing describes a range of compensation schemes in which workers share in increased productivity or reduced costs. Gainsharing plans attempt to measure gains in efficiency against a base ratio of inputs to outputs; variants include the Scanlon Plan (traditional and modified), the Rucker Plan, and the Improshare Plan, each characterized by different formula (Schuster 1984). Bonuses, over and

above regular wages, are paid if future ratios show improvement over the base, giving workers a direct incentive to increase productivity. The Scanlon plan, which originated in the union sector in the late 1930s and was popularized in the 1950s, also involves a philosophy of union-management cooperation and a committee structure to organize worker suggestions for productivity improvement; it is perhaps best described as a combination of participation and gainsharing (Lesieur 1958).

Gainsharing is not feasible in all work situations. Where a viable plan can be established, and actually delivers higher earnings for greater work effort, gainsharing can apparently produce considerable gains in productivity. Probably this is because it combines the considerable power of money as a motivator, the stimulus of group participation and support for individual work effort, and the added benefits of union-management cooperation (Schuster 1984) In her study of unionized Wisconsin firms, Voos (1989 and 1987) found gainsharing to be relatively rare (in about 6.6 % of the unionized Wisconsin companies studied) but consistently evaluated to have larger effects on productivity, flexibility in utilizing labor, and firm performance than many other programs, including employee stock ownership plans, profit-sharing plans, joint in-plant committees addressing specialized issues, or local area labor-management cooperation committees.^{vi}

Profit-sharing plans take a variety of forms but typically pay bonuses if profits pass a threshold. The definition of profits, the level of the threshold, and the percentage of payout are all variable from plan to plan. However, since profits are affected by both economic events and many managerial decisions, as well as by employee work effort, payments are much less certain than under the gainsharing approach; consequently incentive effects may be small. Lawler (1986: 164) describes some successful uses of profit-sharing but concedes that "in most organizations, profits are so far beyond the direct influence of most employees that profit-based bonuses are simply not likely to be effective motivators." Nonetheless, some studies find that on average profit-sharing does have a positive productivity effect (Kruse 1988).

Other types of programs aimed at increasing productivity or otherwise improving human resource outcomes through increased involvement of workers also should be mentioned. These would include survey feedback, job enrichment, and employee ownership. Survey feedback programs solicit worker input on an individual basis through regular formal surveys. Typically, results are discussed with employees and personnel or work practices may then be altered. Job enrichment involves adding duties to an individual job, presumably to make it less alienating and more satisfying. Employee ownership ranges from limited stock ownership plans where only a small percentage is owned by workers to companies which are wholly owned by employees (see Rosen, Klein, and Young, 1986 for a description and positive evaluation). Even wholly-owned firms vary greatly on the degree to which workers' exercise control over management decisions. Voos (1987) found ESOPs to consistently have relatively small effects compared to other programs on firm performance, possibly because the typical stock-ownership plan provides only small financial or ownership benefits, and may function more as an additional fringe benefit than a true "stake" in the enterprise.

Were or Are Nonunion Companies the Chief Innovators?

Many of the programs discussed above first appeared on the U.S. scene a bit more than two decades old ago and have only become widespread in the 1980s.^{vii} Kochan, Katz and McKersie (1986) suggest that these innovations began initially in a few large nonunion companies in the 1960s -- firms that were almost completely unorganized or in nonunion plants of partially unionized companies. These same firms were committed to keeping new facilities nonunion, a stand consistent with "the deep-seated opposition to unions embedded in the ideology of American management and the culture of many American firms" (Kochan, Katz, McKersie, p. 56). So while many of these programs came to be associated with nonunion human resource management, to some extent this may be a spurious association. That is, many of these practices, especially the most participative systems, were begun in new facilities that, for a variety of reasons, tended to open and remain nonunion.^{viii}

This association of innovation, particularly participation and team systems of production, with nonunion companies and facilities initially created a climate of hostility and suspicion within the labor movement. In some cases this opposition continues today, although union leaders have become much more diversified in their views and less oppositional in the 1980s (Eaton and Voos 1989).^{ix} Nonetheless, one often still hears the view that nonunion companies are the progressive leaders in human resource innovation (Lawler and Mohrman 1987). Ichniowski, Delaney and Lewin have recently questioned this perception, based on a survey of human resource management in 495 large firms in the Compustat data set; the major drawback of their study was a low response rate (6.5%). Their data indicate that employee participation programs were "virtually nonexistent" in either sector before 1970 and that "the incidence of participation programs has increased at similar rates in both unionized and nonunion business units, suggesting that employee involvement is not solely a phenomenon of the nonunion sector (p. 19)."

A recent survey of small manufacturing firms in Michigan by Cooke (1988) provides complementary results. Of the firms with participative activities (QC, QWL, EI), none of the unionized firms and only 6.5% of the nonunion firms reported beginning their programs before 1975. 7.1% of the union and 9.7% of the nonunion firms began programs from 1975 to 1980. 92.9% of the union plans and 83.9% of the nonunion plans began since 1980. Thus, though a small percentage of nonunion firms were early implementers, almost all the action in both sectors is post-1980.

In sum, it appears that while some early innovators were nonunion firms, that sector may have been given too much credit as the leader in industrial relations practices. To the extent that innovation did begin in the nonunion sector, it is not so much that unions opposed innovation as innovative companies opposed unionization. Further, even if the nonunion sector has pushed the union sector to change, there are indications that the union sector is now catching up and perhaps pushing beyond the nonunion sector.

The last point is substantiated by both the Ichniowski, Delaney, and Lewin survey and the Cooke research. Data from both these recent studies are reproduced in Table 1. Of the innovative practices we list above, Ichniowski, Delaney, and Lewis gathered evidence on "flexible job design" (this includes job enrichment, job enlargement and job rotation), numbers of job classifications, information sharing and participation/QWL programs. They compare union versus nonunion operations both for all of the business units they survey and for union versus nonunion operations for that subset of firms that have

both types of facilities. The latter comparison is appropriate insofar as it controls for unobserved corporate characteristics.

Under either type of comparison, a number of differences emerged between the union and the nonunion sectors, although these tended to be more significant for union versus nonunion companies than for union versus nonunion facilities in the same company.^x First, the nonunion sector had significantly more flexible job design. However, it has been suggested elsewhere that flexible job design is most prevalent in the heavily-nonunion service sector; consequently, it is not clear whether less flexible job design is related causally to union status (Heckscher 1981).^{xi} Second, the union sector had significantly more total job classifications (again suggesting inflexibility), but significantly fewer job classifications per employee. Both statistics probably reflect the fact that the union companies in this study were simply much larger on average than the nonunion companies, so again its hard to interpret the meaning of these results. Finally, while more unionized operations reported information sharing with employees and the existence of WI programs, these differences were not significant.

Cooke collected information on a different set of programs from 131 union and nonunion manufacturing firms in the state of Michigan; many of the companies in his study were small. He found few differences with regard to participation. Likewise, there were no significant differences between the sectors in their use of ESOPs. The significant differences came in the area of compensation; many fewer unionized firms had profit sharing plans. Interestingly, however, the union firms made significantly more use of productivity gainsharing. Gainsharing tends to be preferred by unions over profit-sharing partially because it allows more worker control over the costs included in the bonus formulae and the resulting pay out when productivity rises; profits in contrast are often viewed as subject to too much finagling on the part of management. Finally, more nonunion firms had pay for knowledge schemes.

A recent survey of a subset of Compustat firms provide similar results (survey described in Finseth, 1988 however these results are unpublished). These also appear in Table I. Again, more union firms are making use of innovative practices with the exception of profit-sharing. There is a negative correlation in this data (-.2103) between the percentage of the workforce involved in profit-sharing and the percentage of the workforce unionized. All the other practices had positive, though not necessarily significant correlations: quality circles (.2668), group bonuses (.1723), job rotation (.0073), and employee surveys (.2009).^{xii}

New, previously unpublished results from a survey conducted by the General Accounting Office (US GAO 1987) provide perhaps the best evidence to date of the extent of innovation in both sectors. GAO surveyed all Fortune 1000 companies and received 476 usable questionnaires for a response rate that was unusually high compared to earlier studies; of these companies, 326 agreed to the release of the information. Tables II and III present our reanalysis of the GAO data, which unlike the original study focuses on union/nonunion differences; figures are based on the 313 respondents who indicated their union status. Table II breaks the firms down into two general categories, partially union and totally nonunion and reports the percentage in each category that reported that some employees were involved in each of the programs listed.^{xiii} Partially unionized firms are more likely to report some activity

Table I, Extent of Innovation – Union vs. Non-Union

<u>I. Ichniowski, Delaney and Lewin, 1988 – 495 large Compstat firms:</u>			
1) All business units			
	Union	Non-Union	Difference
Flexible job design	.252	.397	***
Number of job classifications	121.0	38.8	***
Job classifications per employee	.149	.364	***
Information sharing	.642	.567	NS
QWL	.493	.436	NS
2) Firms with both union and nonunion units:			
	Union	Non-Union	Difference
Flexible job design	.256	.347	NS
Number of job classifications	151.4	52.3	***
Job classifications per employee	.191	.355	NS
Information sharing	.628	.638	NS
QWL	.509	.528	NS
<u>II. Cooke, 1988 – 131 small Manufacturing firms in Michigan</u>			
	Union	Non-Union	Difference
Participative programs	40.0%	51.7%	NS
Profit sharing	29.4	52.6	***
ESOP	7.6	8.8	NS
Gainsharing	9.0	1.8	*
Pay for knowledge	10.4	24.6	**
<u>III. Finseth 1988, unpublished; also Kruse 1988 – Compstat firms</u>			
	Union	Non-Union	
Quality Circles	50.0%	30.6%	
Job Rotation	20.6	18.2	
Employee surveys	62.9	25.7	
Productivity-related group bonuses	45.5	29.4	
Profit-sharing	48.9	77.5	

NS = not significantly different

*** Significantly different at the 0.01 level on a 2-tailed test

** Significantly different at the 0.05 level on a 2-tailed test

* Significantly different at the 0.10 level on a 2-tailed test

Table II, Extent of Innovation - Partly Union versus NonUnion, GAO Data

Standard errors are in parentheses

	Portion of Firms with Any Activity		Mean Extent of Activity'	
	Partly Union [179 Firms]	Nonunion [134 Firms]	Partly Union	Nonunion
Quality Circles	71%	48%	2.20* (.08)	1.92 (.12)
Other Participation	79	61	2.44 (.08)	2.27 (.13)
Union-Management QWL Committees	46	1	1.65** (.07)	1.02 (.02)
Teams	35	19	1.44** (.05)	1.29 (.06)
Profit-sharing	63	66	2.61 (.14)	3.96** (.23)
Gainsharing	33	15	1.44 (.06)	1.42 (.11)
ESOPs	65	58	3.77 (.19)	3.86 (.24)
Job Enrichment	66	60	2.02 (.08)	2.09 (.11)
Survey Feedback	74	62	2.88 (.14)	3.22 (.20)
Knowledge/Skill- Based Pay	47	29	1.74 (.08)	1.68 (.13)

** Significantly greater at the .05 level on a 2-tail test than the corresponding nonunion or partly union mean.

* Significantly greater at the .10 level on a 2-tail test than the corresponding nonunion or partly union mean.

Respondents were asked how many employees were covered by the various practices. Categories of responses: 1 = None, 2 = Almost None (1-20%), 3 = Some (21-40%), 4 = About Half (41-60%), 5 = Most (61-80%), 6 = Almost all (81-99%), 7 = All (100%) "Any Activity" is defined as a response > 1.

in every category than nonunion firms, with the exception of profit-sharing. Respondents also rated the extent of each activity in their corporation. These ratings indicate that while profit-sharing is significantly more extensive in the nonunion sector, the union companies had significantly more quality circles, union-management quality of worklife committees, and teams. The latter is particularly important insofar as teams are a very extensive innovation with high productivity-incrementing potential. It would appear from this information that at present the union sector generally equals or surpasses the nonunion sector.

Table III breaks down the GAO data by level of unionization. There is no clear association between the level of unionization and the experience with innovative programs. In most cases it appears either that there are no significant differences or that the moderately unionized firms have the most activity. Exceptions are profit-sharing--where the least unionized firms resemble their nonunion brethren in being particularly active--and union-management quality of worklife committees--where the most heavily unionized firms lead the pack.^{xiv}

Finally, is there any evidence that a given innovation is more or less effective in the nonunion as opposed to the union environment? To date, there have been few attempts to study this important question. The GAO data set, however, provided us with some--albeit limited--information. The questionnaire asked managers about the extent to which the employee involvement programs (but unfortunately not the compensation-based programs) were successful in improving organizational performance. Their ratings are presented in Table 4.

Most importantly, there are no statistically significant differences in program effectiveness between nonunion companies and those that are at least partially unionized, at the 5% confidence level. Looking across different levels of unionization, however, two programs are rated as significantly more effective in moderately unionized companies (quality circles and survey feedback), and one is rated as significantly more effective in heavily unionized companies (union-management quality of worklife committees). Teams were viewed as significantly more effective in either moderately or heavily unionized firms than in those with less than 20 % organization.

Table 5 presents the managers evaluations of employee involvement programs on outcomes besides overall performance. Again, union and nonunion companies are highly similar. The nonunion companies were more likely to report that innovations had spread performance-based rewards to lower levels of their business organizations, but the union companies were more likely to indicate that safety and health had been improved as a result of innovation.

In sum, the latest evidence suggests that there is very little difference between the two sectors in their use of participation programs or in the effectiveness of a given type of program. Nonunion companies appear to be making more use of job enrichment, and perhaps fewer job classifications, although these differences may be a function of that sector's smaller average firm size and its greater representation in services. Unorganized firms clearly do use profit sharing to a greater extent. Union companies, on the other hand, are more likely to employ gainsharing, teams, and union-management QWL committees. If anything, these latter programs are precisely the ones that have the potentially largest effects on productivity and economic performance. In short, there seems to be little evidence that the nonunion

Table III, Extent of Innovation by Level of Unionization, GAO Data Mean Extent of Activity*

Standard errors are in parentheses

	High (> 40% Union)	Moderate (20-40% Union)	Low (< 20% Union)
Quality Circles	2.00 (.11)	2.56 a (.18)	2.12 (.15)
Other Participation	2.30 (.13)	2.51 (.14)	2.58 (.16)
Union-Management QWL Committees	1.81 a (.12)	1.61 (.10)	1.44 (.11)
Teams	1.37 (.06)	1.67 a,b (.12)	1.31 (.09)
Profit-sharing	2.50 (.21)	2.08 (.19)	3.32 b,c (.29)
Gainsharing	1.39 (.09)	1.43 (.09)	1.54 (.13)
ESOPs	3.55 (.28)	4.09 (.35)	3.76 (.38)
Job Enrichment	1.82 (.10)	2.22 a (.16)	2.08 (.17)
Survey Feedback	2.74 (.22)	2.93 (.20)	3.02 (.29)
Knowledge/Skill- Based Pay	1.64 (.13)	1.74 (.14)	1.88 (.17)
Number of Firms	75	54	50

All significance is at the .05 level on a 2-tail test and is coded as follows:

- a = significantly greater than Low Union category
- b = significantly greater than High Union category
- c = significantly greater than Moderate Union category

* Respondents were asked how many employees were covered by the various practices. Categories of responses: 1 = None, 2 = Almost None (1-20%), 3 = Some (21-40%), 4 = About Half (41-60%), 5 = Most (61-80%), 6 = Almost all (81-99%), 7 = All (100%)

Table IV, Managers Evaluations of the Success of Programs in Improving Organizational Performance, GAO Data

(Standard errors are in parentheses)

	Partly Union	Nonunion	High Union	Moderate Union	Low Union
Quality Circles	3.81 (.07)	3.79 (.09)	3.71 (.11)	4.05 b,c (.11)	3.65 (.13)
Other Participation	3.85 (.07)	3.83 (.08)	3.85 (.11)	3.95 (.10)	3.76 (.13)
Union-Mngt. QWL	3.43 (.08)	3.67 (.33)	3.58 a (.13)	3.36 (.15)	3.20 (.15)
Teams	3.63 (.08)	3.82 (.16)	3.68 a (.15)	3.75 a (.11)	3.27 (.14)
Job Enrichment	3.50 (.06)	3.67 (.16)	3.44 (.09)	3.51 (.12)	3.58 (.12)
Survey Feedback	3.78 (.06)	3.85 (.08)	3.76 (.11)	3.93 a (.09)	3.63 (.12)

Significance
of Difference

All are insignificant
at the .05 level

a = significantly greater
than U < 20
b = significantly greater than
U > 40
c = significantly greater than 20
<= U <= 40

Scaling: Very great = 5, Great = 4, Moderate = 3, Some = 2,
Little or No = 1.

Table V, Managers Evaluations of the Extent to Which Programs Resulted in a Changed Business Environment, GAO Data

	<u>Percent Great or Very Great</u>		<u>Scaled Mean</u>	
	Union	Nonunion	Union	Nonunion
Improved implementation of technology	40.3%	35.1%	2.49	2.66
Eliminated layers of management or supervision	20.1	19.4	1.84	1.93
Changed management style to one that is more participatory	44.7	36.5	2.64	2.65
Improved union-management relations	22.9	0	2.09**	1.00
Moved decision-making to lower organizational levels	36.9	26.9	2.41	2.33
Moved performance-based rewards to lower organizational levels	18.5	22.3	1.87	2.13*
Broadened skill development at lower organizational levels	44.1	36.5	2.65	2.64
Increased information flow throughout the corporation	48.7	44.0	2.75	2.86
Increased employee trust in management	45.2	31.30	2.65	2.61
Improved management decision making	38.0	32.9	2.51	2.60
Improved employee safety/health	31.9	14.2	2.32**	1.85
Improved organizational processes and procedures	38.0	37.3	2.50	2.69

**Significantly different at the 0.05 level on a 2-tailed test

* Significantly different at the 0.10 level on a 2-tailed test

Scaling: Very great = 5, Great = 4, Moderate = 3, Some = 2, Little or no = 1

sector is now more innovative than the union sector, if in fact it ever was much more innovative, or that programs typically yield better outcomes in nonunion companies.

In any event, the union sector is currently experimenting with a wide variety of practices. While it remains to be seen if these experiments will be institutionalized, we believe that there is ample reason to believe that many will be. We suspect that program outcomes in union firms have ultimately a greater potential, although there is currently little evidence of systematic difference in outcomes. There are two primary reasons for our optimism. The first is that, contrary to some popular misconceptions, unions in the U.S. have a long history of bargaining over productivity increases and generally supporting efficiency-enhancing change, albeit with protections for their members. Secondly, unions bring protections and the collective voice of the workforce to the process of innovation. This role seems particularly important and constructive in participative and cooperative programs. These themes are explored in greater detail below.

The Search for Greater Productivity in a Context of Economic Adversity and Concession Bargaining

It would be a mistake to consider the workplace innovations discussed above separated from other labor relations developments in the 1980s. As many industrial relations scholars have noted, increased international competition, deregulation, recession, and a larger domestic nonunion sector in many industries, have led to major, if not fundamental, transformations in industrial relations in the United States. Three major changes are commonly cited by experts: (1) a sharp decline in the percent organized, (2) concession bargaining, and (3) a "new cooperation" in the union sector emphasizing employee participation and other workplace level innovations, along with more traditional joint union-management committees operating at the middle level of industrial relations (Strauss 1984; Barbash 1985; Kochan et al. 1986; see Dunlop 1988 for a measured dissent). What is sometimes underemphasized in discussions of the contemporary trends in industrial relations, however, is the connection between concession bargaining and the use of employee involvement and other human resource management innovations in the union sector (Capelli and McKersie 1987). Concession bargaining in the 1980s has involved the widespread renegotiation of work rules in an effort to avoid even more extensive monetary concessions or layoffs in an adverse economic climate; likewise, many innovative programs can be viewed as means to facilitate changed work rules (Kassalow 1988; Strauss 1984).

Certainly management made a major push on work rules in the early 1980s.^{xv} Even in 1986 and 1987, management often went into negotiations attempting to reduce what was viewed as "restrictive work rules," -- according to the BNA survey of employer bargaining goals, a greater percent of firms emphasized this than planned on seeking cut backs in holidays, vacations, sick leave, personal leave or other paid time off, special early retirement incentives, switches from defined benefit to defined contribution pension plans, or other reductions in nonwage compensation covered by the survey (BNA 1985: 16-17; BNA 1986: 13-14).

In a context of economic adversity, work rule changes were often negotiated by local unions in an effort to prevent plant closure, outsourcing of some work, or to attract new investment and hence the assurance of future work in the same location. For instance, General Motors promised to invest \$80 million in its old plant in Tarrytown, New York, after the UAW local there agreed to liberalize work rules, instead of

in the Framingham, Massachusetts local which bid for the same work but refused to grant work rule changes (this example is cited by Kassalow, p. 575; the Framingham plant is now in the process of closure). McKersie and Klein (1985: 141) note the importance of this trend, which they term "job investment bargaining," and point out that it has occurred through informal union-management consultation as well as through direct contract renegotiation; such investment bargaining is one way unions have become more widely involved in strategic management decisions in this time period.

The more extensive workplace innovations, team production efforts for example, involve precisely the abandonment of traditional ways of doing things and assigning workers to jobs (embodied in work rules), along with the reorganization of work, introduction of new technology through a process that involves consultation with workers, broader training of the workforce, considerably greater management flexibility in defining work tasks and assigning particular workers to particular jobs. Union agreement to the introduction of such a program is productivity bargaining--if not necessarily job investment bargaining in the sense that the company makes an explicit quid pro quo--in that it involves worker agreement to work more productively in exchange for better wages and improved job security than would be available in the absence of such agreement.

Productivity Bargaining: A Union Phenomenon

The workplace level programs that are often a part of the new union management cooperation are in some ways a particular manifestation of a very old phenomenon for U.S. unionism: productivity bargaining (McKersie and Hunter 1973; see Flanders 1964 for British background).^{xvi} It seems likely that productivity bargaining--both the traditional trading of work rules for direct economic benefits and the new open-ended innovations on the shop floor which continuously seek to reduce costs and increase output--is one major, if unheralded, reason U.S. union workers are often more productive than nonunion workers.^{xvii}

Union workers can as a group trade harder and/or more productive work for higher wages, or trade increased productivity to prevent reductions in already high wages when their earlier gains are under threat from the forces of competition. Nonunion workers simply lack the institutions--the collective voice which permits inter-worker discussion and then explicit negotiation with employers--to make these exchanges. More productive work for higher wages is a trade that even union workers do not always want to make. But union workers are better off than nonunion workers insofar as the institution of unionism permits them to make, or to not make, this exchange.

One can see this by considering the role played by work rules in nonunion firms and considering the barriers to productivity bargaining in that environment. Personnel experts assure us that work rules exist in nonunion companies, and may be very resistant to alteration (McKersie and Klein 1985: 146; Foulkes 1980: 61). Informal work norms function in this setting to protect workers from stress, from poor evaluations, from not being able to keep up, and from adverse social reactions by coworkers (Mathewson 1931).^{xviii}

This is important because the nonunion employer has considerable formal power to reassign both tasks to particular workers and workers to particular jobs -- a power frequently termed "flexibility." Employees use informal work norms in such a context to build some slack into jobs and thus protect themselves

against negative outcomes like fatigue or inability to keep up.^{xix} The power to reassign work and workers, the flexibility so envied by many union managers, is simply not a productivity panacea because it often sets in motion protective human behavior. Indeed in some nonunion settings, the company may choose to "buy" individual worker cooperation in ways which are ultimately counterproductive. Supervisors in Foulkes' (1980: 61-66) classic study of nonunion companies complained loudly about overly loose work environments and the difficulty in disciplining workers that resulted from a "people oriented" approach to managing without a union.

The very fact that employee participation programs have been introduced so widely in the nonunion sector is evidence for our view in this regard. In doing this, nonunion employers are attempting to focus the energy of the work group on production. In these organized groups, coworkers can discuss product quality, work flow, and all the details of how work is done and allocated. When such groups decide to alter such matters to improve quality or reduce costs, individuals will be more likely to see the process as fair (a view that implies some protection against potential arbitrary or adverse changes by management fiat in the future), and moreover, are more likely to see increased productivity as being supported by the work group. What differentiates the nonunion sector from the union sector in this regard is that the arena of negotiation, and the degree of protection, is very much more limited in the nonunion case.

In summary, we would conclude that although union workplace innovations are typically more balanced than nonunion programs, in the sense that quality of worklife is often a direct program goal, they have been very heavily oriented towards increasing productivity in a context of economic adversity. This may well be a contemporary example of a more general phenomenon whereby unionization, in the absence of dysfunctional conflict, produces a positive productivity effect.

Participation and Industrial Democracy

We would argue that not only has innovation been as widespread in the union sector, but that when implemented in a unionized workplace, a participative program has greater potential for producing significant outcomes. As former Secretary of Labor Ray Marshall has stated, "Any viable worker participation system probably requires workers to have some independent power, through organizations they control." (1988: 207) Industrial democracy is like political democracy in this regard. In essence, democracy in either sphere becomes real rather than theoretical 1) with adequate guarantees of the rights of individual participants, for instance free speech and 2) organized interest groups which articulate and push the concerns of individuals within the system.

It is probably worth noting at this point that these preconditions are necessary for some kinds of participation or cooperation but may not be for others. Turner (1988: 13), for example, points to the differences between "one Japanese management approach to consensus in which top management makes a decision and then groups of lower managers and workers discuss it until they all agree with the decision [and] a more genuinely participative approach." In the first case, workers are made to feel are part of the process, but the information and decisions are still top-down.^{xx} This type of "participative" process can clearly go on without protections or organized interest groups but it is probably not something most U.S. workers would regard as genuine involvement. Unions offer more when participation in the sense of authentic opportunity to influence outcomes is the goal.

While it is unclear which approach is dominant among innovative nonunion companies, clearly some have implemented participative programs intended to provide real, bottom-up communication if not actual decision-making. However, these efforts must ultimately be hindered by the lack of independent worker representation (Heckscher 1988).^{xxi} For instance, the political scientist John Witte's involvement in and observation of a participative program in a nonunion company led him to conclude, "It is difficult to conceive of a lasting program in industrial democracy that does not provide a formal system of rights and procedures to protect employees ... this implies a union." (1980: 153) He further found:

[M]eaningful democracy in an organization is not a minor adjustment of style and priority but requires a truly radical shift away from traditional norms of corporate organization. . . [T]he traditional corporation is based on meritocratic principles that exploit human differences, while the democratic enterprise is premised, at least in part, on political and substantive equality." (p. 156)

Similarly, Elden (1976: 287) concludes from his study of a nonunion company that "increased participation and communication between superior and subordinate, absent some change in the basis of power . . . is more likely to reinforce than replace hierarchical authority."^{xxii}

While constitutional protections of individual rights and political parties and "special interest groups" provide the pre-conditions to political democracy, in the economic enterprise, unions and collective bargaining agreements can provide these same preconditions. Collective bargaining agreements typically contain the requirement of "just cause" for discipline and discharge. Written protections against arbitrary treatment are enforced through the grievance procedure, providing the individual with protection against potential detrimental outcomes of his or her participation. These range from direct threats of job loss or unpleasant treatment on the job when supervisors are displeased by what they hear in participative group sessions, to more indirect concerns about job security generated by increased efficiency.

Fear of Reprisal

Protection from arbitrary treatment is widely regarded as one of the most significant benefits unions offer workers. Given contract clauses and grievance arbitration procedures, managers must have a legitimate reason for firing or otherwise disciplining a worker in unionized workplaces.

The importance of such protection for these programs should not be underestimated. In the more extensive participative programs, workers are asked to give their opinions and suggestions about a wide range of issues including potentially their supervisor's role and performance and company policies. In fact, first line supervisors are widely recognized to be one group greatly threatened by employee involvement; middle-managers too may be resistant (Klein 1988). Clearly, workers will be reluctant to participate fully insofar as they have reason to fear retaliation from either group.

There is some evidence to indicate that this dynamic limits the potential of many nonunion programs. Bernstein (1976: 501-502) describes the near-demise of worker participation in the worker owned American Cast Iron Pipe Company due to the "lack of guarantees against penalties for criticism".

Witte (1980) observed these problems to some degree in the nonunion company he studied, particularly when employee groups were dealing with such core issues as wages. Fear of reprisal is expressed in the following quote from a worker-member of the "Planning Council", an upper level joint committee:

'You see, there's a little bit of fear out there; you know when a good issue is brought up and there's going to be good talk, nobody ever says anything. Any time an issue comes up that's important, it always gets buried.' I asked him why he thought people were afraid to speak out, and he replied, 'I don't know--job minded. They aren't thinking about why they're in the room there, but maybe they're thinking about their own job; maybe they are a little leery about it. If they say anything, they won't be able to advance.' (p. 90)

Grenier's case study (1988) focuses on a nonunion involvement program in a context that, while not unique, is out of the ordinary. He details the functioning of a "team" program during a union organizing drive and describes the ways in which that program was used to combat the union. In this case, "fear" and isolation of union supporters became an explicit goal of the team meetings, goals which were orchestrated through the comments of team facilitators and the use of peer pressure:

[Fear] was used to coerce union sympathizers into compliance and discourage new employees from entertaining pro-union notions, or at least expressing them. It was fear that kept the workers down: fear of being ridiculed, fear of being fired, fear of the actions of facilitators and fellow workers, fear of the team turning against you like a rabid dog, fear of persecution. 'It was like a witchhunt', one woman later told me. (p. 78)

Thus, there is some anecdotal evidence that fear of reprisal can prevent workers from fully participating in a nonunion setting. At the same time, it is important to recognize that many innovative nonunion companies, those that Heckscher (1988) refers to as "managerialist", provide some reassurances against arbitrary treatment. Their "complaint systems" include "open-door" policies, "speak up" programs and ombudsman offices as well as more formal grievance procedures resembling those in unionized settings. (Foulkes 1980; Kochan and Katz 1988) The final step in a minority of these procedures is, in fact, a decision by a neutral third party arbitrator. More typically, the final decision is made by a highly placed company official.

In a survey conducted 10 years ago by BNA, almost half of the nonunion organizations responding reported having some type of formal grievance; many of these, however, were in government organizations. The three organizations that reported having the appeal process end outside the organization were all governmental agencies. A more recent survey of private sector firms (Ichniowski, Delaney, and Lewin 1988) indicates that 54% of the nonunion respondents had a formal grievance procedure, with a surprising 21.2% of these firms reported a procedure ending in arbitration. As indicated earlier, however, this figure may be erroneous due to the low response rate to the questionnaire.

Both theory and research suggest that arbitration or not, nonunion procedures produce mixed results. Managers themselves report many of problems. For instance, the BNA respondents mentioned problems with timeliness and delays, inconsistency in outcomes, and lack of worker awareness of the procedure (BNA 1979). Perhaps the most significant problem mentioned in several studies of nonunion settings is

worker fear of reprisal. (BNA, 1979; Lewin 1987; Witte 1980: 87-88 and 200, note 1) Other studies (Lewin 1987 - cited in Kochan and Katz 1988; Foulkes 1980) indicate low usage rates and very low rates of appeal, especially when compared to union procedures. Finally, even if the process ends in front of a neutral arbitrator, it is unclear how well an individual worker can present his/her case. Thus, while it cannot be said that all nonunion companies lack effective protection against arbitrary treatment, nor that all unions provide ironclad insurance, there does seem to be a significant difference in the protections offered in the two sectors.

Economic Security

In addition to the possibility of reprisal due to participation, workers have concerns regarding their economic security in the face of an innovation aimed at improving work methods and productivity. Concern about possible job loss and wage reductions may exist in union as well as nonunion firms. Union leaders frequently mention employment security as an issue that must be addressed before becoming involved in a participative program. Examples abound in both the union and nonunion sectors of involvement programs that were undermined by economic insecurity.^{xxiii}

For this reason labor and management have begun to pair workplace innovations and employment security guarantees in the union sector. Rochan and Cutcher-Gershenfeld (1988:17) detail this relationship in a recent review of several cases of innovation. Recent national agreements, including the current ones between GM and the UAW, and Ford and the UAW provide for employment guarantees and retraining assistance. Similarly, innovation at unionized facilities of Boeing, Boise Cascade, and Xerox were all accompanied by no-layoff agreement or retraining provisions.^{xxiv} On the other hand, Eaton's research (1988) suggests that though some unions win formal guarantees against harmful economic outcomes, most do not. Only 14% of the 86 local unions in her study were able to win contractual guarantees against layoffs, for instance.^{xxv}

In the nonunion sector, the commitment to job security is likely to be informal. Foulkes (1979) found that "employment stability" was a key management goal in many of the large nonunion companies he studied. These companies use a variety of techniques to meet this goal including hiring freezes, attrition, use of temporary employees, inventory buildups, use of subcontractors, voluntary leaves of absence, vacation banking, early retirement programs, moving people to work, training, and work sharing. (Foulkes 1979: 99) While it is difficult to know the success of these techniques, nine of the twenty-six companies studied by Foulkes claimed never to have laid off any regular workers. It is likely, however, that in addition to having a commitment to no lay offs, these companies have occupied steadily growing and highly profitable markets enabling them to meet that commitment. Other nonunion companies have been unable to meet this commitment when their markets declined. (pp. 114-118)

In the study discussed earlier, Witte concludes that lack of economic security ultimately is a barrier to participation just as is fear of reprisal: "Without the job security and advancement guarantees afforded by a union, even the most active, hostile workers will eventually give up; while more timid workers, protecting their futures with the company, will subside much earlier." (p. 153) Unions, of course, have not always been strong enough to provide adequate guarantees of job security; interestingly, in this regard, Turner (1988) has recently produced evidence that workplace innovations in the U.S. automobile industry are more likely to result in enhanced productivity in the presence of strong local unionism than in its

absence! In any event, there appears to be reason to believe that unions can, by protecting individuals and negotiating better job security, create a better environment for participation and cooperation to succeed.

Collective Voice

Unions may also play a second, more proactive role as the one institution which has the potential to bring the "collective voice" of the workforce into the participative or cooperative process. That is, the union can provide collective rather than individual input into the initial structuring and operation of the participation process, and which can serve as a check on management in a constructive way.

In an unorganized company, management not only the benefit but also the burden of structuring the workplace without collective input from the workforce. Heckscher clearly articulates the inadequacy of the nonunion setting in this regard:

A major reason that leadership in a managerialist system is so difficult and rare is that it tries to substitute for an adequate form of representation. Somehow, in order for the system to work, the doubts and resistances of employees must be accounted for and dealt with in formulating principles and strategies. If there are no adequate mechanisms for employees to express their concerns, it falls to a leader to guess them. (p. 106)

Further, he suggests that, "The only reliable method for clarifying the positions of groups is for them to have their own institutions and representatives." (p. 112) Indeed, Cutcher-Gershenfeld, McKersie and Weyer (1988: 11) conclude that the union may bring needed legitimacy to innovation, greatly facilitating worker involvement.

It is useful to consider the role of collective voice in various aspects of cooperative programs or systems. Union input is perhaps both most needed, and most absent, in the earliest stages of setting up innovative programs.^{xxvi} The undemocratic imposition of a democratic system, political or industrial seems obviously flawed. Consequently, management risks failure where it must "guess" or "assume" that workers want participation as well as the forms that participation should take. Witte (1980: 155) found that the imposition of the participative program by top management led to the "failure to build a normative foundation for worker participation", a necessary component of a successful program.

Elden (1976) examined a case where a nonunion company attempted to set up a new plant with self-managing work teams. He reports considerable frustration and disappointment within the workforce regarding the actual amount of control and discretion teams were able to exercise, although it should be noted that his research was conducted largely in the plant's developmental stage. This frustration appeared to stem, in part, from the lack of worker input in the implementation process itself. Further, "self-management became vulnerable to being defined by workers as something imposed on them from above, something, ironically they were not allowed to participate in managing." (p.291) Unions are a potential mechanism through which workers can participate in designing and molding programs, as well as other parts of the process.

One specific way in which unions may serve a constructive role in structuring a program concerns the spread of an innovation throughout a plant or company. Underlying the move toward more participative

forms of management is the notion that workers want to have more say. Without entering into this debate, we think it's sufficient to state that some workers probably want more input and others do not. These kinds of differences have been documented among workers in various unionized facilities (Kochan and Cutcher-Gershenfeld: 7). Interestingly, it appears that unions prod employers to accommodate both types of workers. For instance, participation in QC and QWL programs in unionized settings is typically voluntary.

Such differences within more far-reaching changes in work organization, like team systems, may be harder to accommodate. However, the GM-Fiero agreement with the UAW, "allowed workers to choose between working under the pay-for-knowledge compensation plan and flexible work systems, or under a traditional pay system." (Kochan and Cutcher-Gershenfeld 1988: 12) Such flexibility seems preferable to the exclusion of more "traditionally" oriented workers through screening. Such screening is frequently recommended by consultants and appears to be commonplace in the nonunion sector (Grenier 1988; Lawler 1986: 206-207), although it is not unknown in the unionized sector.

Alternatively, the union's traditional commitment to equity or "the common rule" may serve to spread successful innovations across a plant or even an organization. Lawler points out that many change efforts are attempted in a single workgroup or part of a plant. When workers do not voluntarily sort into experimental and traditional work groups this limitation can create a series of internal problems for the union that have been well documented (see Goodman, 1979; Wells, 1987 for examples). Lawler goes on to suggest that "[m]uch of the credit for [the spread of change throughout an organization] goes to the union because it is the first to raise issues of equality of treatment." (p. 131)

A union can provide input from the workforce not only during the implementation of a program, but also in the course of an ongoing program. One consultant has suggested that the union is absolutely essential to the success of plant-level programs. (Shay 1989) First, the union is tied to the plant while managers may come and go. Cutcher-Gershenfeld (1988: 24) notes that at Xerox, "The very existence of a union . . . proved critical in sustaining and diffusing many of the innovations -- particularly when there was managerial turnover." Second, there is general agreement that the payoffs from innovative programs tends to come over the long run. Lawler (1986: 233) suggests that some kinds of programs may take "several years to produce results." However, plant managers tend to be rewarded based on their short run performance, while the union is an institution that is committed to the long run. As such, it can provide the necessary institutional stability for a program to succeed. In fact, results from a GAO survey indicate that the single greatest barrier to employee involvement efforts is "short term performance pressure."^{xxvii}

A union, particularly one that actively organized for and participated in the program, would be an ideal and much-needed vehicle for articulating and prioritizing both issues of greatest concern and the degree of desired involvement.^{xxviii} Unions have always set bargaining agendas through the process of intra-organizational bargaining; such a process could aid the smooth functioning of participative programs as well.

Of course, it is disingenuous to pretend that the union's collective voice will never be in opposition to participation in general or to specific directions it may take. In fact, that is clearly one implication of union involvement. The point is precisely that collective opposition to a program may be appropriate. Elsewhere (Eaton and Voos 1989), we have suggested that union opposition to participative and

cooperative programs is reasonable and to be expected where management appears to be using a program to interfere with the union's role at the workplace or simply as a method to speed up production. Unions might also appropriately oppose programs that were posed as solutions for problems that do not exist or were the wrong solution for problems that do exist (Heckscher 1988: 105).

In addition, union participation in the structuring of participative and cooperative programs should bring balance to those programs. That is to say, management is likely to be most interested in increasing productivity while unions are more likely to see the actual quality of working life and job satisfaction as inherently important goals themselves. In fact, many unions explicitly state the balancing of these disparate goals as a precondition to their participation and support. The "Statement of Principles" that govern the joint QWL program between ATT and CWA, for instance, provides that the "[t]he goals of the process include both human satisfaction and economic efficiency." (US DOL, p. 13)

Thus, a participation program would seem most likely to yield balanced outcomes with union input. In fact, Lawler's (1986: 133-134) survey of participative programs cites "union-management QWL programs" as "consistently improv[ing] employee well-being and satisfaction." While these findings are not unique to these programs,^{xxix} Lawler suggests they result from the types of projects likely to be undertaken: "QWL committees often recommend changes in the workplace that are desired by employees. In particular, they make changes in the physical environment: parking lots, cafeterias, restrooms, and time clocks." He further suggests that the reduced conflict between union and management that often results from these programs may lead to a more satisfying environment.

Participation at Higher Organizational Levels

An additional way in which the union as an institution can play a crucial role is in providing linkages through various tiers of an organization. For our purposes it is useful to think of decision-making at the workgroup, plant and corporate level. The problems discussed above may merely hinder real participation at the lowest level -- in workgroups, but lack of a union is probably fatal to real participation at higher levels.

This is, in part, a question of the information and knowledge necessary to be effective at higher levels of decision making. While Witte (1980: 153) reports that the workers in his case study were generally as competent to deal with plant and lower level issues as managers, he is not so sanguine about their capabilities at a higher level.

Especially in large companies, it is very doubtful that an employee, who spends most of his time in a factory or office job, could effectively compete with professional managers who, with their staffs, invest a great deal of time in the top-level decision that require board approval. The only answer that seems viable is for professional union leaders, back by staffs of their own, to present the employee side of issues.

There is also the simple need to coordinate the activities of shop-floor participative groups. Heckscher, suggests that such coordination is both necessary and rare in managerialist firms (p. 112-3): "While managerialist firms encourage worker participation on the job, they rarely create mechanisms for linking different groups; each problem-solving team remains distinct, obscuring

common issues and interests." Further, he sees unions, albeit different from their current forms, as potentially providing such coordination. Witte (1980: 154) similarly concludes that lack of coordination and communication among shop-floor work teams as well among the teams and the higher level "Planning Council" was also a problem in his case. The company that Elden (1976: 290) studied used joint worker-management task forces to study and propose solutions to plant-wide problems. Even so, he suggests that full participation was "limited by the absence of regular and continuous means of involving workers in decision-making beyond the immediate work group and team."

In fact, union involvement at various levels of the organization is probably the dominant model of QWL programs in unionized firms (Lawler, 1986: 122). The typical structure involves workgroup or department level committees, which may or may not include union representatives as such, combined with a plant level "steering" committee that oversees the program as a whole and includes plant management and local union leaders. This is also the model of the successful and long-lived Scanlon plan. It is important to note that collective bargaining itself constitutes worker representation at a plant or higher level.

What is more rare, but nevertheless important, is strategic participation at the corporate level. In fact, union involvement at that level may be key to the ultimate success at other levels. Kochan and Cutcher-Gershenfeld (1988: 21) argue that "broader and deeper union roles at the strategic level of management decision making are necessary if the innovations in employee participation, work reorganization, and introduction of new technologies and work systems are to be sustained over time." For instance, strategic decisions like closing a plant or laying off a significant portion of a workforce may undermine plant level participation and cooperation efforts as described above.

Union involvement in decision making at this level is both rare and relatively new in the United States.^{xxx} At the low end would be a case where management is simply sharing information about long term corporate plans and goals. An intermediate level of participation might take the form of management consultation with union leaders. At the high end would be actual representation on corporate boards of directors such as Chrysler, Western Airlines, or Northwestern Steel and Wire. A different type of high level participation that may be equally or more effective would involve joint strategic planning of products or business units; the Saturn project involvement of the United Automobile Workers is the probably the best known example of such extensive joint planning from an early stage.

While this kind of participation is rare in the union sector, it appears to be growing. We know of no examples of this level of worker involvement in nonunion companies. It is difficult to conceive of such involvement without 1) the institutional structuring of representation and 2) the institutional resources and expertise a union provides.

To summarize, unions clearly have the potential for improving the implementation and functioning of participative programs. This is due in part to the protections unions typically offer members against arbitrary treatment and economic insecurity and in part to their traditional function of organizing and articulating collective voice in the workplace. Unions may play a constructive role in the structuring of participation to meet the needs of all parties and would appear to be a necessary partner in any attempts to involve labor in decisions at higher levels of management.

Conclusion

In this paper we have attempted to demonstrate that productivity-improving human resource management innovations are in wide usage in the union sector and that, in fact, the use of the most truly productivity-enhancing innovations is at least as common in that sector, if not more so, than in the nonunion sector. We would further suggest that these programs have greater potential in the union sector not only for enhancing productivity but for increasing job satisfaction and genuine worker participation in a wider variety of decisions in the workplace.

This greater potential results from two major factors. The first is the role of the union as an agent for explicit productivity bargaining. Unions in the U.S. have a long history of bargaining over productivity improvements in ways that do not hinder change but also protect their members' interests. Union involvement in innovative programs is consistent with this experience. The second factor consists of the protections and voice for workers that unions bring to any innovative program, but especially to participative programs. Union protections and voice should improve and deepen the potential of innovations to improve production and create a better working environment.

ⁱ This list is adapted from Kochan and Cutcher-Gershenfeld (1988) who use the following categories: employee participation, flexible forms of work organization, participation in new technology decisions, employment security, gainsharing, and participation in management decisions. We also made use of Lawler's (1986) categories: quality circles, survey feedback, job enrichment, work teams, union-management quality of work life programs, gainsharing, and new-design plants.

ⁱⁱ "New design plants" are newly opened plants which, in Lawler's view, are designed to maximize worker involvement in their job and in decision making. Thus, they tend to bring together the elements of many of the other programs including work teams and gainsharing.

ⁱⁱⁱ In practice, teams, like other participative programs, take a variety of forms. Some exhibit all of these characteristics; others, only some.

^{iv} Like earlier cooperation, strategic participation often involves the use of joint committees of union and management leaders, but often in conjunction with either ongoing shopfloor participation or workplace reorganization. The main difference between it and more limited union-management cooperation is simply that the latter is restricted to less comprehensive issues like safety and health.

^v Another example of a very intense form would be the involvement of the UAW in the development and design of the Saturn corporation from the earliest stages.

^{vi} Unfortunately, in some of Voos' published work gainsharing and profit-sharing plans were reported together because of small sample size for the gainsharing plans alone. However mean effects for the gainsharing programs were always greater than for the profit-sharing plans; means were 1.04 versus .67 for productivity, .76 versus .16 for flexibility, and .72 versus .33 for profitability.

^{vii} Scanlon plans and union-management cooperation, of course, have a much longer history. See Lesieur (1958); Slichter (1941); Slichter, Healy, and Livernash (1960); and Jacoby (1983).

^{viii} Managers appeared to be making the reasonable assumption that innovations could be more easily and successfully implemented in new facilities. As a long time observer of work innovations explains,

"the processes of innovation (diagnosing, planning, inventing, and implementing) are significantly different for new and existing units. In established facilities, the level of aspiration for change and the time frame allotted for achieving it must be much more modest than in new facilities. . . [t]he main job of planners in old facilities is defrosting the old work culture and creating a sense of potential for change." (Walton 1979: 98)

^{ix} Leaders of major unions such as CWA, USW and the UAW have all strongly supported some types of participative and cooperative activities, but other have not. William Winpisinger of the Machinists, for instance, has opposed Quality Circles as duplicating the local union's functions. Even the UAW, the union perhaps most associated with innovative programs, is internally divided on these issues. Nonetheless, there is much more support for innovation among union leaders at top levels than there was ten years ago. Much less is known about attitudes at the local level. Surveys of local leaders involved in participative programs tend to report majority support for such programs, with roughly a quarter to a third opposed. (Kochan, Katz, and Mower 1984). Such opposition may result from negative experiences with these programs as well as ideology.

^x For the companies with both types of facilities, there were no significant differences except for the number of total job classifications. The results on the relative importance of merit in promotions and layoffs in the union and nonunion sectors, the use of performance appraisals and grievance procedures discussed in the paper are not included in our overview because these are long-standing differences related to the very nature of collective bargaining, not differences in innovations.

^{xi} Specifically, Heckscher suggests that individualized programs are more suited to the nature of service work in which the "product" is to some extent the relationship between the worker and the client or customer.

^{xii} The correlations are presented to deal with the fact that the percentages do not tell us whether the innovative practices are actually used with the unionized workers within a unionized firm. Unfortunately, even the correlations do not address directly the question of the coverage of union members by innovative practices.

^{xiii} Respondents were asked to report what percentage of their non-managerial workforce was represented by unions. No company reported total unionization.

^{xiv} It should be noted that there is no information in the GAO survey that indicates specifically whether unionized workers are involved in innovative programs; nonunion workers in partially unionized firms may be partially or even primarily involved.

The studies by Cooke and Ichniowski, Delaney, and Lewin also provide some additional information on the intensity of the participative programs.

Delaney, Ichniowski, and Lewin (1988), using the same Compustat data as in their other study, report that more employee involvement programs in totally nonunion firms provide high decision making authority to participative groups than those in totally unionized firms. Looking at firms with both union and nonunion facilities, however, more unionized operations provided high authority, although not significantly more. It is difficult to interpret this result. In unionized operations, collective bargaining provides an alternative path for worker participation and in fact, participative groups are frequently barred from discussion and/or implementation of issues that touch on the collective bargaining agreement. It is easy to see that in the absence of the bargaining process, nonunion participative groups may be given more authority since it is the workers' only channel to management.

Cooke's data also dealt with the intensity of participative programs, but in a different way. He looked at the percentage of the work force participating in the program, the hours of participation-related training received and the percentage of the workforce receiving training. There were no significant differences between the two sectors on any of these dimensions.

^{xv} A Conference Board survey of Fortune 1000 firms done in late 1983 confirms the importance of work rule changes for the early 1980s. Fully one-third of the respondents reported early contract openings--and concessions--in 1982-83. Of these, more sought "changed work rules" (57%) than any other concession including wage freezes (51%), reduced fringe benefits (40%), a two-tier wage scale (30%), reduced paid time off (29%), deferral or delay of COLA adjustments (29%), or wage reductions (29%) (Freeman, 1985, p. 12).

^{xvi} For historical discussions of union management cooperation and productivity bargaining see Jacoby 1983, or Slichter 1941. The dominant U.S. union response to productivity enhancing technological change has been to share in the economic benefits, rather than to block innovation itself. Well-known examples include the Mineworkers agreements in the 1950s and the Longshoremen and Warehousemen's contracts in the 1960s.

^{xvii} While the matter remains somewhat controversial, predominant econometric evidence indicates that on average union workers are somewhat more productive than nonunion workers, even once one controls for differences in education, worker experience, and other personal characteristics and for the greater amount of capital per worker in the union sector (see Belman, this volume, for a review; see Addison and Hirsch 1989, for a dissenting view). Earlier discussions of this phenomenon have emphasized the greater accumulation of firm specific human capital in the union sector (with fewer quits and more training being offered by the average union employer) and more professional management subsequent to executives being "shocked" by the union's appearance on the scene (Freeman and Medoff 1984). To date, however, there is little conclusive evidence on the actual mechanisms through which unions raise productivity.

Our view that productivity bargaining is important is consonant with the research done by industrial relations scholars indicating that the union productivity effect depends in part on the industrial relations climate, with a cooperative union-management relationship being more likely to manifest greater productivity than is a highly-adversarial relationship (Ichniowski 1984; Freeman and Medoff 1984).

^{xviii} In the union workplace, work rules play similar protective functions. But here, where wages, continued employment, and work loads are not so conditioned on management's unilateral judgment, where other protections are available, it may be easier to discuss work norms and get the work group to accept their alteration.

^{xix} In an environment where work is variable, first-level supervisors too may have an incentive to build some slack into jobs, insofar as it will protect their future ability to meet surges in work.

^{xx} Elden (1976: 319) refers to these two approaches to designing a work organization as a "harmony bias" versus a "democratizing bias".

^{xxi} He concludes that "employee organizations . . . are necessary even in the best managerialist firms," (p. 112). However, he would have the forms of those organizations altered somewhat from traditional unions.

^{xxii} Interestingly, arguments regarding the necessity of independent worker representatives, ie. unions, have extended into the literature on worker-owned and managed enterprises. Ellerman (1988) suggests that the union can and should function as the "legitimate opposition" in a worker owned and managed firm. Some of the specific roles a union would play include guaranteeing workers rights, monitoring management activities, questioning and evaluating management decisions. Thus, even in a worker-owned enterprise, the union can provide a useful check on management power. Strauss (1982: 230-1) similarly concludes from his international survey of worker participation in management, that there is a need for "checks and balances" even in worker-owned and managed enterprises. In particular he suggests that unions may serve as a counter-balancing force to "tyrannical" supervisors and to top level managers overly concerned with the long run. Additionally, workers may need independent representatives to help them compete within the enterprise for "status and scarce resources".

^{xxiii} In one union situation, the Maxwell House plant in Hoboken, NJ implemented an OWL program in its freeze-dried division in 1976. The experiment ended when, for reasons beyond the plant management's control, the work force in that department was laid off. Current efforts to build participation and cooperation are frequently met with the call to "remember freeze-dried!" (Interview with Maxwell House personnel management, 8/1988) Kochan, Katz and Mower (1984: 77) document a similar case in the steel industry but conclude that while other plants in that industry have also suffered job losses, the effect has been "to slow the growth of the [participative] process rather than seriously threaten its existence."

There are also historical parallels in the nonunion sector. Brody (1980) argues, for instance, that the nonunion "employee representation plans" widespread in the 1920s and 30s ultimately failed because of their inability to deal with the wage reductions and employment losses of the depression (Brody 1980). These plans closely resemble participative programs in nonunion companies today. In fact, some of the current programs appear to date from that time (Foulkes 1980).

^{xxiv} In fact, successful innovations in crisis situations may save jobs without any formal guarantees; the threat of job loss itself may be sufficient to stimulate participation in these cases. On the other hand, Kochan and Cutcher-Gershenfeld argue that employment guarantees are not sufficient to drive participative innovations on their own.

^{xxv} Of these 86 local unions only 9 % had guarantees against speed-up resulting from the program, 16 % had guarantees against the downgrading of wage rates due to reclassification of jobs resulting from the program, and 23 % had guarantees against loss of seniority rights due to changes resulting from the program. In some cases, such guarantees may not have been perceived as necessary due to the limited scope of the participative program. Results of some multi-variate analyses suggest that this is one explanation for the lack of such guarantees. See Eaton, 1988, Tables 6-14 and 6-15.

^{xxvi} Local union leaders frequently complain that management springs fully formed programs on them, leaving little room for union input into that program. The Saturn project stands in clear contrast to that approach.

^{xxvii} Only 9% of the respondents indicated that short term pressures were of little or no importance; other factors were much more frequently viewed as unimportant. In fact, managerial turnover was viewed as unimportant by 71% of the respondents. Likewise, short term pressures were viewed as being of great or very great importance by 43% of the respondents. No other factor came close to that weight.

^{xxviii} This need is apparent from Witte's discussion (1980: 100 - 104) of the tendency of supervisory members of participative groups to block discussions of issues by continually questioning worker representatives about the breadth and degree of support for the issue among the workers generally. It is unclear whether there was genuine concern about spending time on unimportant issues or managers were using the support question to block discussions they did not want to have. Elden (1976: 256), reporting on a similar case, suggests that "what seems to have been missing from the design of the experimental plant was a way of authoritatively aggregating and articulating workers' definition of self-management."

^{xxix} Lawler also reviews employee surveys, quality circles, job enrichment, gainsharing and work teams. The latter seems to be the other program type providing the best outcomes in terms of job satisfaction although it appears that quality circles and surveys also improve satisfaction to some degree.

^{xxx} Western European countries that have legally required worker representation on Boards of Directors are heavily unionized, and elected representatives, particularly of production workers, are typically either union leaders or persons close to the labor movement.

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