

Strategic Choice and the Control of Labor Costs

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The transformation of the system of industrial relations in unionized settings in the U.S. that has occurred in this decade has led to a rethinking of the basic paradigm used to understand labor relations. The arguments presented below outline the challenges to that paradigm and the role that strategic decisions play in explaining recent events in the U.S. Finally, these arguments are used to examine recent efforts to alter one of the key elements in labor costs; workrules.

### The Challenge of Recent Events in the U.S.

Changing product markets, new management strategies, and the decline of the labor movement have generated tremendous pressures for change in the U.S. system of industrial relations. That system had remained reasonably unchanged from its creation in the 1930's through the 1970's. Beginning with the 1970's, however, market pressures associated with rising foreign and nonunion domestic competition joined with market deregulation in many industries to put great pressure on established prices and, in turn, on labor costs. These pressures were accentuated by the 1980 recession, the steepest since the 1930's, which drove many high-cost producers out of business. One consequence was that a disproportionate number of unionized operations closed as their costs tended to be higher.<sup>1</sup> Further, the reversal of union contractual gains known generally as concession bargaining became a routine practice. Foreign and nonunion competition explain more than half of the distribution of concession bargaining (Cappelli 1983). Recent figures from the Bureau of Labor Statistics suggest that virtually all union members may have made concessions to reduce labor costs.

The changes in the system of U.S. industrial relations that became noticeable with the 1980 recession were so severe, however, that they could not be adequately explained simply by changes in markets or in the environment generally. For example, the decline in union membership (from approximately 23 percent to estimates as low as 18 percent of the labor force at present) was far sharper than could be explained simply by the unemployment associated with the recession. Farber (1984), Freeman (1984), and Dickens and Leonard (1985) find, for example, that changes in

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1. Labor costs tended to be above average in part because of the growth of low-cost competition which pulled the average down. In addition, unionized operations tended to be concentrated in manufacturing and other industries more vulnerable to entry; they also tend to be older and less competitive in their capital structure (Kochan and Verma 1983).

the economy account for only a fraction (roughly one-third) of the decline in unionization in the U.S. These conclusions were supported in the mid-1980's when union membership and coverage continued to decline even as the economy improved; this would appear to be the first time in the modern period when U.S. unions have failed to make gains during an economic expansion.

Similarly, not all of the concession bargaining is explained by market forces. Many concession negotiations took place in operations that were healthy.<sup>2</sup> Further, concession bargaining continues even as the economy improves. Indeed, recent research suggests that the basic structure of wage equations has shifted; wages are now lower than in the past given similar levels of unemployment, inflation, and other macroeconomic variables (Farber?). In addition, there is now considerably more variance in labor relations practices even where the same basic environmental factors apply; bargaining is decentralized -- pattern bargaining across employers and across locations for the same employer has diminished -- and bargaining outcomes now vary widely even within the same firm.

These and other changes in U.S. industrial relations suggested that traditional explanations, which focused on pressures from the social and economic environment and allowed no independent role for the parties, are no longer adequate for explaining recent developments. Additional arguments have been needed, for example, to allow a role for factors unique to the firm and its collective bargaining relationship with labor. Kochan and Verma (1983), for example, found early evidence for this by documenting that the decline of unionization was particularly sharp within the firm; unionized facilities declined while nonunion plants grew.

These arguments have led to a new framework for considering changes in labor relations (Kochan, McKersie, and Cappelli 1984). That framework has added two notions to the environmentally based, systems explanation of changes in industrial relations. First, both unions and management in many situations have discretion over decisions because the environmental pressures are not strong enough, at least in the short run, to dictate the outcomes. Some of these decisions may be unilateral, such as the choice of plant location by management or the selection of targets for representational elections by unions. These decisions are presumably based in part on internal strategies for labor relations that the parties want to pursue -- hence the term "strategic choices."

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2. A Business Week survey, for example, found that 11 percent of employers were seeking concessions even though they were not justified by current economic circumstances.

Second, these decisions and the effects that they have on industrial relations operate not only through collective bargaining but at other levels as well. Unilateral decisions such as those associated with business planning decisions operate at a level above collective bargaining -- referred to here as the corporate or organizational level. For example, a decision to shift production capacity to nonunion shops clearly has an important impact on labor relations but is made outside of collective bargaining. Other decisions and effects operate at a level below collective bargaining through shopfloor relations. For example, the quality of relations at the shopfloor often varies widely across locations covered by the same collective bargaining agreements because of special programs and practices introduced at that level.

Recent research has found empirical support for this framework that helps to explain some of the recent developments in labor relations noted above. This is especially true for the relationship between management business decisions at the organization level and collective bargaining outcomes. Kochan, McKersie, and Cappelli (1984) find that business decisions in the rubber industry explained the variance in negotiating positions across firms and, in turn, helped explain differences in bargaining outcomes. Cappelli (1985) argues that the mechanism through which business decisions affect bargaining and outcomes is through their effect on labor demand; differences in contractual changes across airlines following deregulation are explained in this fashion. Cappelli and Chalykoff (1986) use survey data to show that firms pursuing union avoidance as an overall strategy open many more plants and are much more successful at keeping unions out of those plants than are firms that attach more importance to securing gains in collective bargaining; Kochan, McKersie and Chalykoff (1986) find that union avoidance firms have reduced unionized employment significantly more than have firms that did not emphasize this strategy. Chalykoff (1986) finds that such firms also have secured smaller settlements in collective bargaining.

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3. Some of the separation of issues by level is the result of U.S. labor laws which create a category of issues that are mandatory topics for collective bargaining (wages and conditions) and a category of permissive topics (including business decisions like plant locations) which are part of bargaining only if both sides agree. See U.S. Congress (1983) for these and other labor law problems.

4. Our views on the role of strategy in industrial relations were formed independently of the British literature which emerged roughly at the same time. Certainly there are similarities; especially the notion that many current developments are driven from the management side not simply as reactions to environmental

## Employer Options in the Unionized Sector

### Asset Management Versus Value Added Management

The arguments and research outlined above suggest that the most important factor changing the system of industrial relations in the U.S. is the strategies and decisions pursued by management in response to a changing environment. Firms have responded to cost-cutting pressures with a variety of strategies, all of which have implications for industrial relations. One set of strategies might be called "asset management" -- shifting the firm's capital away from current employees and their work systems, typically union systems. The most extreme case would be simply to sell all or parts of the business and transfer the firm's assets to another line of business. Some firms may alter their product lines and emphasize market niches where union labor costs are less of a burden.

For those who stay in the business, other strategies include opening nonunion facilities and transferring work to existing ones. These options have become easier in recent years, and the evidence cited above suggests that they are common and effective strategies. A related option is to subcontract parts of operations. In some situations, investment in new technology, such as CAD/CAM equipment, can be used to reduce labor and, in turn, labor costs.

Asset management strategies bypass current work arrangements, generally eliminating unions and unionized jobs, but avoid efforts to address and redesign existing industrial relations. Some firms, however, have pursued a different strategy; the reduction of labor costs through reform of the existing work systems, what we refer to as "value added" or productivity enhancing management. It is interesting to ask why some firms pursue value added strategies while others do not.

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changes but as conscious management strategies. The categorization by Thurly and Wood (1983) of labor strategies according to product market characteristics may be closest to our own work. In general, however, the British literature appears to be more focused on management strategies in collective bargaining (e.g., Purcell and Sisson (1983)). It may also be fair to say that our arguments have been more closely associated with market forces while much of the British literature seems more closely aligned with behavioral arguments.

5. For example, some trucking firms have abandoned the "full load" or point-to-point business for the "less than full load" market, which requires transferring loads, etc. and terminal operations, because low-wage, nonunion competition is fierce in the former.

Certainly one reason is that not all firms find it equally easy to pursue other options. For example, the labor law governing air transport makes it more difficult for carriers to establish nonunion operations.<sup>6</sup> This is one reason why airlines have been particularly concerned with reforming workrules.

There may be other reasons, however. The rise in the cost of capital in recent years has made it relatively more expensive to build new facilities, which begin nonunion, than to revamp existing plants, which are often unionized. Where firms have a great deal of capital tied up in unionized plants, it is more difficult to shift those operations elsewhere. Further, some firms are finding that the experience and high skill level of their unionized workforces is well suited to the frequent changes in product lines and the often idiosyncratic, batch production required for tailoring output to narrow and changing market niches (Piori and Sabel, 1985).<sup>7</sup> Employers in general may be finding it more efficient now to pursue a policy of reforming current practices in part because it is easier to secure such changes from unions as their power declines and their concern for aiding individual employers (in an effort to save jobs) increases.

#### The Issue of Workrules

For firms that try to cut labor costs at existing operations, the most important avenue now is to alter workrules through job redesign. During the height of the recession, managements efforts were directed toward wage cuts. Wage and benefit cuts generate immediate cost savings and were useful for meeting immediate, cashflow crises; workrule changes were less attractive as they generated no immediate savings since at current manning levels would cut average costs would drop only if output expanded.

There are limits to how much wages in particular can be cut, however, and this soon increased the importance of workrule changes as a way of cutting costs. From the employee side, workrule changes were typically a more acceptable way to reduce

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6. The Railway Labor Act, which governs air transport, establishes bargaining units across the entire airline system making it impossible to set up nonunion stations; airlines have established separate, nonunion subsidiaries, although the legality of these arrangements has not been settled clearly (Cappelli 1986).

7. Our case studies of manufacturing firms find management arguing, for example, that new product lines can often be introduced faster in unionized plants because the workforce has more experience working the "bugs" out of new lines.

labor costs than are wage cuts. Cappelli (1983) finds a cost-cutting hierarchy with workers most sensitive and resistant to wage changes, then benefits cuts, followed by workrule changes. Workrule changes not only are less visible and therefore have less symbolic importance for unions but also do not affect one's standard of living. (The potential effects on employment obviously are important and are considered below.) Wage cuts also suffer from diminishing returns from the management side. As Slichter (cite?) noted, reductions in compensation have a quick and negative effect on morale that in turn affects productivity through a variety of channels such as absenteeism, turnover, etc.

In addition, pressures soon mount to restore wage and benefit cuts when periods of crisis pass; in contrast, workrule changes, especially those associated with a systematic redesign of jobs, tend to become permanent as it is more difficult to revert to the older system. Finally, workrule changes have become a crucial source of comparative cost advantage because they cannot easily be identified and copied by competitors, in part because of the idiosyncracies of organizations and jobs. This is in contrast to wage concessions which are well publicized and have spread quickly across competitors -- a kind of employer-driven pattern bargaining. These factors and the interest they generated in changing workrules became more important as recession-based crises gave way to recovery and longer-run concerns of competitiveness and growth.

#### Describing the System of Workrules

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8. Of course, this is not the first time that job redesign has been a concern in the U.S. The Western Electric experiments of the 1930's and then the quality of worklife movement in the 1970's (symbolized by the Work in America (1973) report, much like On the Quality of Working Life (1973) in Britain), shifted attention from traditional, industrial engineered approaches to work organization by arguing that much of the unrest in the workplace, the poor quality of products, and the lack of growth in productivity, existed because jobs did not meet the needs of the new generation of workers. This motivation faded as the economy dropped into the recessions of the 1970's (Marglin 1979) and was replaced by the current employer-driven concern with cutting labor costs, mainly by shedding labor. In many cases, factors other than cost-cutting efforts also played a role. For example, the introduction of new technology, especially CAD/CAM techniques, provided an independent pressure to restructure jobs. We focus on the more common cases where cost reduction is the motivation, however.

The traditional system of workrules was established by collective bargaining and subsequently transferred to the nonunion sector.<sup>9</sup> A taxonomy for organizing workrules is presented below and is used to describe the traditional system of workrules as well as recent innovations in that system:

1. Horizontal structure -- which tasks are assigned to a given job, typically set out in job descriptions. Piori points out that narrow job descriptions were first introduced as an extension of Scientific Management. Unions defended them not only to keep workloads down on individual jobs but to maintain employment. Because the tasks associated with any operation were divided between workers, it was difficult to lay anyone off without disrupting the flow of work. The demarcations between jobs were especially sharp and narrow where different jobs were represented by different unions as in construction; if tasks were not kept separate, work might end up flowing from one union to the other. The narrowness of jobs was also fostered by management's reaction to seniority-based rules for promotions and layoffs. This criterion meant that jobs were not always filled by those with the necessary abilities; narrowing jobs made them simple enough for even minimally qualified workers to handle.

Changes in the horizontal structure amount to broadening the tasks that given workers can be assigned as well as the circumstances under which they can be assigned them. Broader job descriptions are explicitly designed to reduce the number of workers needed for a particular operation by eliminating idle time when a particular set of tasks might not need to be done. These efforts work best where jobs are closely interrelated -- where tasks are done in the same area but at different times -- such as maintenance work, continuous production technologies, and craft work generally. A good example of a change in the horizontal job structure would be the introduction of utility craftsmen, especially in maintenance functions, who perform routine carpentry, electrical work, and plumbing tasks. GM, for example, has reduced the number of craft classifications from 20 to 3 at the refurbished NUMMI plant in Fremont. Some new airlines like People Express routinely cross skill lines to meet unusual work demands; pilots help load bags where the need arises, management will sell tickets, etc.<sup>10</sup> People's claims, for example, never to have hired a single person solely to do

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9. Freeman and Medoff (1985 Chapter 10) and Foulkes (1983) point out that union gains have been passed on to nonunion workers to reduce the incentive for unionization as well as to standardize procedures within firms that are partly unionized.

10. Of course, this crossing of craft lines can only move downward toward lower skill positions; baggage handlers do not fly planes yet.



administrative work (Parenti 1983).

Horizontal broadening of jobs is thought to be more difficult to achieve in production operations, especially assembly lines, where specific tasks occupy workers more or less continually. Yet there may still be gains in such cases from substitutions for absent workers, temporary reallocation of workers where operations run at varying capacities, etc. GM's Delco-Remy plant recently cut its assembly job classifications from 75 to one; such changes are wide-spread and in firms as diverse as Digital Equipment, Best Foods (mayonnaise plant), Proctor and Gamble, and Rawlings Sporting Goods (baseball gloves). Such changes are especially difficult, though, where current job classifications span different unions because the elimination of a job classification may eliminate an entire union; Kahn (1971) notes, for example, how technological change on the flight deck gradually eliminated jobs such as navigators, radio operators, flight engineers and their individual unions (generating considerable inter-union conflict in the process) as their functions were combined with those of pilots. Changes are in the works even where jobs span different unions, however. Hollywood's screen unions, for example, have recently agreed to permit greater operating flexibility across their jurisdictions (12).

One important concern about broadening jobs is that craft workers in particular are pushed away from jobs that have clearly identifiable external labor markets (e.g., electrician, plumber) and toward jobs that involve a combination of skills that are relatively unique to individual firms. In short, workers are pushed out of external labor markets and toward internal labor markets. For workers, this may be a risky strategy as it reduces their opportunities and makes them dependent on their employer. For employers, shifting these workers to the internal labor market also makes the firm more dependent on the individuals currently in those jobs. Both parties become more dependent on each other, but which side gains relatively in power depends on how bargaining power was allocated previously by the external market. Craft workers, who had power because of strong external markets, probably lose relatively; semi- and unskilled workers who lack strong external markets may gain power from the shift to the internal market.

2. Vertical structure -- the hierarchy and authority structure governing work. Typical arrangements gave foremen and supervisors complete control over decisions about work within the confines of the labor agreement. In addition, hierarchies of authority were established within the production workforce, especially in craft work -- e.g., apprentice, journeyman, craftsman. Some arrangements specified the number of apprentices assigned to work under a journeyman and required supervision of given projects by craftsmen. These arrangements prevented lower-paid junior workers from displacing senior workers and also

provide less taxing jobs for the latter. They helped stabilize unions and gave them some control over the skills being used.

Changes in the vertical structure of jobs take two forms. The first occurs within a hierarchy of jobs and consists of transferring tasks to lower skilled, lower paid workers. In air transport, for example, the task of straightening-up the cabin between flights is being transferred from flight attendants to lower paid cabin cleaners; the job of "pushing back" planes, walking with them from the gate to the runway, is being shifted from mechanics to lower-paid members of the ground crew. Plumbers and pipefitters unions have agreed with the Mechanical Contractors Association to add a semi-skilled grade below journeyman to take over many of the simpler tasks formerly done by journeymen (DLR 6/17/85). Cummins engine has created a new work category of technician to take over some of the routine tasks from engineers.

The second, more common, effort to change the vertical job structure occur within production work and are efforts to transfer some managerial authority to workers. These programs include quality of worklife plans, autonomous workgroups, etc. and vary in the authority given to the workers. One argument for these arrangements is that they shorten communications lines, especially on questions of scheduling and coordinating tasks, and make for quicker, more effective decisions.<sup>11</sup> The more important argument is that participation per se may enrich the job,<sup>12</sup> increase satisfaction and, in turn, improve performance.

The amount of decisionmaking pushed down to the workgroup varies across operations. The most common arrangements give the group control over decisions otherwise made by immediate supervisors as at GM's Fiero and Delco-Remy plants. Workgroups at Xerox's wireharness division and Martin-Marietta's Denver plant go further and get help make technical and production decisions (Thomson 1982). Some like TRW's Lawrence, KA plant and Digital Equipment's Enfield, CT facility even make personnel decisions about hiring, training, and production standards for

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11. On the other hand, some argue that the process of worker decisionmaking is generally by consensus and may be extremely prolonged; any net benefits in this area are certainly offset when employees simply participate in management decisionmaking.

12. As Fox (1985) notes, this process of building a "moral commitment" to work is a much more complicated relationship than other cost-cutting measures. Kochan, Katz, and Gobielle (1984) provide evidence that productivity at GM was higher where QWL performance is better, but many researchers are remain unconvinced about the relationship between QWL programs and productivity gains.

the group (Personnel 1985, Industry Week, 1/21/85).

Workgroups also need to be supported with the same kind of technical advice and resources that management requires. These groups may need more sensitive information (about business plans, strategies, etc.) to function effectively than management might traditionally feel comfortable giving them. Exempt employees may resent "serving" production workers, especially in technical areas, as Martin-Marietta found. Indeed, this problem is even worse with general management -- especially supervisors -- who are confused about their new role under QWL programs (Klein 1984).

3. Deployment -- how workers move through the organization including rules governing hiring, promotion, transfers, layoffs, and scheduling. Unions seek control over hiring to protect against "free rider" problems, often securing it through closed shop agreements. Employers have in general only recently given much attention to sophisticated selection procedures and typically used cheap screening systems (e.g., high school diploma) for hiring. Seniority typically governs promotions, transfers, and layoffs because it is widely accepted as a fair and objective criterion, it provides increasing job security for older, less mobile workers, and it is simple to administer. One complication of seniority systems is that they permit "bumping" -- the systematic replacement of junior workers by more senior ones down through the organization when, for example, a position is eliminated.

Union efforts to reduce layoffs extend beyond seniority systems and typically include income security programs (e.g., supplemental unemployment insurance) which create financial incentives for the employer to avoid layoffs by raising the fixed costs of labor. Similar arrangements govern the scheduling of work by establishing premium pay for working undesirable shifts and overtime.

Deployment rules also cover whether employees are full time (with at least some implied commitment by the firm to employment security) or are temporary/part-time workers. Part-time and temporary work shifts jobs and employment risks to the external labor market; indeed, some firms use temporary and part-time workers to help reduce employment fluctuations for their "core" workers (see below).

Changes in the rules governing the deployment of workers may be less difficult to implement than changes in the structure of work and bring more immediate relief than many other workrule changes. Changes have been instituted first in the rules governing selection into jobs, in part because of the increased demands that new job designs place on workers. Companies like Rohm and Haas now use elaborate testing and screening systems to select workers for their team-based plants (WSJ 4/16/85). GM and

the UAW compromised on a system that would select workers for its NUMMI facility based not only on seniority (those laid-off from the Fremont plant) but also on the results of an assessment program jointly administered by GM and the UAW. Cablec company now makes skill levels as important a criterion as seniority in rehiring decisions (WSJ 6/4/86).

The most important change in deployment rules for management may be efforts to reduce the role played by seniority, especially the effects of "bumping" -- seniority-based reassignments typically following layoffs. Especially where jobs are specialized, management argues that transfers and promotions based solely on seniority often mean that unqualified people end up with the jobs; bumping is even worse because it shifts workers out of current jobs, disrupting workgroups and often requiring vast amounts of retraining. Xerox recently secured limits on the extent of bumping in return for a no-layoff clause; Cablec company now uses skill level as a criterion equal in importance to seniority in rehiring decisions. The UAW offered to reduce the role of seniority for intraplant transfers at Mack Truck (60).

A second set of deployment changes deal with work schedules. Recent retooling of many manufacturing facilities has sharply increased the amount of capital equipment, and management has argued for more work shifts to amortize this investment. High-tech manufacturing, for example, regularly works 12 hour shifts; the tire industry has pushed hard for adding regular weekend shift work at its newer facilities. Along with these schedule changes have been management demands to reduce or eliminate premium pay for shift pay, etc. that provides an impediment to these changes. The United Transport Union, for example, recently agreed to eliminate many of these premium payments in the railroad industry (DLR 1/30/86).

Changes in deployment rules are also being used to address fluctuations in production. The major airlines have rapidly followed American in hiring part-time workers (at lower rates of pay and benefits) to staff less busy airports; the Saturn agreement creates a second category of employee without the job security enjoyed by the primary group (employment fluctuations for the second group help provide job protection for the first group) (WSJ 7/10/85). The Newspaper Writer's Guild and the Associated Press recently reached an agreement to let employees share jobs, in part as a way of dealing with job losses (77).

4. Production Standards -- intensity of effort and manning levels for idiosyncratic jobs. These standards include crew size, effort levels, and work pace. They have been described as constituting the "effort bargain." They must strike a balance between the employer's interest in maximizing output and the employee's concern about being overworked. Production standards are closely tied to compensation rules, especially where systems

like measured day work are used, and are spelled out in union contracts. Such standards often effectively become ceilings.

Changes in these standards have the clearest and most direct benefit for management. It seems fair to say that most firms have tightened standards in some way -- stricter quality control, higher output levels, tighter personnel policies (e.g., absenteeism), etc. In some cases, these new standards stem from changes in other workrules, such as changes in the horizontal structure of jobs, and may be different without necessarily being harder for workers; in other cases, the standards are not the result of other job changes but are a kind of "speed up" that may make jobs harder for workers. The United Parcel Service (UPS) company, for example, has focused its labor cost reduction efforts largely on tightening production standards for workers. UPS organizes work in a traditional, time and motion fashion (it employs about 1000 industrial engineers) and is continually trying to lower the time required to perform individual tasks.

Workers in general are likely to resist tighter standards to the extent that they raise output per worker because these workrule changes are most obviously associated with job loss.

There has also been a general tightening of personnel standards covering issues such as absenteeism and employee misconduct. Many of these efforts fall under the heading of "positive discipline"(20), a policy of immediate and progressive penalties for employee misconduct. Such programs inevitably foster resistance; workers recently struck General Electric' newly redesigned plant in Lynn, MA in part over the handling of shopfloor standards (84).

5. Compensation -- the amount and type of compensation and the terms on which it is received. Most compensation systems in the U.S. attach pay rates to jobs, rather than to individuals; trade unions have encouraged this development with their interest in standardizing wages across workers and taking wages out of competition across competitors. As Lawler (1984) points out, even where employers have explicit performance appraisal programs, they generally breakdown because of the internal political difficulties associated with differentially rewarding workers.

Concession bargaining has obviously reduced wage premiums at unionized firms, and no doubt management will try to reduce wages down to market levels. Two-tier wage plans may be the most obvious long-term attempt to get wages down to market rates.

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13. (WSJ. It is important to note, however, that UPS also pays high wages, has historically had supportive relations with its union (Teamsters), and is generally seen to be an excellent employer.

Beyond that, however, the most important changes are those designed to impart greater flexibility to wage costs so that they vary with fortunes of the firm -- increasing in good times and decreasing in bad. Lump-sum payments fall into this category in that they do not raise base wage costs for future periods. Profit sharing, stock ownership, and other forms of performance-based pay not only impart flexibility but also try to tie the worker's financial incentives to those of the firm. The problem in principle with many of these plans is that they establish clearly that pay should be cut in downturns but are not nearly so clear about what happens in upturns -- what constitutes an upturn and how much should pay rise?

Beside the concern with flexibility, the other general trends in compensation rules are designed to reinforce the workrule changes outlined above. The most general of these are efforts to abolish across-the-board pay increases for systems of performance appraisal that will set pay increases for each individual worker based past performance. There are two basic problems with this approach. First, it becomes incredibly complicated to perform job evaluations on all these positions to identify what the tasks are, to set standards for each job (especially where the job changes), and then to evaluate the performance of each individual. Second, as Foulkes (1983) notes, systems of performance appraisal tend to break down in practice even in nonunion firms because of the political difficulties they raise (charges of subjectivity, etc.).

Perhaps the most important point about the traditional system is that it worked. It provided an orderly, if not always optimal, allocation of labor and provided some protection for workers against capricious management decisions. As Kochan and Cappelli (1983) argue, these rules bought labor peace in unionized situations at the cost of some efficiency. For management in the 1980's, the benefits of these arrangements were apparently no longer worth the costs.

### Revising Workrules

Employers in unionized firms have varied considerably in their ability to revise the system of workrules outlined above.<sup>15</sup> Some of the factors that affect the ability to change workrules are outside of the control of the parties (e.g.,

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14. Sockell (1985) finds that such plans do not necessarily have this effect on workers; one study finds that many stock ownership plans actually give employees nothing of value (4).

15. Nonunion employers obviously have more power to revise workrules, but resistance to change within these firms may also be severe. See McKersie and Klein ( ).

available technology); others lie with the employees (e.g., the strength and expertise of their unions). But many of the important factors governing the ability to change workrules are within management's influence and can be influenced by conscious management strategies. The arguments below describe some of these factors which explain the variance in workrule changes across firms.

#### Proposition 1: Business Strategies and Employment Security

The process of negotiating labor cost reductions through changes in the collective bargaining agreement is known as concession bargaining and is driven on the worker's side by an interest in reducing expected employment losses. The threat of job loss certainly appears to drive concession bargaining, and while the pressures of competitive product markets are typically behind that threat, employers' business strategies have been very important in creating such pressures. These strategies sharpen the wage/employment trade-off for unions through (as noted above) decisions about outsourcing, plant closings, allocation of work across locations, etc. The sharper the trade-off between employment and labor costs, the more likely are unions to grant concessions.

But securing workrule changes is quite a different process from securing wage cuts precisely because of the employment issue. Wage cuts reduce labor costs immediately and encourage the hiring of labor; workrule changes reduce labor costs at current output levels only if there are layoffs. Lessons from productivity bargaining (McKersie and Hunter 1971) remind us that workgroups are only interested in changing workrules if there is some assurance that the changes will not result in layoffs. The promise of job security requires a business strategy that is consistent -- typically a plan for business expansion such as taking back functions previously subcontracted. We found in the U.S. airline industry, for example, that extensive workrule changes were secured through negotiations only at carriers who could offer prospects for growth and employment security, contingent on workrule changes; carriers that could not offer such a strategy could not change workrules as readily even if severe employment losses were threatened (Cappelli 1985).

#### Proposition 2: The Role of Institutional Security

In addition to job security, acceptance of the union and its role within the firm is certainly necessary to secure its cooperation in any area, especially workrule changes. Unions obviously find it difficult to work cooperatively on one level of their relationship with the firm when management is threatening the union at another level. For example, General Motors could not get the UAW to consider work redesign efforts in the 1970's while it was pursuing its Southern Strategy of opening nonunion plants in the south. The complete redesign of traditional

workrules at GM's new Saturn plant, in contrast, represents a complete reversal of this situation; the UAW was actively involved in the job redesign process at Saturn in large part because GM agreed to have the UAW represent Saturn's employees before the plant was built.

Some companies know that they either do not have the resources or the strategies for the future that would facilitate jointly planned change but want new workrules badly enough to force them on their unions. Implementing changes through confrontation and within the framework of labor law involves the following steps: 1. insist on changes at the bargaining table 2. if no agreement is reached at the strike deadline, continue to operate the facility in the face of a strike 3. unilaterally impose the changes presented in management's last offer. Observers believe that management forced a recent strike at Santa Fe Railroad in order to force workrule changes there (WSJ?); a paper company we studied eliminated many job classifications and imposed a pay-for-knowledge system on its workforce when they returned after losing a strike; Texas Air used the protections of bankruptcy law after a strike was called to impose unilateral changes in its labor contracts (Cappelli 1986).

In general, the quality of the collective bargaining relationship, especially the amount of trust that the union has in management, clearly affects whether unions can be convinced that the firm will adhere to its business strategy and maintain employment. In this sense, trust plays an intervening role in determining whether workrules can be changed. The amount of trust is in large part a function not only of the circumstances but also of the style of leadership pursued by both management and labor (See Purcell and Gray (1986) for arguments about management style).

### Proposition 3: The Need for An Internal Model

The introduction and administration of a new system of workrules within an firm is a complex and idiosyncratic process that typically requires a range of expertise and resources. Firms are best able to manage the transition to a new system when they have a model of alternative workrule arrangements within the organization where many of these problems unique to the firm have already been worked out. Such models were often came from nonunion plants that were geographically isolated from the rest of the production facilities. (The isolation reduces the transfer of practices and employees from the older facilities.) At General Motors, for example, many of the innovative work designs currently being introduced in union plants were developed first as experiments during the 1970's in their nonunion facilities (Cherry 1982). GM's current cooperative enterprise with Toyota in California (NUMMI) is designed in part to create a new internal model -- based on Japanese practices -- for manufacturing within GM. Many of the innovations in work design



at Cummins Engine's main facilities in Columbus, IN were perfected first at their innovative, nonunion plant in Jamestown. TRW and Best Foods also recently transferred work systems established at nonunion facilities to their unionized plants (WSJ 4/16/85).

Internal models of innovative workrules can be developed even within traditional facilities. In some cases, the opportunity to develop a pilot project is created by the introduction of new technology in a subset of the operation. In other cases, such as railroads, subsidiaries or sheltered operations have been developed that reduce crew sizes in an effort to attract new business.

Casual observation seems to suggest that firms with an internal model of innovative workrules are able to reorganize work more quickly at their more traditional operations; firms like Cummins Engine, Goodyear, and others fit this category. It is not clear, however, whether in all these cases the innovative, nonunion model was established to help transfer workrule lessons to the rest of the firm, as at GM, or simply to enhance productivity at that plant. In all cases, the presence of the alternative model also serves as a threat to both workers and management at traditional operations; there is a competing model within the organization that may take scarce resources and jobs away from traditional facilities unless their productivity rises. Such a threat is effective even within firms that are otherwise sheltered from competition.

But the presence of an internal model and indeed the knowledge of how that model should be implemented of course do not guarantee successful workrule changes. For example, People Express is generally thought to have a system of workrules that is a model of flexibility and comparative advantage for management, yet it has had tremendous difficulties trying to impose some of this system on Frontier which it recently purchased even though the tasks to be performed are identical at Frontier. (74) The difficulties of meshing these two systems were so severe that they helped push People to offer Frontier for sale.

#### Proposition 4: The Power of a Changed Context

Strategic decisions at the business level also play an important role in managing the expectations created by workrule changes. Certainly many of the decisions that create pressure for concession bargaining also make the transitions in workrules easier to take; the threat of layoffs, for example, certainly lowers expectations and creates interest in workrule changes. Beyond that, however, workrule innovations are easier to affect where existing patterns of custom and practice on the shopfloor are broken. Perhaps the most effective way to do this is to get rid of the old facilities and rearrange the existing workforces.

Firms have had the greatest success introducing innovations when facilities are new, before informal practices are established and acquire normative force. (Lake Orion example of job transfers.)

More effective arrangements are those where firms have the resources to establish new plants, as with GM's Saturn facility, or where they can make retooling decisions coincide with workrule changes so that existing facilities are essentially rebuilt. TRW, for example, started a new facility in Lawrence, KA and staffed it with recent high school graduates who had no prior experiences against which to make invidious comparisons (Engle 1985).

Proposition 5: Fitting Changes into a System

Finally and perhaps most importantly, whether workrule changes will be effective depends on whether they can be fit together into effective system. Not all workrule changes are equally difficult to introduce. Those that involve horizontal and vertical changes -- what Walton (1985) calls the "High Commitment" work system -- require systematic changes in other workrules to support the new work system. There is an internal order to the workrule arrangements outlined above, and whether a change can be successfully introduced depends on what other workrules are in effect at the shopfloor. The following chart illustrates how changes in specific workrules drive changes in related rules:

Initial Workrule Change

Horizontal/ Vertical/ Deployment/ Standards/ Comp.

Resulting

Change

Horizontal

Vertical	X			X	
Deployment	X	X			
Standards	X	X			X
Compensation	X	X	X	X	

Horizontal changes are the most difficult to affect because they must be supported by changes in all other rules; compensation, in contrast, is the area most affected by other workrule changes. Every other workrule change may need to be supported by changes in compensation. The arguments below illustrate the kinds of changes in related workrules that are driven by a change in any one category of rules.

The broadening of jobs first creates a need for changes in vertical workrules. The greater flexibility that broader jobs give management makes the process of supervision much more complicated. Indeed, traditional forms of supervision where management tells workers which tasks to perform when may have to be abandoned in favor of systems where workers have considerable autonomy in work decisions. Second, deployment rules may need to change because different kinds of workers may be needed to fit these broader jobs -- e.g., workers with a wider range of skills and the capacity to learn new ones -- and new methods of selection may be needed to find them. The Borg-Warner company calculates, for example, that it takes ten times as much training for these broader production jobs than for the positions they replace (WSJ 6/4/86). In addition, greater flexibility in work schedules may be needed to take advantage of these broader skills.

Production standards also must change with broader jobs, focusing less on individual tasks and more on overall performance measures as the tasks associated with particular jobs become harder to define. These changes, in turn, force revisions in compensation systems. For example, when the content of the job is changing almost from day-to-day, and workers in the same classification may be doing quite different tasks, how can the usual wage/effort bargain be maintained? One answer might be to put production workers on salaries. Second, compensation must provide incentives for workers to acquire the additional skills and knowledge needed for these jobs.<sup>16</sup> Such skill-based or pay-for-knowledge systems reward the acquisition of skills rather than the tasks performed. At GM, for example, craft workers earn an additional 20 cents an hour for each three new tasks learned.<sup>17</sup> Virtually all employers trying to broaden craft and technical jobs have introduced similar plans (although they are still rare

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16. It is debatable whether adding more tasks to a job necessarily enriches it, meets worker needs, and provides nonpecuniary incentives to take on these broader jobs. Unless the additional tasks are interesting, such incentives are not created (see Hackman and Oldham, 1975).

17. Proctor and Gamble was one of the first to introduce these plans. They are called skill evaluation plans there and were introduced in the early 1970's.

for production workers). The pay programs must be tightly matched to manpower needs to prevent the acquisition of skills that are not needed and, in turn, to worker frustration. Many of these pay plans also run into the problem of "topping out" -- ceilings on skill payments end the incentives to learn new skills.

In general, the greater flexibility associated with expanding the horizontal job structure also creates greater management discretion and the possibility of decisions that are seen as unfair. Recent strikes at GM's Wentzville, MO and Lake Orion, MI plants apparently were associated with resentment and charges of favoritism about job assignments and pay for knowledge increases, respectively. They may also alter bargaining power on the shopfloor to the extent that skills and mixes of skills are created that are idiosyncratic to the operation and are very difficult to replace.

Vertical. One of the difficulties associated with changes in the vertical structure of jobs is that it takes a workgroup quite some time to begin to operate effectively as a team, and deployment decisions that disrupt the team (schedule changes, seniority-based layoffs and bumping, etc.) have to be avoided. Guest (197?) found, for example, that layoff decisions severely disrupted the QWL process at GM's Tarrytown plant. Just as different selection procedures are needed to find employees to fit broader jobs, they may also be needed to find workers who can handle the greater autonomy associated with these systems.

Finally, production standards and the process of setting them also must change when decisionmaking is pushed down the work hierarchy. As with broader jobs, the standards certainly must move from individuals to the workgroup. Where workers have more authority and must set or monitor their own standards, problems of compliance are raised. In particular, problems of collusion similar to output restrictions or "goldbricking" may be common where workgroups are asked to set their own standards. Another difficult question is assigning responsibility for meeting standards; to what extent is the group responsible? If their responsibility has increased vis a vi management, perhaps compensation ought to be rearranged to encourage higher standards and should look more like management's -- performance bonuses, incentive pay, etc. Otherwise, there are certainly limits to the amount of responsibility workgroups will take on just for fun.

Deployment. Changes in deployment per se generally make fewer demands on other workrules. Changes that reduce the role of seniority and increase the use of merit criteria in promotions, layoffs, etc. make new demands on job standards as they become the basis for many of these decisions. Similarly, innovations in scheduling that make it easier to move workers within the organization require modifications in traditional compensation systems which typically create financial incentives

to avoid flexible deployment (e.g., premium pay).

Standards. Tighter production standards raise conflicts mainly with compensation rules. To the extent that changes in standards are seen as making jobs harder, workers can be expected to demand more pay and to suffer a decline in satisfaction if they do not receive it. More importantly, changes in the structure of compensation are necessary to reinforce changes in standards -- encouraging higher levels of performance and the taking on of risks, etc.

Compensation. Again, virtually all of the important innovations in compensation currently underway are driven by changes in other workrules. Many of the self-standing compensation changes (e.g., making pay vary with the fortunes of the firm) can be introduced without changes in other rules; some, such as the introduction of performance-based pay, require clear standards against which to judge performance.

### Conclusions

The system of highly-specified workrules that developed during the post-war period has begun to unravel not only because of pressures from the market but also because of management strategies that both force and encourage workrule innovations. Management's interest in pursuing workrule changes and a value added strategy varies across firms according to their circumstances; their success in achieving changes also varies in large part with their ability to address the issues outlined by the propositions above.

The changes introduced in workrules generally seek to eliminate artificial restraints on decisionmaking and allow more flexibility in the use of labor. In a sense, the elimination of these restraints makes labor relations and the decisions governing it closer to a free market system. Certainly one aspect of this is to place workers much more closely in competition with each other: Wages and costs are no longer uniform across competitors; the presence of "internal models" within firms creates competition for jobs within the firm; the use of performance appraisals, merit-based pay, and individualized job standards creates competition between individuals.

There is relatively little doubt that the emerging system of innovative workrules will not leave workers better off. If costs can be reduced, some jobs may be saved. But where the competition is largely domestic, firms may find that they are

simply cutting costs to take business away from each other.<sup>18</sup> The new arrangements make it much more difficult for workers to increase wages and capture some of the firm's profits because wages are no longer taken out of competition across employers. Indeed, changes such as higher production standards and more variable compensation leave workers materially worse off in the short run. These new workrules also give management much more discretion and, in turn, create more opportunities for arbitrary and capricious decisions.

Certainly some workers may gain from horizontal and vertical workrule changes to the extent that they gain more autonomy and variety from them. But the primary purpose of even these workrule changes appears not to be to increase employee satisfaction and capture any productivity gains that might result; it is instead to reduce labor requirements. Indeed, there is no doubt that the innovations in workrules are designed to benefit management and that in many of these cases, it is the weakness of trade unions that allows their adoption. Recent changes in job classifications at AT+T and in flight attendant work schedules at TWA, for example, were imposed after unsuccessful strikes.

Flexibility in work decisions, however, does not inherently benefit management. It simply aids whichever group at the moment has the most bargaining power. In the 1940's and 1950's when U.S. unions had great strength at the workplace, they would use "flexibility" in work decisions to secure marginal improvements across situations and "whipsaw" the employer by demanding equal improvements across all situations. Management retreated behind a consistent system of formal rules in order to reduce these union gains. Accounts from the U.K. suggest that management is at present trying to impose a system of formal rules, not unlike that being abandoned in the U.S., to reduce the advantages that unions had gained from informal negotiations. Ironically, management in the U.S. may find that the more formal and traditional system of workrules is in fact more efficient if labor markets tighten, unions reorganize, and workers regain the bargaining power that they have lost over the past decade.

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18. For the industry as a whole, the effects of labor cost reductions on employment are very indirect; the cuts have to be big enough to lead to price reductions that combine with the product's elasticity to increase demand (and employment) enough to offset the cuts resulting from productivity gains. Certainly the economy gains from productivity improvements, but it is not so obvious that the economy as a whole gains from labor cost reductions that result, for example, from lower wages.

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