

The crisis in US shopfloor relations

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The decade ahead will probably witness the emergence of a new set of institutional arrangements guiding industrial relations in the US. Like the post-war industrial relations system, these new institutional arrangements will reflect the existing power configuration between workers and employers. They will limit the expression of certain desires, constrain certain behaviour, channel discontent, and thereby privilege certain outcomes. While the die is not yet cast, employers have clearly taken the lead in establishing this new set of institutional arrangements.

In the unionised manufacturing sector, many employer initiatives have come at the level of the shopfloor. The explanations one finds in the literature for this concentration on shopfloor issues are generally inadequate, however, as they are divorced from the history of shopfloor relations. Conventional accounts link the recent shopfloor experiments to new advances in the theory of human relations, to the discovery of superior management techniques in Japanese firms, to the development of new, more flexible technology, or to employers' conscious attempts to break the organised labour movement. I argue instead that the recent shopfloor experiments have been initiated by management in an attempt to overcome the crisis of post-war shopfloor relations that emerged in the 1960s.

My thesis, in a nutshell, is that the post-war industrial relations system lacked a well-defined, fully operational set of institutional arrangements for resolving shopfloor disputes. In theory, management was granted prerogative over those shopfloor conditions not specifically regulated by contract language, but, in practice 'managerial prerogative' was never fully realised, and was not significantly attained until the late 1950s and early 1960s. What emerged during this later period was a form of shopfloor control involving inflexible company policy, detailed contract language, legalistic procedures for workplace dispute resolution, and bureaucratic union and management structures. These were consistent with (because they were constrained by) the post-war system of industrial relations. They were also incredibly inefficient.

The inefficiency stemmed from a combination of bureaucracy and rank-and-file shopfloor discontent. Recent shopfloor experiments are an attempt to overcome both of these aspects of inefficiency, but to do so in a way that preserves management's

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control over production. Quality of worklife programmes and team production address these inefficiencies by decentralising limited aspects of shopfloor decision making, and by giving workers responsibility for, but not the substantive power over, production. These experiments pose a serious challenge to the industrial labour movement in that they undercut the organisational form it has relied on for the past 40 years. To meet this challenge, the labour movement must develop an organisational form that allows compensation to be removed from competition across firms, while at the same time promoting significant worker autonomy with respect to local workplace issues. Rank-and-file movements should be at the forefront of this effort.

In Section 1 of this paper, I analyse the contradictory unfolding of shopfloor relations over the post-war period. In Section 2, I put the shopfloor experiments of the past two decades in their proper historical context.

1. A brief history of post-war shopfloor relations¹

The technology and organisation of mass production that emerged in the US around the turn of the century produced a homogeneous group of semi-skilled machine tenders. The solidarity engendered by the workers' common predicament helped to foster both the empowerment of industrial work groups on the shopfloor of many mass-production manufacturing firms and workers' collective demands for change (Gordon, Edwards and Reich, 1982). The organising drives of the 1930s led to union structures that rested upon the mass support of workers at the shopfloor level and the active participation of unpaid staff members from shop stewards on up. One consequence of this was a significant amount of rank-and-file control over union goals, especially at the shopfloor level. Indeed, in the days before World War II, labour-management disputes were settled largely through collective shopfloor power brokering, sometimes with workers simply 'knocking off' until the dispute was favourably resolved (Lichtenstein, 1982).

By the end of the 1940s an 'accord' had emerged among significant segments of capital, the state, and the labour leadership. It represented an informal and rather vague understanding or set of intentions. Employers would willingly enter into negotiations with labour over wages, hours, fringe benefits, and their distribution to workers in the plant (through the definition of job titles, job evaluation schemes, and seniority agreements). The government would support, through legislation and various government-financed agencies, the process of responsible collective bargaining. As for shopfloor conditions, if labour would not dictate to capital how it should market its products or where it could invest its profits, employers would not refuse to discuss a wide range of shopfloor conditions (e.g. safety, speed-up, technology). Contract language and the grievance procedure would serve as adequate mechanisms for the orderly resolution of shopfloor disputes.

Compared with the situation a decade earlier the process of workplace dispute resolution had by the late 1940s grown less openly conflictual. The 'quickie strike' was less common in day-to-day shopfloor relations, and although the slowdown was still employed in those industries and departments whose production processes left some control over pace in the hands of workers, these older expressions of shopfloor

¹ The historical material in this section of the paper draws heavily on Fairris (forthcoming).

power had become integrated with a new form of dispute resolution referred to as 'fractional bargaining' (Chamberlain, 1948). Fractional bargaining was a decentralised and strategic form of workplace dispute resolution involving foremen, shop stewards, and industrial work groups. Its existence rested upon the power, though not necessarily the right (as defined by either company or union), of foremen and shop stewards to strike extra-contractual deals governing shopfloor conditions. Fractional bargaining has therefore been aptly described by Hyman (1972, p. 62) as 'the unauthorized pursuance of demands backed by unofficial sanctions'.

Kuhn (1961) notes that most extra-contractual workplace issues were handled in this fashion well into the mid-1950s, and that even contractual rights of management were often won by workers using this technique. Kuhn's survey of 20 major manufacturing firms during the mid-1950s revealed that the internal grievance procedure was being used by workers as a mechanism to facilitate shopfloor bargaining over workplace concerns. Fractional bargaining often operated as a strategic process of grievance filing, shopfloor slowdowns, and occasional shutdowns, through which the rank-and-file was able, with the support of shop stewards, to bring its power to bear upon the conditions of production in the labour process. In his interviews with foremen and shop stewards, Kuhn found that roughly 80% of all grievances were resolved by the give-and-take efforts of these two groups of actors (1961, p. 27).

Strauss describes fractional bargaining as follows:

In the typical company throughout the 1945-55 period there developed a whole series of informal relationships between union and management. Grievances were often handled on a 'problem solving' basis without much reference to the specific terms of the contract. Foremen and stewards, superintendents and committeemen, were permitted and even encouraged to reach private unwritten understandings or 'bootleg agreements' which in effect modified the contract . . . [O]n the whole, this was a type of guerrilla warfare in which the union had all the advantages of terrain (1962, p. 86).

The form and extent of fractional bargaining varied between industries. Rubber and electrical equipment workers were able to maintain relatively more shopfloor power over the period than workers in oil, chemicals, or meatpacking. Sometimes there was a great deal of variation among firms within an industry. In the car industry, for example, General Motors was quick to adopt a narrow and legalistic acceptance of union rights, in which industrial relations became a top management function, well-defined rules and regulations guided daily decision making, and the opportunity for decentralised bargaining was held to a minimum (Harris, 1982, p. 28-29). The story at Chrysler could not have been more different. Its ideologically anti-union stance, coupled with an extreme centralisation of managerial decision making, but without the proper bureaucratic form to make it feasible, created an environment ripe for fractional bargaining gains by labour well into the late 1950s (Jefferys, 1986).¹

¹ I use the terms 'centralisation of power' and 'bureaucratisation of structure' here jointly to imply something akin to Edwards' (1979) notion of 'bureaucratic control'. The Chrysler example suggests that bureaucratic structures are not sufficient for the successful centralisation of power.

Shopfloor conditions like safety and the intensity of labour effort can be legislated to a limited extent by contract language. Detailed job descriptions, for example, may allow a union some contractual control over precisely what a job entails and, to a lesser extent perhaps, how the job is actually done. And seniority provisions can lessen the competition between workers which often leads to collective increases in intensity. But shopfloor power is very important in ensuring that the intent of a collective bargaining agreement is upheld in practice, and in granting workers some say over the rather large area of non-contractual shopfloor conditions. Through fractional bargaining unionised workers were able both to win new improvements in working conditions in the immediate post-war period and to protect past gains. This form of shopfloor power served as an adequate mechanism for policing contractual agreements on job descriptions and seniority rules, as well as an important source of rank-and-file empowerment in influencing those work standards which were largely non-contractually determined.

The 'accord' or understanding forged in the late 1940s had an important impact on the direction of future developments in shopfloor relations. The state was constantly refashioning bits and pieces of labour law in the hopes of realising the industrial peace and enhanced productivity the accord seemed to promise. Unions shifted their focus to bureaucratic, centralised bargaining structures in order to ensure the monetary gains the accord made possible. And employers were freed, subject to the rank-and-file's shopfloor power, to enlarge their control over the labour process, allowing them the possibility of offsetting the monetary gains which the accord effectively conceded to labour, and of re-appropriating those shopfloor gains which workers had won in past struggles. The result of these developments was a gradual bureaucratisation of shopfloor relations, leading to the slow erosion of rank-and-file power at the point of production and increased appropriation of working conditions by employers in the labour process.

Much of managements' energy on the organization front was spent on bureaucratising the process of shopfloor dispute resolution. This involved the formalisation of both company policy on production and procedures for grievance handling. These were accomplished by increasing the size of industrial relations departments, by hiring young, recently educated industrial relations experts with an exceedingly legalistic approach to the resolution of workplace disputes, and by the schooling of foremen and supervisors in the proper, bureaucratic approach to dispute resolution (Strauss, 1962).

The government helped to shore up the system of grievance arbitration. In a series of important decisions in the late 1950s and early 1960s, the NLRB and the Court threw their weight behind the private arbitration of industrial disputes (Stone, 1981). In the 1957 *Lincoln Mills*¹ decision, the Court argued that the Taft-Hartley Act disclosed a Congressional policy of committing disputes to arbitration. In the famous *Steelworkers' Trilogy*² of 1960, the Court found that the courts should not review an arbitrator's decision, but should instead confine themselves solely to the question of

¹ *Textile Workers Union v. Lincoln Mills* (1957) 353 US 448.

² *United Steel Workers v. American Manufacturing Co* (1960) 363 US 564; *United Steelworkers v. Warrior and Gulf Navigation Co.* (1960) 363 US 574; and *United Steelworkers v. Enterprise Wheel and Car Corp.* (1960) 363 US 593.

whether or not the issue was indeed arbitrable. The Court also held that doubts about whether an issue was grievable should always be made in favour of grievability (Tomlins, 1985, p. 321).

Meanwhile, union power became centralised at the level of the international, multi-plant and multi-employer bargaining agreements grew, and contract negotiations were increasingly conducted by well-trained experts. These were important measures, given the nature of the US industrial relations systems, for winning workers' wage and fringe benefits demands from firms within an industry.¹ However, the bureaucratisation of union structures served one set of workers' interests at the expense of another. As the power to affect wages and fringes grew, the ability to control shopfloor conditions diminished (Weber, 1967).

Fractional bargaining slowly gave way in the late 1950s and early 1960s to increased reliance on contract language, formal company policy, and use of the grievance procedure.² This allowed management to avoid the all too common practice under fractional bargaining of conceding to workers costly and precedent-setting shopfloor decisions whose existence became guaranteed under 'past practice'. In committing a large number of disputes to the grievance procedure, management also gained the right to act unilaterally until some resolution was reached. This form of shopfloor governance amounted to the containment of the rank-and-file's freedom to act by granting workers certain limited shopfloor rights in contract language. From the workers' standpoint, bureaucratic job control unionism was far superior to the method of shopfloor governance which preceded the rise of the industrial labour movement; it was not superior, however, to the rank-and-file shopfloor control granted to workers under the system of fractional bargaining.

The ultimate effect of these changes on the realised shopfloor power of the rank-and-file is, of course, difficult to chart. However, several studies indicate that the management offensive was at least partly successful. Derber, Chalmers and Edelman (1961) surveyed company managers and local labour officials in 41 manufacturing firms in 1955 and then again in 1959. The survey results suggest that union members faced important reductions in their ability to participate in decisions concerning the content of jobs and the safety rules governing the plant. Interestingly, a majority of the managers surveyed in 1959 viewed the union as a favourable institution for co-operating in worker discipline and maintaining harmony—a view that was not widely shared by management in the earlier survey results.

Objective measures of working conditions improvements in the early period following unionisation and their deterioration in the late 1950s following the onset of bureaucratic job control unionism are not easy to come by. The trajectory of injury rates, however, follows a telling path. Injury rates in the late 1920s were roughly twice those of the post-war period (US Bureau of the Census, 1975, Series D-1029).

¹ Firm-wide, multi-plant agreements were necessary in order for unions to prevent employer whip-sawing, while multi-employer agreements were often forced on unions by employers who were concerned with union whipsawing (Weber, 1967; Hendricks and Kahn, 1982). The extent of centralisation of power could none the less differ considerably across union structures. The national unions in cars and steel, for example, played an important role in contract negotiations, overseeing strikes, and administering the grievance procedure, while union decision making was much more decentralised in paper, meatpacking, and car parts.

² I shall refer to this system, following Piore and Sabel (1984), as (bureaucratic) job control unionism.

While injury rates in manufacturing continued to decline in the immediate post-war years, they reached a low of 11.4 work injuries per million employee-hours in 1958, and turned up thereafter, increasing with much rapidity in the years between 1963 and 1967, from roughly 12.0 to 14.0. Sizeable increases in injuries occurred over this period in meatpacking, rubber, primary metals, and electrical equipment (US Department of Labor, 1963, 1967).

Workers' first inclination upon their loss of shopfloor power was to seek working conditions protection through contract language (Brody, 1980). In 1961, strikes at General Motors and Ford took place after the master agreement had been hammered out. They involved working conditions issues and represented the rank-and-file demand that plant-level concerns be addressed in contract negotiations in the car industry. General Motors alone was presented with 19,000 local demands during this strike (Livernash, 1967). While local issues had arisen in the 1958 bargaining round, the International was able to foreclose local action after the master agreement was signed.

During the 1965 negotiations in steel, local issues demands, most of which dealt with conditions on the shopfloor, posed a significant threat to the *status quo* negotiating structure. Committees were set up at the plant and company levels, in addition to the normal industry-level bargaining committee, to conduct negotiations. As a result of these rank-and-file initiatives, more working conditions issues began to appear in contracts, but as Livernash (1967) makes clear, the issues of deep concern to workers were largely non-contractual in nature; their resolution required decentralised forms of power and decision making on the shopfloor, and neither the firm nor union bureaucracy was willing to grant this.

When contract language failed them, workers turned to the grievance procedure wherever possible to address their workplace concerns. The number of grievances rose, but, to the extent they got resolved at all, either took too long to resolve, were far too biased in their results, or involved a process that was too narrow in the kinds of issues it could address. By the mid-1960s the number of filed grievances had shot up dramatically, and the number going completely unresolved was also beginning to mount. At General Motors, for example, the number of written grievances per one hundred blue-collar workers rose from 50.4 in 1960 to 71.9 in 1973 (Kochan, Katz and McKersie, 1986, p. 39). Lichtenstein (1985, p. 370) notes that unresolved local grievances raised during contract negotiations at General Motors amounted to 11,600 in 1958, but grew to 39,000 by 1970. Herding (1972, p. 188) found from interviews with management and labour representatives in a steel plant in the late 1960s that 'the [grievance] load has increased at a rapid pace in about a decade . . . [T]he speed of the procedure is "definitely stalled".' Arbitration cases, for example, took an average of 16 months to resolve. In this same plant during the period 1948–1952, an average of 6% of all grievances appealed to arbitration were still pending at year's end. By 1967, this number was 49%!

What emerged in the 1960s as a result of this diminution in shopfloor power was widespread expression of workplace discontent by rank-and-file workers (Herding, 1972). The percentage of strikes over working conditions, for example, rose from an average of 14% in the period 1954–1962 to 19% in the period 1963–1972 (Naples, 1988, p. 159). The percentage of wildcat strikes, over half of which generally involve

working conditions issues, also increased over the 1960s, from 32% of all strikes between 1961 and 1967 to 40% between 1968 and 1973 (Naples, 1981, p. 38).

The revolts also resulted in growing tension between the rank-and-file and the labour leadership. Contract rejections by the rank-and-file, an event unheard of before the early 1960s, jumped from 8.7% of FMCS 'joint-meeting cases' in 1964 to 14.2% in 1967 (US Federal Mediation and Conciliation Service, 1970, p. 37).¹ Between 1964 and 1969 significant movements developed to depose union leaders in steel, electrical equipment, and rubber, all of them successful. This challenge filtered down with even more vigour to the local level. For example, in the steelworkers' union new local presidents were elected in 1100 of the union's 3800 locals in 1970 (Mkrtchian, 1973, p. 146).

While the bureaucratisation of shopfloor dispute resolution beginning in the late 1950s was successful in eliminating the source of workers' rank-and-file shopfloor power and in producing a short-lived spurt in productivity and profits in the early 1960s, the long-run consequences for employers were clearly negative. The expressions of rank-and-file discontent with shopfloor conditions produced significant losses for employers in the form of declining productivity growth and reduced profits rates. Empirical evidence on post-war trends in productivity and profit rates suggests a direct link between the secular decline in these economic barometers beginning in the late 1960s and measures of institutional decay—such as accident rates and working conditions strikes—in post-war capital-labour relations (Naples, 1988; Bowles, Gordon and Weisskopf, 1986).²

The 1973–1974 recession brought an abrupt end to the rank-and-file shopfloor revolts, but not to the underlying worker discontent nor to the bureaucratic structures for shopfloor dispute resolution that partially fuelled this discontent. Both of these aspects of the system of bureaucratic job control unionism have plagued employers' efforts to revive productivity and profits.

The elimination of fractional bargaining meant that workers were less successful in protecting contractual rights, and much less successful in winning rights surreptitiously. The reaction of workers to this loss in shopfloor power is nicely captured by the following statement by a union representative in 1961:

When the men settled things on the floor, it was something they did themselves. They directly participated in determining their working conditions. When things are settled legalistically, through the grievance procedure, it's something foreign. They don't see it (Strauss, 1962, p. 90)

Workers responded to this alienation with a defensive shopfloor posture and a 'work-to-rule' mentality with respect to work. The negative impact on labour productivity has been significant. Production-worker productivity growth, for example, remained below its pre-1965 rate throughout the 1970s.

¹ For a useful discussion of the link between contract rejections and workplace discontent, see Herding (1972, pp. 262–267).

² Micro-level studies by industrial relations scholars also point to the specific signs of internal institutional breakdown discussed in this paper—grievances filed, unresolved grievances, and unauthorised work stoppages—as important factors in explaining productivity differences across plants (Norsworthy and Zabala, 1985; Ichniowski, 1986).

The bureaucratisation of shopfloor governance has also led to the growth of unproductive labour, which suppresses both overall labour productivity growth and profits. Industrial relations departments are filled with rule writers, interpreters, and grievance handlers; personnel departments are full of people striving to standardise the hiring process in order to acquire workers who will not transgress the rules; while the growing ranks of relatively powerless supervisors try to abide by the standards of rule-makers in the midst of a process that is inherently unworkable by the law of rules. By all accounts, the bureaucratic costs have risen enormously. Bowles, Gordon, and Weisskopf (1983, p. 130) note, for example, that the ratio of non-production to production employees rose from 13.7 to 20% between 1948 and 1966.¹ Even the business press regularly comments on the fact that large companies in the US have on average twice the layers of management and supervisory staffs as their leading foreign competitors.

Employers' recent shopfloor experiments are an attempt to deal with these remaining aspects of the productivity slowdown in manufacturing. However, there is also an ulterior motive involved in employers' continued interest in shopfloor issues: they saw in the rank-and-file revolts of the 1960s against bureaucratic shopfloor relations a possible inroad for weakening workers' allegiance to unions. More decentralised forms of shopfloor organisation, even if they give only the appearance of addressing workers' working conditions grievances, might undermine rank-and-file commitment to unions by attacking the very Achilles heel of union structures, their inability to grant workers control over shopfloor conditions (Wells, 1987).

2. Recent shopfloor experiments

Conventional accounts of the crisis in manufacturing stress increasing import competition and the declining share of US manufacturing in international markets. In this view, quality of worklife (QWL) programmes are co-operative efforts to overcome competitive cost disadvantages, and team production and pay-for-knowledge schemes are attempts to mimic competitors' approaches to production. These accounts fail, however, to acknowledge the important roles played by bureaucratic job control unionism and rank-and-file workplace discontentment in the productivity slowdown that precipitated the economic crisis. QWL programmes can be directly traced to attempts by management to solve problems associated with the jammed grievance procedure and the workplace discontentment of the 1960s. Team production and pay-for-knowledge schemes were often introduced in these settings as ways of decentralising shopfloor decision making.

Conventional accounts of recent shopfloor experiments are clear about the challenges they pose to the post-war system of industrial relations. One group of

¹ Their interpretation of this increase is slightly different from the one offered here. Bowles, Gordon, and Weisskopf are inclined to see the rise in unproductive labour as management's way of eliciting greater effort from workers through supervision. I see it, on the other hand, as an effort to enhance management control in production in the face of the success of fractional bargaining. This was the only way for management to proceed given the larger institutional arrangements of the post-war industrial relations system and its expressed preference for the bureaucratisation of shopfloor dispute resolution in the form of contract language and the grievance procedure. Where Bowles, Gordon, and Weisskopf and other 'social structures of accumulation' economists see the consolidation of employers' power during the late 1940s and early 1950s, followed by rising labour strength, I see substantial rank-and-file shopfloor control during the 1950s, followed by declining labour strength in the 1960s.

commentators tends to see the challenges as unavoidable and change as inevitable (Kochan, Katz and McKersie, 1986; Piore and Sabel, 1984; Heckscher, 1988). This group tends to be guardedly optimistic about the advantages to both employers and workers of the new regime. Another group of commentators is not convinced of the inevitability of change, nor do they view the experiments as having mutually advantageous consequences for workers and employers (Parker and Slaughter, 1988; Shaiken, 1985). According to this view, the recent shopfloor experiments are a combination of union 'busting' and attempts at enhanced control by management.

The shopfloor history presented above suggests that both views have merit. If the creation of bureaucratic job control unionism was ultimately disadvantageous to both workers and employers, then it follows that there is room for mutually advantageous adjustment. However, the recent shopfloor experiments have thus far attempted to establish new institutions for shopfloor governance with little rank-and-file empowerment. While these recent initiatives are to the mutual advantage of workers and employers relative to the period of crisis in shopfloor relations, they are certainly less advantageous to workers than the system of fractional bargaining, and quite possibly less advantageous than bureaucratic job control unionism.

(a) *Quality of worklife programmes*

Quality of worklife programmes, or their equivalents, grew at a healthy rate throughout the 1970s, but witnessed a tremendous surge in the early 1980s.¹ They can be found in both the public and private sector, and in services as well as in manufacturing. Survey results suggest that by 1983 135,000 QWL programmes were in operation in 8000 locations, encompassing over one million workers. According to a 1982 survey, roughly 44% of firms with over 500 employees contained QWL (Parker, 1985, p. 8). Among manufacturing firms, these programmes are most prevalent in the car, steel and electrical equipment industries. Quality of worklife committees typically consist of regular meetings of rank-and-file workers and management, taking place on company time, to solve problems encountered in production. They have no direct power, as implementation of proposals almost always requires approval by the normal chain of command.

Quality of worklife committees have their origin in particular programmes begun in the late 1960s and early 1970s by employers to address the emerging contradictions in shopfloor dispute resolution, and the jammed grievance procedure in particular. These committees were initially viewed as supplements to the existing system of shopfloor governance. Because of labour law's doctrine of exclusive representation, they required at least the tacit approval of unions in order to exist.² Early experiments in the car industry can be linked precisely to these shopfloor problems (see Katz, 1985, p. 44). The plant-level Committees on Productivity begun in the steel industry in 1971 have similar origins.

¹ Worker participation schemes go by different names in different firms. Employee involvement, quality circles, and labour-management participation teams are some examples. I will use the QWL label throughout my discussion.

² See La Botz (1991, pp. 44-45) for a useful discussion of some of the legal issues surrounding labour-management co-operation.

In the car industry, the rank-and-file expressions of discontent popularised by the events at the General Motors plant in Lordstown, Ohio, led to attempts by both employers and the union to address the local shopfloor concerns of workers. Quality of worklife programmes emerged in a number of General Motors and Ford plants in the early 1970s, but the majority of them faded away by the late 1970s owing, in part, to the threat they posed to entrenched management and union bureaucracies. Plant-level industrial relations departments were so opposed to participation schemes at General Motors, for example, that initial responsibility for co-ordinating QWL programmes was given over to the personnel department staff (Katz, 1985, p. 76). The union's position on the effect of QWL on union structures was summarised succinctly in a 1980 statement by Irving Bluestone: 'the provisions of the national agreement and of the local agreements and practices remain inviolable' (quoted in Katz, 1985, p. 76).

In the mid-1960s in the steel industry, David MacDonald was defeated as president of the United Steelworkers by I. W. Abel, who ran on a platform of returning control of the union to the rank-and-file. Abel was swept into office by a rank-and-file demanding the right to strike over local issues and increased attention to shopfloor concerns (Bethel, 1978). While few substantive changes emerged from Abel's reign, he did endorse the introduction of plant-level Productivity and Employment Security Committees in the early 1970s to discuss shopfloor issues of concern to labour and management. However, the committees were viewed as a threat by both plant management and local union representatives and as a result became inoperative by the mid-1970s.

These early experiments were credited with reducing grievance rates and absenteeism and with improving some shopfloor conditions, but the committees were severely constrained in their scope and they received little support from industrial relations departments and local union officials—those groups who were empowered in managements' elimination of fractional bargaining, and whose positions would be threatened by a decentralisation of shopfloor decision making. The early participation schemes were consequently left dealing with issues untouched by either the collective bargaining agreement or company policy.¹

The analysis by Katz, Kochan and Gobeille (1983) of the impact of these early QWL programmes on production in General Motors plants during the 1970s reveals that even these modest schemes had a significant effect on product quality. The impact on labour productivity, however, was not found to be significant. Even though strong QWL programmes were associated with lower grievance rates, and lower grievance rates were found significantly to increase labour productivity, participation schemes had only a marginal independent impact on plant productivity.

Participation schemes reappeared in both of these industries in the late 1970s and early 1980s, this time with a slightly different focus. There was still the emphasis on resolving workers' non-contractual shopfloor concerns, but increasingly management

¹ Another reason for the demise of these early QWL experiments is waning government support. The Senate held hearings on worker alienation in 1972, and Congress established the National Center for Productivity and Quality of Working Life in 1975 to support QWL experiments. However, the agency was disbanded three years later. It was not until the early 1980s that money was forthcoming by the government (through the Federal Mediation and Conciliation Service) to support participation schemes (Wallace and Driscoll, 1981).

turned its attention to cost-cutting measures and the unions' interest turned to job security. Many of these new participation programmes were explicitly designed as joint labour-management 'cost study teams' (Klingel and Martin, 1988). In most cases, one of the stated management goals was to decentralise shopfloor decision making in the hopes of increasing worker participation and making better use of the knowledge of production possessed by the rank-and-file worker.

There is a tendency in the literature to view this renewed interest in participation as a result of the worsening position of US manufacturing firms in both domestic and foreign markets. The 1970s witnessed increased import penetration in the steel industry, and the late 1970s and early 1980s saw a sharp downturn in the car industry. Production-worker employment in cars, for example, fell from a peak of 802,800 in December 1978 to 511,500 in July 1982 (Kochan *et al.*, 1984, p. 86). The timing suggests that this interpretation is irrefutable. What it ignores, however, is the underlying structural crisis in shopfloor production that both contributed to this worsening position and was the focus of renewed attention in the new initiatives. The further erosion of domestic manufacturing was arguably the impetus for a more forceful attempt by management to break the coalition of forces blocking structural change in shopfloor decision making.

To the extent that older institutional arrangements wear thin and require replacing, the uncertainty of what to replace them with always produces a general opposition to change. Rank-and-file workers generally welcomed participation, but were also suspicious of management during a time of increased layoffs. Supervisors and foremen felt uncomfortable with the loss of authority, and possible unemployment, that decentralised decision making might imply. Union officials were threatened by any challenge to the sanctity of the collective bargaining agreement, and by the threat local agreements might pose for multi-employer bargaining structures. But perhaps the biggest immediate threat was to the shop stewards and grievance committee representatives in unions and to the staff of industrial relations departments, whose existence and identification rested on the older institutional arrangements. Through a slow process of communication, management and union administrative reshuffling and retraining, and a few key appointments to positions of leadership within management and union structures, the momentum for change was maintained.¹

A study by Kochan, Katz and Mower (1984) of these later QWL programmes in their early developmental stages sheds important light on the process of dispersion, the areas of resistance, the strength of the rank-and-file's desire for greater input into the nature of work, and the ultimate impact of the programmes. Kochan *et al.* surveyed workers and local union officials in a small number of companies experimenting with QWL programmes.² They also conducted in-depth interviews with a small group of local union officials in a number of different industries. Their results reveal a

¹ Some of the important changes in personnel included the appointment of Don Ephlin as vice-president of the UAW and director of its Ford Department, Pete Pestillo as Ford's vice-president of industrial relations, and Alfred Warren, Jr., as corporate vice-president of labour relations at GM, all of whom strongly supported the growth of participation schemes in car manufacturing (Katz, 1985, pp. 78-79).

² The surveys of rank-and-file workers occurred in different plants from those of local union officials. The latter surveys took place in five different plants in the car industry. The former surveys spanned a number of different industries.

rather slow pace of dispersion of participation programmes throughout the plant work force. Among the sample of rank-and-file workers, roughly half were participants in QWL schemes even though the plants to which these workers were attached had been experimenting with these programmes for an average of two to three years (Kochan *et al.*, 1984, pp. 98–105).

Local union officials reported that management efforts to change work rules or practices and the resentment and resistance of lower-level management staff to the participation schemes were among the primary reasons for the slow pace or actual blockage of progress in the spread of QWL programmes (pp. 146–148). This reveals both management's intention to utilise participation programmes as a mechanism for changing the structure of industrial relations and the ambivalence of supervisors and industrial relations staff to such changes. Interestingly, union officials who were interviewed generally stated that QWL programmes had a favourable effect on the rank-and-file's ability to communicate its concerns to both management and the union (pp. 134–138).

As a precursor to evaluating the impact of QWL programmes on aspects of the job, the rank-and-file surveys asked workers about their interest in participating in decisions concerning the running of the plant. No less than 70% of the workers in each plant surveyed responded that they wanted 'some say' over 'the way work is done', 'the level of quality of work', or 'how fast the work should be done'. No less than 63% said they wanted some say in the choice of technology used on the job. These results offer very compelling evidence of workers' interest in shopfloor issues. By way of contrast, workers expressed little or no interest in participating in decisions concerning such things as management salaries or promotions, and little interest in potentially important issues such as plant closings and the investment of profits (pp. 106–112).

The results of the plant-level surveys of rank-and-file workers were reported separately for each plant. Some plants had experimented with QWL programmes for only a short time, while others had more lengthy experiences. Interestingly, among the plants with roughly two years' experience or less, the responses of participants were rarely significantly different from those of non-participants on questions concerning the actual amount of say workers had on the job (pp. 115–118). This contrasts sharply with the survey results (to be discussed below) in a plant from which the participation programme had extended its domain of decision making to include substantive shopfloor (and contractual) issues.

As perhaps the harshest critic of QWL programmes acknowledges, participation schemes count among their strongest supporters rank-and-file workers (Parker, 1985). This should be no surprise given the historical trajectory of working conditions quality and workers' shopfloor control over the post-war period. What is arguably more surprising is the rank-and-file's willingness to experiment with alternatives to bureaucratic job control unionism which threaten such time-honored labour movement goals as 'taking wages out of competition'.

Management's campaign to create a sense of the mutuality of interest between capital and labour has no doubt had a significant impact on the rank-and-file's willingness to experiment, as Parker (1985) has argued. (The fact that there is some truth to the 'mutuality' claim must also be seen as a contributing factor.) But this

explanation ignores the rank-and-file's deep scepticism of bureaucratic job control unionism as a mechanism for addressing workers' shopfloor concerns. Job control unionism offers workers significant protection against such things as the capricious use of management authority, but it also entails significant productive inefficiencies and contains gross limitations for shopfloor empowerment, both of which serve as impediments to the dignity of blue-collar work.

In situations in which the progress of participation schemes had not been stalled or blocked entirely by entrenched bureaucracies, chips appeared in the structure of job control unionism. The labour leadership's efforts, through local union officials, to maintain a separation between issues discussed in QWL programmes and contract language generally failed. Local agreements—which are independent of the national contract, but procedurally determined by collective bargaining—witnessed a proliferation of work-rule practice changes in many industries over these years. In many, perhaps even most, cases these were concessionary moves by unions to enhance productivity without a concomitant increase in shopfloor power. But, in most cases, the trajectory of these changes, as stated by management, was toward the further devolution of shopfloor decision making to workers and supervisors directly concerned with production in a setting absent of formal contract language. What remained to be worked out, then, was the institutional form for joining participation schemes to workplace practice.

Katz's (1985, pp. 80–85) discussion of the evolution of a participation programme in a car plant during the early 1980s is illustrative. The committees initially tackled issues that did not threaten existing contract language, such as lighting or the rearrangement of work stations. But before long, participation groups were engaged in a feasibility study for the use of a robot in production and in discussions concerning changes in the general layout of the shopfloor brought about by alterations in product mix or the introduction of new technologies. Within the time span of several years, there was talk of instituting a far-reaching programme of team production and 'pay-for-knowledge' systems in production as a way of linking participation groups to the formulation of workplace practice.

(b) Team production

Comparisons between US and Japanese production methods in the 1970s and 1980s revealed rather trivial differences in the technology of mass-production manufacturing, leading to the natural conclusion that the production-cost advantages of competitors resided in their system of management (Abernathy, Clark and Kantrow, 1983). Increasing import competition and the loss of foreign markets gave further impetus to shopfloor experiments by domestic manufacturers, but what followed was far from a wholesale transplanting of the Japanese system of management. The US productivity crisis had specific shopfloor causes, and, as it happened, certain features of the Japanese management system appeared to contain solutions. Moreover, only certain aspects of this system seemed politically feasible, even for an industrial relations system in the midst of decay.

A number of alternative developmental paths towards co-operation and team production emerged in US manufacturing during this period. In some industries, 'greenfield' plants opened up with a new, co-operative organisation of production.

These were often non-union plants within a largely unionised firm, as in rubber and cars. Team production methods were introduced as early as the mid-1970s in General Motors' non-union plants in the south (Katz and Sabel, 1985). In other cases, team production grew out of the earlier experiments with QWL programmes. In still other cases, where QWL programmes had been successfully contained in their tendency to encroach on traditional company policy or contract language, teams emerged as last ditch efforts to prevent plant closures. Finally, Japanese firms have introduced teams in their manufacturing plants in the US.

The diversity of experience with team production makes it difficult to describe in general terms. Most team production systems, however, have the following attributes: a dramatic reduction in job classifications, often to a single classification for all production workers; workers becoming skilled in a much fuller range of production activities; work teams composed of between 10 and 15 workers who meet weekly to discuss such issues as efficiency, quality of product, and the job assignments of team members; a team leader (typically a union member in union plants) from the ranks of workers and a group leader (a salaried, non-union employee) from the ranks of management as co-ordinators of team activity; and a pay-for-knowledge system which encourages workers to acquire different skills in the plant by awarding increased wages for skill acquisition. Workers and supervisors are encouraged (indeed forced) by this structure to resolve shopfloor disputes speedily, with a minimum of bureaucracy.

Work teams can be found in a wide variety of manufacturing industries—steel, cars, rubber, electrical equipment, paper, foods, chemicals, oil refining and sporting equipment. At the forefront of team production are such companies as General Electric, Proctor and Gamble, Best Foods, Goodyear, and General Motors (Parker and Slaughter, 1988). Unions have displayed a variety of different approaches to the introduction of team production in unionised plants, from outright endorsement to resistance at all costs (the latter is especially true of skilled trades unions). After initial resistance, for example, the UAW explicitly endorsed teams in national contracts with Ford and General Motors in 1987. The United Electrical Workers and the Oil, Chemical and Atomic Workers, on the other hand, remain adamant in their opposition to team production.

Co-operative labour-management relations, autonomous work teams, and decentralised shopfloor dispute resolution held out great promise in the eyes of rank-and-file workers wary of bureaucratic rules and regulations governing production. While detailed job classifications and formalistic work rules granted workers certain rights on the job, the advantages of terrain under job control unionism went to management, who was given the unilateral right of action only to be challenged through a bureaucratic grievance procedure. By most accounts, the picture painted of team production by management was one of substantially increased freedom for workers in determining shopfloor conditions. And initially, at least, reality sometimes accorded with management's description. But both survey results and case study evidence suggest that even if rank-and-file team members feel better about certain aspects of the job, they rarely experience any substantive, long-run enhancement of worker autonomy.

The Kochan *et al.* (1984) survey of workers experimenting with QWL programmes contained workers from one plant where team production had emerged out

of QWL discussions. At the time of the survey, workers had only a very limited experience with work teams since the experimental programmes had been in operation for less than a year. A comparison of responses by team participants and non-participants in this plant is none the less revealing. In 8 of 11 questions concerning how workers viewed their work (involving issues such as whether the job is 'meaningful', 'requires that workers learn new things', and 'gives the worker a sense of his or her impact on the final product or service') participants' responses were significantly more favourable than those of non-participants (1984, p. 116). However, when asked how much actual influence workers felt they had over various aspects of their work (e.g. 'the way the work is done', 'the level of quality of the work', or 'the use of new technology on your job'), in only 1 of 17 areas of concern ('who should do what job in your group or section') were participants' responses significantly different from those of non-participants (1984, p. 113).

Similar results emerge from Parker and Slaughter's (1988, pp. 192-195) case study of General Motors' Factory 81 plant, where torque converters are built as part of the giant Buick complex in Flint, Michigan. What was touted as an ambitious experiment in worker autonomy (one of the first such experiments at General Motors with a group of union workers working under a traditional bargaining arrangement) gradually turned into something quite different. The promise by management was of a plant with no shop rules, no time clocks, and where workers could set production standards. Although jobs were designed before work began in the new plant, workers were initially allowed much freedom in the scheduling of work and in job assignments. But before long even these minimal freedoms had been eroded by management. A local union official who had been an early supporter of the move to co-operative relations with management summarised the experiment in this way:

The bottom line . . . is this: anything joint should be 50-50. But in reality it's 51-49. When it's a question of 'quality, cost, schedule,' *they'll* make the bottom line decision. It's their plant (1988, p. 195).

Team production builds on workers' natural desires to produce a quality product in surroundings that are reasonably pleasant and under conditions of relative autonomy. While the team concept acknowledges these desires, it never truly fulfils them. It is properly viewed as a system of management control in which the responsibility for producing is squarely placed on workers' shoulders while the production goals and job standards are dictated by management.¹ Experience to date suggests that in exchange for an increase in the intensity of labour effort, decreased safety, the attenuation of seniority as a criterion for labour allocation, and an ideological structure that promotes competition between workers (across team, plants and firms) workers receive the promise of limited job security, wage increases for newly

¹ Any system of co-operative production will entail some means by which to control the actions of its members so as to ensure the attainment of production targets with minimum waste. The capitalist firm differs from a worker democracy in that the power of stakeholders in the firm is not structurally evenly distributed. The concerns of stockholders and management are disproportionately represented in the structural aspects of the system of control. It is in the actual practice of production that labour expresses its concerns, and, depending on conditions in the labour market and the solidarity of the workforce, practice may diverge from the structural plan. Team production is one element of an emerging structural system of management control.

acquired skills, a quicker turn-around time for the resolution of workplace disputes, and limited—in some cases bordering on the truly superficial—say in the nature of work.

In manufacturing, the car industries' experience with work teams is arguably the most far reaching; it is certainly the most well publicised. Parker and Slaughter (1988, p. 4) note that by March 1988 work teams were in place in at least '17 General Motors assembly plants, in six Chrysler plants, in Ford's Rouge Steel operation and Romeo engine plant, and in all of the wholly or partially Japanese-owned plants (Nissan, Honda, Mazda, Diamond-Star and NUMMI)'. Teams are also prevalent in components plants in the car industry and are a critical element in the production process at the new General Motors plant. Team production has emerged in the car industry via a number of different paths, from their introduction in the mid-1970s in non-union plants to the co-operative effort between union and management in the Saturn project. Each of the aspects of team production mentioned above can be found in car production.

One of the most troublesome features of bureaucratic job control unionism was the backlog of grievances concerning shopfloor disputes. Plants using team production typically decentralise shopfloor dispute resolution rather dramatically. For example, the NUMMI-UAW contract, much like a traditional one, contains a number of steps for resolving workplace disputes, but the contract clearly states that the first step for resolution is the work team (or Group), and goes on to state that 'The Company and the Union shall encourage all employees to attempt to resolve problems (the term used for grievances in the contract language) within the Group using problem-solving methods' (Parker and Slaughter, 1988, p. 115).¹

By all accounts the attempt to address promptly shopfloor concerns has been enormously successful. It was not unusual for the General Motors Fremont plant (before NUMMI) to have a load of over five thousand grievances, and a backlog of over a thousand (Brown and Reich, 1989, p. 28). Under three years of NUMMI management, only four grievances were filed for arbitration (1989, p. 29). When workers were asked by Parker and Slaughter (1988, p. 109) how the 'problem-solving' procedure at NUMMI compared to the grievance procedure at General Motors Fremont, not one wished to return to the traditional system. Workers stated that:

At GM, . . . once the grievance was written, you never heard again . . . the grievance took forever . . . it just got kicked upstairs . . . general supervisors would always back the foremen . . . you never won . . . if you won it was too late to do any good.

Not all that glitters is gold, however. Grievances concerning job standards in traditional contracts in the car industry were not covered by arbitration and were therefore strikeable issues. This is not the case at NUMMI. Since the decentralised structure at NUMMI resembles shopfloor dispute resolution during the days of fractional bargaining, it might be thought to be vulnerable to the same kind of manipulation by the rank-and-file. NUMMI management, however, has attempted to undercut this possibility by stating in the contract that any resolution at the first

¹ Parker and Slaughter reproduce portions of various local contracts in the car industry.

stage of the problem-solving process 'shall not set a precedent or a binding past practice on either party' (Parker and Slaughter, 1988, p. 115). Finally, reduced grievance rates are not a sure sign of increased shopfloor contentment. In at least one other car plant the number of filed grievances has also fallen under team production, but workers there blame the reduction on the unresponsiveness of committeemen under team settings (Parker and Slaughter, 1988, pp. 132-133).

The lack of rank-and-file empowerment under work teams is revealed in certain shopfloor outcomes. There seems to be almost unanimous agreement among scholars that both the intensity of labour effort and workplace accidents increase under team production. Labour intensity is enhanced by sheer edict, but also by a dramatic reduction in absenteeism, and by the elimination of 'featherbedded' positions.¹ This is no doubt a large part of the explanation for the 50% increase in productivity at NUMMI over the General Motors Fremont plant (Brown and Reich, 1989, p. 28) and over other similar plants in the General Motors system (Parker and Slaughter, 1988, p. 101). Increased accidents are related to the intensity increase through worker exhaustion, but are also the result of successful efforts by management to eliminate maintenance workers, who are specially trained in safety aspects of equipment repair.

On the positive side for workers, team production has been associated with improvements in ergonomics, plant cleanliness, respect from management, and the quality and accessibility of personal facilities, including in some cases the introduction of sports areas and exercise rooms (Parker and Slaughter, 1988, pp. 33-35).

Many of the early team concept plants utilised a 'pay-for-knowledge' system of compensation. Under this system, workers are expected to learn a number of different skills in the plant. In order to encourage this (and to pay off workers for abandoning old work rules) management compensates workers for skills acquired. Typically there are a small (between five and ten) number of pay levels for production workers in the plant, each level associated with a greater level of skill. As workers learn more jobs on their team and on other teams within the plant, they qualify for payment at the next higher level. The pay rates for the top levels in the system often exceed those in typical jobs in traditional plants, so for many workers pay-for-knowledge offers the opportunity to earn more money (Katz, 1985, p. 96). One of the problems in practice with pay-for-knowledge schemes is that workers apparently move up the various level quite rapidly, topping out at the highest pay level in relatively short order. The only way found to prevent this is to grant group leaders the right to make decisions concerning who can and cannot learn new tasks, but this raises the possibility of supervisor favouritism. Perhaps for these reasons, many of the newer car plants are not using pay-for-knowledge schemes (Parker and Slaughter, 1988, p. 86).

Team production proposals by management have sometimes occurred along with the suggestion, if not outright threat, of plant closure. Job security has therefore been

¹ Parker and Slaughter describe a typical production job at the NUMMI plant:

In 59 seconds, inspector Richard Aguilar has to get in and out of the car and check to make sure each contains the items specified on a form for that particular car. Each item is also checked to see that it operates correctly. The list includes: headlights; high beam; turn signals; back lights; side marker light; parking lights; radio; speakers; heater; air conditioner; dome lights; air ducts; steering wheel; console; dash; shift lever; check upholstery for color, cleanliness, tightness, damage; check headliner for tightness and damage; check garnishes (mouldings which cover joints) (1988, p. 105).

viewed by workers as a valid *quid pro quo* for their acceding to the team concept. To the extent job security is indeed enhanced by the move to co-operative industrial relations, the enhanced security applies only to the streamlined workforce after the elimination of maintenance, inspection, and custodial (not to mention management) positions. The UAW in recent years has bargained for enhanced protection against layoffs. In 1982, long-term layoff protection was won in the form of the Guaranteed Income Stream that supplements the more short-run Supplement Unemployment Benefits won in the early 1950s. In 1984, a job bank was set up to guarantee workers full pay and benefits for jobs eliminated for reasons other than a decline in sales. These job security benefits have not been explicitly tied to the International's position on teams. It is at the local level that such linkage has occurred. Even here, however, the contract language is typically a vague commitment to job security which may or may not be honored by management. The very different approaches to job security by NUMMI versus General Motors Van Nuys, for example, have occurred with amazingly similar contract language governing layoffs (Brown and Reich, 1989).

The downside of team production for workers stems from the fundamental fact that an institutional void has been both created and filled by management's initiative. That work teams primarily focus on, and allow for the realisation of, management's concerns in production should therefore be no great surprise. What management has essentially done is to replace a system of shopfloor regulation and dispute resolution that contained significant (contractual) rights for workers, little rank-and-file responsibility, and few shopfloor freedoms with a system that contains significantly fewer contractual rights, much more rank-and-file responsibility, and arguably less shopfloor freedom. In essence, team production restores the decentralised atmosphere of shopfloor relations during the days of fractional bargaining, but severely constrains the rank-and-file's ability to act.

Job design and work standards are no longer matters of contractual rights defined by job classifications and work rules, but neither are they open to substantive rank-and-file control. In the most advanced team production plants, job design and work standards are determined in the following manner.¹ As in any traditional plant, the technology and product design are determined by actors far removed from the shopfloor. Under team production, industrial engineers at corporate headquarters are responsible for the additional task of breaking the process of production into a series of 'transferable work components', each composing the smallest combination of acts for which it would be impracticable to have more than one person responsible in the course of production. Engineers then recommend the most efficient procedures for carrying out each 'transferable work component' as well as time standards for each. It is at this point that work teams become involved in job design.

Even at this stage, however, rank-and-file workers have little say. Team leaders (who are often appointed by management) and group leaders are responsible for coming up with initial job descriptions, the work standards associated with each, and the initial assignment of operators to jobs. It is only at this stage that rank-and-file workers enter the process. After some experience with the jobs, workers are required

¹ The following discussion relies heavily on Park and Slaughter's (1988) description of the process at NUMMI.

to complete a detailed description of their job duties for use by future operators. With experience in production and through team meetings, the job design and work standards can be amended, but only with the approval of group leaders. Typically, the nature of each job becomes well defined and is unaltered after a short period of time. Group leaders who approve of job designs involving an 'inefficient' combination of 'transferable work components' obviously open themselves up for rebuke from superiors.

Another way in which workers' shopfloor power is constrained under work teams is in the creation of the team leader position. Team leaders have clearly divided loyalties. They are workers in that they are required to know all of the jobs in the work team and to fill in for absent team members, but they are management in that they supervise workers' performance and have some say in the assignment of workers to jobs. Team leaders also act as the equivalent of shop stewards or committeemen in traditional arrangements for resolving first-step grievances. Team leaders who are involved in job assignment are especially vulnerable to the charge of favouritism since, without detailed job classifications and clearly-stipulated job ladders, the allocation of labour within the plant need not be constrained by seniority rule.

A final way in which rank-and-file shopfloor power is limited under team production is through the effect this structure has on the informal work group. Informal work groups have been, since before the days of unionisation, the last bastion of protection for workers against the bosses' efforts to 'drive' production. The power of the group rests on solidarity and the ability to keep workers' knowledge of production from management. Team production alters significantly the power of informal work groups. Team members are encouraged to co-operate with one another in the process of production, but they are also clearly competing for access to more training and the better jobs in the plant, something that has historically challenged the solidarity of work groups. Under team production group leaders (first-line supervisors) have unprecedented access to the shopfloor and the process of production. Moreover, in some plants workers' knowledge of production is formally elicited through the job manual each worker completes. With job rotation, these manuals represent the collective wisdom of the various workers who have done a particular job.

Team production has elicited a variety of responses by rank-and-file workers, suggesting that its existence, let alone the final form it might take, is still very much an open question. Workers at the General Motors Van Nuys plant, for example, led one of the earliest and best publicised campaigns to convince General Motors to be more forthcoming about the precise nature of team production when General Motors was proposing it as a solution to the plant's productivity problems in the mid-1980s (Mann, 1987). After work teams were ultimately adopted at the plant, the rank-and-file responded with a variety of attempts to enhance its shopfloor power, among them being the maintenance, in slightly altered form, of seniority (even as a rule for choosing team leaders), reduced job rotation, and meetings of team leaders in which the appropriate line between labour and management is discussed (Parker and Slaughter, 1988).

The workers' reaction to their experiences with team production at the Van Nuys' plant is apparently shared by other workers. Cappelli and McKersie (1987, p. 455) report, for example, that strikes at two of General Motors' midwestern assembly

plants have been associated with favouritism in job assignments and pay-for-knowledge increases. Katz (1985, p. 91) cites the example of a General Motors plant in Oklahoma City, which until 1979 was non-union and one of General Motors' southern strategy plants. During the negotiation of the first local contract, the workers pushed for the elimination of team production. Ultimately, what has emerged in this plant is the negotiation of job classifications that are somewhat fewer in number, but none the less similar in other respects to the traditional collective bargaining structure. These workers would appear to be expressing the view that bureaucratic job control unionism is superior to team production for protecting workers' shopfloor interests.

While the future path of industrial relations in US manufacturing is by no means settled, the elimination of bureaucratic job control unionism by way of reduced job classifications and decentralised shopfloor dispute resolution appears to be a priority item on management's agenda for change. Things may not stop there. Job classifications and procedures for dispute resolution are fundamentally linked to other components in the traditional industrial relations system; a single job classification for production workers, for example, may disrupt seniority as an allocative mechanism, it may require an alteration in the plant's hiring policies as different worker attributes become more highly valued, and it may require a change in payment practices to give incentives for skill acquisition.

One of the more interesting features of team production is the way in which it shifts responsibility for production to rank-and-file workers. In some cases this responsibility may require a genuine commitment to quality and efficiency on the part of workers. In most cases, where substantive control does not rest with workers, this responsibility merely requires a willingness to police or monitor the activities of fellow team members. Positive incentives such as salary-based payment schemes with profit-sharing arrangements might prove necessary to ensure motivation in the former case. More negative incentives are called for in the latter. 'Just-in-time production'—a scheme that eliminates the stockpiling of parts which act as buffers at various points in production—has been used to increase the sense of individual and team responsibility through a heightened fear of major disruption to production (Parker and Slaughter, 1988; Shaiken, Herzenberg and Kahn, 1986). Greater management control through technological innovation has also been utilised; strategically placed robots have been used to facilitate the pacing of work and management information systems have been employed to monitor labour effort (Shaiken, 1985; Shaiken *et al.*, 1986).

The vision of a return to crafts-based skills and specialised production, sometimes labelled 'flexible specialisation' (Piore and Sable, 1984), has not emerged as yet (Tomaney, 1990). The recent experiments in shopfloor organisation have been driven by management's desire to increase labour productivity not through the adoption of sophisticated technology that enhances worker skills, but through such things as increased flexibility in labour allocation, a reduction in machine downtime, and an increase in labour intensity. Experiments in the car industry with high-tech production, such as at the General Motors Poletown plant, have not fared well. Although it boasts a number of important technological improvements, even the General Motors Saturn plant is better known for its innovative work organisation and industrial relations policy.

The impact on labour productivity of the recent experiments in co-operative production awaits further analysis. Recent Commerce Department data on manufacturing productivity growth during the 1980s reveal significant progress. Between 1979 and 1990 output per worker-hour grew at an annual rate of 3.6%, roughly three times the rate for the 1970s. A host of factors have no doubt played a role in this rebound in productivity growth, but the recent shopfloor experiments may prove to be an important contributor.

To the extent that recent shopfloor experiments in team production account for some of the productivity improvements over the 1980s, my analysis suggests they have done so while simultaneously worsening shopfloor conditions. Workplace health and safety statistics would seem to support this claim. After some progress in the 1970s in reducing the rate of industrial accidents, the accident rate turned upward rather abruptly after 1983. Bureau of Labor Statistics data reveal, for example, that the number of job-related injuries and illnesses per 100 employees rose 5% in 1987. In manufacturing, the increase was 12%. The *Wall Street Journal* (1989) reports that increased job-related injuries and illnesses have much to do with people being 'pushed to produce'. Excessive overtime work, inexperienced workers resulting from the outsourcing of jobs through contract labour, and the increased pace of production all play a role. At the John Morrell & Co.'s Sioux Falls, South Dakota, meatpacking plant the speed of the line has been increased in some departments by as much as 84% in the 1980s. Plantwide injuries increased over this period by 51% (*Wall Street Journal*, 1989).

3. Conclusion

The events of the 1970s and 1980s suggest to me that the US is likely to see the emergence of a new industrial relations system in the not too distant future. Union density (i.e. the percent of the work force unionised) in manufacturing reached a post-war peak of 42% in 1953. It stood at 25% in 1985 (Craypo, 1990, p. 4). Accompanying this decline in unionisation has been a breakdown of multi-employer bargaining structures and the rise of competitive payment schemes within unionised plants. The institutional features of job control unionism have also been substantially eroded.

A complete overhaul of the post-war industrial relations system is by no means a certainty, however. Non-union firms may become unionised in steel, meatpacking, and car parts, and the non-union plants of unionised firms may become organised, as they were in cars. Multi-employer bargaining structures may re-emerge and compensation may once again become standardised across plants and across workers within plants. Seniority may remain an important criterion for pay and promotion and job security may be restored with an even greater commitment on the part of employers. But, if the arguments of this paper are correct, the bureaucratic version of job control unionism is likely to be abandoned. What should workers struggle to replace it with?

The long-term goal should be for genuine worker participation in every realm of shopfloor decision making. This should be demanded on the principle that every worker has a basic right to influence the conditions of his or her work. Democratic

participation—not bureaucratic unionisation or the freedom to quit—is the most effective way for workers to express their needs in production. It is also a productivity-enhancing form of work organisation, as is suggested by a comparison of fractional bargaining with bureaucratic job control unionism. Direct participation by workers decreases the costs of bureaucracy, counters corporate mismanagement, and promotes the open sharing of ideas about how to best engage in the production of useful goods and services. Workers should struggle to make the current rhetoric of participation a reality.

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