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RECENT UNION CONTRACT CONCESSIONS

by

Daniel J.B. Mitchell*

*Daniel J.B. Mitchell
Director
Institute of Industrial Relations (Los Angeles)
U.C.L.A.

and

Professor
Graduate School of Management
U.C.L.A.
(213)-825-4339

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Highlights

The recent spate of wage and other concessions in the union sector has attracted considerable public attention. To some extent, these adjustments can be viewed as a counter-reaction to a long-term trend toward a widening union-nonunion wage differential. However, the immediate causes of the concessions are threats of imminent plant closings, layoffs, and bankruptcies. A peculiar mix of a management hard line ("take a cut or we close the plant") and discussion of, and experimentation with, labor-management cooperation has accompanied the concessions.

Union concessions are not a new phenomenon, although they are unusual. During the post-Korean War recession, there was a similar episode, particularly in the apparel and textile industries. Two back-to-back recessions in the late 1950s and early 1960s, were associated with a period of "management hardening" symbolized by a prolonged steel strike. In both these periods, the mix of hardness and cooperation was also seen against a background of wage moderation. Hence, the current enthusiasm for worker participation in management, gain sharing, quality circles, etc. had its earlier counterparts. The earlier experience suggests that such enthusiasm tends to erode if not given external support.

An interesting question is why such behavior did not occur during the 1973-75 recession. Actually, there were concessions in some industries during this period. However, in major industries the timing of contract expirations and the use of escalators insulated union wages from the recession. The recession began in late 1973, after most of the major contracts had been negotiated. Even then, there was much initial confusion over whether a real recession was under way, or whether an aberration due to the gasoline shortage was being felt. The boost in oil prices and related inflation pushed up escalated wages and raised the "ability to pay" of employers in energy industries. By 1976-77, when the contracts expired, the economy was clearly recovering and inflation was rekindling, both factors adding to wage pressures.

To some extent, the 1979-80 bargaining round was a repeat of 1973-74. An OPEC oil shock and gasoline lines marked the onset of a period of economic slackness. As in 1973, most of the major settlements were locked in place by the time the recession was apparent. Unlike the earlier period, a prolonged period of softness in the labor market, combined with special factors in certain industries (import competition, de-regulation), created threats to job security which affected even senior union members. These added pressures led to the concessions.

Observers have been quick to label the union concessions as marking a "turning point." It is important, however, to distinguish between a temporary period of low wage settlements and a fundamental change in the way union wages are set. There is little to suggest, for example, that long-term contracts and escalator clauses are going to be permanently abandoned. During 1981 and early 1982, union negotiators in industries which were not facing imminent crises did not appear to react to the concessions occuring in distressed industries. Union and nonunion wage setters may well react to the lessening in price inflation which developed in 1981, but so far the concessions have not spilled over into sectors where imminent crises do not exist.

During episodes of wage concessions, interest in gain-sharing plans (of which profit sharing is an example) tends to increase. Such a tendency has been evident during the current period. A question for public policy is whether steps should be taken to reinforce this interest. For example, gain sharing could be promoted through tax incentives. Gain sharing permits wage sensitivity to labor-market conditions to be built into union contracts and nonunion pay systems. Such sensitivity could have the useful side effect of strengthening the anti-inflation effectiveness of tight money.

Contents

In recent months, there have been a succession of newspaper and magazine accounts which might best be titled "The Decline and Fall of the Union Movement." Typically, such stories note the erosion of the national unionization rate: the proportion of the workforce belonging to, or represented by, labor organizations. They note the declining success rate unions have experienced over the last two decades in representation elections, the apparently large number of union members who voted for Reagan, and the traumatizing effect the Reagan administration has had on the various federal programs supported by the AFL-CIO. To these are added reference to the various "concessions" that unions have negotiated during the last three years. The conclusion is generally that union wage settlements will be made more moderate in the future by these circumstances.[1/]

What should economists think about these developments? Is the union sector rounding a turning point or is a temporary aberration from traditional behavior being observed? Much emphasis is being placed on the wage settlements that were scheduled to be negotiated in 1982, particularly in autos, tires, petroleum refining, electrical equipment, trucking, and meatpacking. Given the close proximity of these negotiations, it is obviously difficult to make a definitive judgment on this issue. Rather, in the material that follows, an attempt will be made to place these recent events in historical perspective, to define what a "turning point" might mean, and to suggest some policy implications.

I. Long-Run Trends

As noted, there has been a steady erosion of the unionization rate. This development has been in evidence since the mid 1950s, when the rate (measured as claimed U.S. national union members per nonfarm payroll employee) stood at 35%. By 1978, the rate stood at 24%.[2/] The historical data do not include labor organizations not calling themselves "unions". Even with the addition of these groups, the unionization rate was only 25% in 1980 and would undoubtedly show a similar decline if available over a long period.[3/] The major bright spot for unions since the 1950s has been in the public sector, where collective bargaining became more commonplace and membership rolls swelled during the 1960s and early 1970s.

In the private sector, however, a variety of demographic, occupational, industrial, and locational trends have not been favorable to unions. The unionized workforce tends to reflect an earlier composition of the labor force. It is more heavily male, more heavily blue collar, more heavily concentrated in "older" industries such as manufacturing, and less well represented in the "sunbelt" states, particularly the southeast.[4/] Despite the well-known adverse labor-force trends, not all of the decline in unionization can be mechanically linked to changes in employment patterns. Nor are the continuation of these trends, by themselves, likely to have a heavy impact on the overall unionization rate over the next decade. If workforce projections of the Bureau of Labor Statistics are used mechanically to forecast the unionization rate, the projected trends suggest a further decline by 1990 of perhaps 2%.[5/]

Two points can be made about such labor-force explanations. First, by definition they cannot explain why unionization has not risen within the various employment categories. Why, for example, has American unionization not reached the levels achieved in Britain or Scandinavia? The sharp rise in the unionization rate from the 1930s to the 1950s suggests the danger of assuming that membership propensities are permanently determined. Growth of unionization during that earlier period was largely the result of rising propensities. Second, even if fixed propensities are assumed, unionization has been falling faster than the labor-force mix can explain. That is, the unionization rate within regions, occupational groups, and industries has tended to fall.[6/]

The union explanation for the apparent difficulties of organizing has centered on management resistance, particularly the growth of a management consulting industry aimed explicitly at defeating union organizing drives and/or eliminating existing unionization.[7/] It is impossible to measure the relative intensity of such activity, or whether it has increased in recent years. However, anyone in the industrial relations field cannot but be impressed by the number of solicitations making known the availability of anti-union services. It appears that much of the advice given consists of paying attention to "human relations," and providing "unionesque" conditions relating to such issues as grievances, job security, etc.[8/] This is advice that has been around for a long period of time--certainly since the 1920s when employers established company unions, employee representation plans, and various fringe benefits in the hopes of keeping independent unions out of their plants. Unions note, however, that recently the advice has been more overt and point to the establishment by the National Association of Manufacturers of a Council on a Union-Free Environment in 1977. It has also been noted that such overt employer activities are typically not found in Western European countries where unionization rates are higher.[9/]

While management resistance may well be the cause of declining unionization, a further explanation is needed of why management resistance may have intensified in recent years. One explanation for management resistance has always been a "sociological" one: that management resents the limits on its prerogatives and decision making associated with unions, apart from whatever tangible costs actually result. This explanation may well be valid, but it has limited utility in explaining <u>increased</u> resistance. The basic contractual devices which limit management decision making were in place by the mid 1950s.[10/] For example, grievance arbitration was well established by that time. Why should management experience increased resentment over these issues in the last few years?

It is possible, however, that the tangible costs of unionization have been rising. In my earlier Brookings study, I presented evidence--shown on Table 1A--that the union-nonunion wage differential had risen from the mid 1950s through the mid 1970s (with some interruptions).[11/] Most empirical studies suggest positive union effects on wages and conditions, causally related to unionization.[12/] Up through the mid 1970s, however, obtaining direct time series evidence on the union-nonunion differential was difficult because data were not collected by union status. Since the mid 1970s, the BLS has made available an index of union and nonunion wage change. This index, as shown on Table 1B, indicates a steady increase in the percentage pay gap between the two groups.

The widening wage differential between the union and nonunion sectors over a long period of time is at least a candidate for explaining increased management resistance to union organization. Obviously, the gap could be used as a union organizing tool. There is evidence that nonunion workers think that unionization would bring them increased pay.[13/] Both increased management resistance and increased attractiveness of unions to potential members could accompany a rise in the union-nonunion wage differential. If the wage gap explanation is accepted as a partial cause of the decline in unionization, implicit in that acceptance is the notion that the management resistance effect has outweighed the union-attractiveness effect.

II. Short-Run Developments

One possible outcome of a widening union-nonunion wage gap would be a reversal of the trend, eventually. There is evidence that groups whose wages get "out of line" tend to be pulled back into line. As expressed in wage-change equations, such effects are inevitably pictured as gradual. An abrupt realignment is not likely to be predicted by a relative wage coefficient. Thus, based on my earlier study, the widening of the union-nonunion gap shown on Table 1B would subtract about 0.5 to 0.7 percentage points from the predicted rate of union wage change by 1982.[14/]

What has attracted the interest of both journalists and economists is the rash of dramatic wage concessions that has occurred. Table 2 provides a selected listing of union settlements reached over the period 1979 to early 1982 that are notable breaks from past practice. Exactly how to define a "concession" is unclear. It might be argued, for example, that a union which could be expected to negotiate an annual rate of wage increase of 10%, but actually negotiates for 7%, has made a concession. Since there is great difficulty in predicting what an individual union could have been expected to negotiate in a given situation, the table omits such moderations. More particularly, contracts providing for nominal wage increases, but likely real wage decreases, were not included. There is much in the history of industrial relations which suggests nominal wage cuts, because of their overt nature, are regarded much more seriously than real wage erosions attributed to an excess of price inflation over wage inflation.15/

Five categories were defined as worthwhile for inclusion on Table 2. These were 1) wage cuts (decreases in the nominal wage), 2) wage freezes (agreements to not increase the nominal wage for an extended period), 3) premature renegotiations of existing contracts (the scrapping of, or overriding of, an existing agreement prior to an expiration or re-opener date in a manner which reduces the nominal wage specified), 4) an easing of a workrule restriction in a manner likely to decrease costs and increase flexibility for management, and 5) a catch-all category of other notable concessions. The situations included on Table 2 were gathered mainly from Current Wage Developments, a monthly BLS listing of contract settlements.

A total of 45 settlements appear on Table 2. Of these 21 involve wage cuts of someone's wage (in some cases not all workers are affected). In twelve cases, some kind of freeze was imposed. There are agreements which provided for wage cuts, but then permitted some or all of future scheduled wage increases to go into effect. In some cases, cuts in wages were scheduled to be restored or repaid as a lump sum at a future date. Descriptions of the settlements did not always make it clear if the agreement was made at a scheduled negotiation or if an existing contract was being interrupted. In 25 cases, however, it was clear that an interruption had taken place; in several other instances it was likely that such interruptions had occurred. The fact that existing contracts can be scrapped suggests a footnote needs to be added to theories of wage rigidity or insensitivity based on long-term agreements.

It is clear from the descriptions of the settlements of Table 2 that imminent plant closing, layoffs, and bankruptcy motivated the agreements. In some cases, when management's demands for concessions were rejected, steps were taken to begin implementing cutbacks of production and employment. These steps sometimes produced worker acquiescence. In a number of instances, the wage concessions were "sweetened" by implementation of a profit-sharing plan whereby workers would gain if the economic health of the employer was eventually restored. Instances of worker ownership or partial ownership are also reported. In some cases, wage increases were suspended or a portion of current wages was "put aside." This may have been intended by the union to indicate that the wage rates were merely in some ill-defined limbo from which they would emerge in better times. Explicit job security guarantees or agreements for advance warning of future layoffs were obtained in several settlements.

Some of the employers affected were particularly hurt by the poor economic performance of the post 1979 period (autos, tires). Others may have been victims of long-run trends which were, at most, aggravated by the general economy (newspapers, meatpacking). In three cases, the federal government was involved in imposing the concessions (Chrysler, Conrail, Milwaukee Railroad). De-regulation adversely affected some employers in trucking and airlines.

Not reflected on the table are changes in union-management relations that have occurred in some industries in recent years, including some of those affected by recent concessions. There has been much talk about worker enlistment by management in improving productivity, worker participation in management, and improving the quality of working life. A union representative was placed on the Board of Directors of Chrysler; similar moves were initiated at American Motors but were stymied by antitrust problems.[16/] A peculiar blend of cooperative rhetoric and toughness has emanated from management. There has been discussion in industrial relations circles of the need to end the "adversary relationship."[17/]

Even with the concessions listed, a substantial increase in unemployment among union workers occurred after 1979. But in some cases workers vetoed concessions and were laid off.[18] In other cases, local worker desires were not honored by national unions concerned about maintaining the integrity of industry-wide contracts.[19]

The Bureau of Labor Statistics (BLS) reports that in 1981 about 67,000 workers under major agreements experienced unscheduled contract reopenings resulting in pay cuts or freezes. Roughly 160,000 workers who negotiated in 1981 received first-year cuts or freezes. But 280,000 workers experienced unscheduled reopenings that led to extra pay increases. The average wage adjustment negotiated in 1981, including those workers experiencing freezes and cuts, was over 10%.[20]

III. Some Historical Perspective

The concessions made by unions since 1979 were unusual enough to attract media attention. But did they reflect completely new forms of behavior? It is well known that unions have taken wage cuts to preserve jobs. In his early text on unions, John Dunlop, for example, cites a 20% wage cut agreed upon by the Glass Bottle Blowers in 1908 to reduce incentives for automation. On the other hand, he notes that postures of "no reduction" have generally been the official stance and that unions have been reluctant to build formulas into their contracts that would induce cyclical wage sensitivity.[20]

When economic circumstances dictated wage cuts, unions have sometimes officially retained contractual rates but allowed informal undercutting.[21] This historical behavior is in line with some of the recent behavior noted on Table 2 in which official rates were placed into some kind of suspension rather than obliterated. It is also in accord with recent reports that employers in the trucking industry were paying less than contract rates in some areas, apparently with local union acquiesence.[22]

The BLS indexes of hourly union wages in construction and printing both showed declines in the early 1930s, although the reaction in printing--given the fall of consumer prices of 24% from 1929 to 1933--was quite mild.[23/] George Shultz's well-known study of the behavior of unionized shoe industry wages during the 1930s indicates the painful process by which wage decreases occurred. Union leaders who advocated wage cuts to preserve jobs exposed themselves to charges of "sellout" and attracted the attention of rival unions seeking to organize their members. Wage decreases tended to occur during downturns, i.e., when conditions were becoming worse, not when they were merely depressed.[24/]

i) The Post-Korean War Episode

Wage cuts have also been known in the post-World War II period prior to the recent wave of concessions. Immediately after the Korean War, some union workers experienced wage cuts in the garment and textile industries. These cuts occurred in a period of recession and slight decreases in consumer prices. Often they were not readily accepted and were preceded by strikes or imposed by arbitrators.[25/] But wage decreases were apparently not regarded as unthinkable at the time; the director of the Federal Mediation and Conciliation Service publically alerted bargainers to the possibility of cuts.[26/] Although escalator clauses today typically do not provide for wage decreases in response to price decreases, some of those existing in the early 1950s were symmetrical. As a result, some unionized workers did experience reductions in their cost-of-living allowances during and after the Korean War.[27/] The fact that escalators could no longer be counted on to raise wages may have contributed to the reduced popularity of such clauses.[28/] However, the common practice of separating the basic wage and the cost-of-living allowance tended to cushion the psychological impact; the official wage was not cut, just the allowance.

Other developments in the post-Korean War period are reminiscent of recent events. In some cases, workers rejected wage cuts negotiated by their unions--notably at Studebaker.[29/] Sometimes such rejections were followed by plant closings.[30/] In other cases, concessions were more artfully packaged--as at Kaiser-Willys--and were accepted.[31/] In contrast to the situations of confrontation were instances of labor-management cooperation. For example, employees purchased stock in their employers and unions provided financial assistance.[32/] Unions and management in distressed industries issued common appeals for governmental regulations which would increase employment.[33/] The frequency of strikes declined to a six-year low.[34/] In some instances unions permitted deviations from previous pattern-setting arrangements to accommodate individual employers.[35/]

The 1953-1954 recession also produced demands for job-security arrangements. In some cases, as at the Hat Corporation of America--the union was able to obtain only vague assurances of continued production.[36/] However, at the major automobile firms and in other industries, more dramatic concessions were obtained from management. For many years, there had been talk of a "guaranteed annual wage" for blue-collar workers which would shield their incomes from the ups and downs of production. Proposals for employment guarantees go back at least to the 1920s and a scattering of such plans existed before World War II.[37/] In 1955, however, a breakthrough occurred in autos and other industries when the modern "supplemental unemployment benefits" plan (SUB) was inaugurated in various versions.[38/]

ii) The Period of "Management Hardening"

During the period 1953-58, Table 1A indicates that the union-nonunion wage differential widened. But by the early 1960s, there was talk in industrial relations circles of a "hardening" on the management side. A prolonged and bitter strike occurred in the steel industry in 1959, interrupted by a Taft-Hartley injunction. Steel management conducted a major public relations program aimed at picturing itself as the victim of restrictive workrules. In the electrical equipment industry, a bitter strike also occurred in the late 1950.[39/] Management in the automobile industry began to increase its interfirm cooperation during negotiations.[40/] In newspaper publishing, airlines and railroads, "mutual assistance pacts" and strike insurance plans were established which provided aid to struck employers.[41/] These developments occurred against a background of two recessions, one in 1957-58 and a second in 1960-61.

Table 1A suggests that union and nonunion pay rose at comparable rates during 1958-1964, in contrast to the earlier widening of the wage gap. Decreases in wages were rare in the early 1960s, but decisions not to increase union wages were quite common. Over 27% of union workers in manufacturing in 1962 received no general increases of any type.42/ Strike frequency declined. It might be noted that it was in the early 1960s that econometric studies by Perry and others found evidence of below-normal wage changes, especially in "visible" industries.43/ These were interpreted as indications of success of the wage-price guideposts program. An alternative explanation could be that there was a management hardening, provoked perhaps by union wage gains in the late 1950s, and that this hardening persisted into the 1960s. Or perhaps the guideposts reinforced the hardening stance.

There is evidence in the steel case of a traumatizing effect of the 1959 strike. Labor and management believed that the strike had induced domestic steel consumers to sample foreign suppliers and that permanent losses had thus been suffered. A considerable effort was made at promoting labor-management cooperation during the early 1960s by both sides. Most notably, a "Human Relations Committee" was established which dealt with areas of mutual concern and which negotiated a series of moderate one-year agreements. During this period the steel escalator clause was dropped. The difficulties surrounding such cooperation are made apparent by the subsequent loss of office of the Steelworkers union president on grounds that he had been too cozy with management.44/

Other instances of labor-management cooperation appeared during the early 1960s, notably in West Coast longshoring, Kaiser Steel, and Armour. On the west coast, the International Longshoremen's and Warehousemen's Union and the Pacific Maritime Association (a bargaining group representing stevedoring and other employers) engaged in what was commonly referred to as "productivity bargaining." The resulting "Mechanization and Modernization" agreement, which lasted into the 1970s, provided for acceptance by the union of various workrule changes to permit automation and handling of containerized freight. In exchange, various benefits and job guarantees were provided. The agreement, first reached in 1960, yielded large increases in productivity and cost savings.[45/]

The Kaiser "Long Range Sharing Plan" arose out of the steel strike in 1959 after Kaiser reached a separate settlement with the Steelworkers. A committee was established, headed by George W. Taylor who had chaired the Taft-Hartley emergency board of inquiry in the steel dispute, to consider issues such as technical change, worker displacement, and other matters of concern to both parties. In late 1962, the committee announced its new plan which provided for workers to receive a share of productivity gains, calculated by a formula, and various employment and retraining guarantees.[46/]

In meatpacking, the Armour Automation Committee was established in 1959 under the co-chairmanship of George Shultz and Clark Kerr. The committee provided a forum for the study of employment problems caused by plant closings and technical change. It was credited with providing retraining and placement services for displaced workers.[47/] Generally, there was much talk and discussion in the early 1960s about automation, structural unemployment, and related issues. This discussion was ultimately reflected in the establishment of various "manpower programs" by the federal government. In some respects, the concern and discussion about automation in the early 1960s can be compared to the recent discussion about plant closings, "robotics," and keeping pace with Japanese technology.

It is clear that the current atmosphere of concessions has precedents in the past. During prior episodes, there has usually been a period of economic slackness and a threat to job security. A paradoxical mixture of management aggressiveness and experiments in labor-management cooperation seems to develop in such periods.

IV. The 1973-1975 Recession

A severe recession afflicted the American economy beginning in late 1973. The official unemployment rate peaked at 9% in May 1975, the highest rate then reached in the post-World War II period. It might be asked, therefore, why wage concessions were not widely in evidence during 1973-1975. Even apart from the recession itself, productivity performance was generally poor after 1973. While the cause of the productivity slump has been much debated, it might have been expected that--regardless of cause--union wage settlements would show signs of the decrease in economy-wide "ability to pay."

First, it should be noted that there were instances of concessions and shifts in wage behavior during the 1973-75 recession and its aftermath. In the newspaper industry, for example, contracts were reached between printers and owners in New York City and Washington, D.C. which provided for an end to restrictive workrules in exchange for "lifetime" job guarantees and early retirement bonuses. Similar arrangements were later worked out for commercial printers.[48/] Publishers were prepared to take a hard line; the Washington Post broke a strike of pressmen in 1975.[49/] Construction union wage settlements soared after federal wage controls were lifted in early 1974, but scattered wage freezes, wage reductions, and workrule modifications were subsequently reported.[50/] Even before the recession was officially under way, wage freezes and workrule concessions were reported at financially-distressed breweries in the New York City area. Wage reductions were also reported in the airline industry at Pan Am and TWA. Management at Eastern Airlines proposed wage concessions which were initially rejected, but later accepted when tied to profit sharing.[51/]

Probably the most dramatic shifts in the behavior of union wages came in the public sector. In the late 1960s and early 1970s, a significant body of opinion held that the public could not "take" a strike of government employees and that, therefore, public-sector unions could be expected to negotiate oversize wage settlements.[52/] In some sectors of government, wages did rise more rapidly than in private employment during the late 1960s.[53/] However, by the mid 1970s, the New York City fiscal crisis provoked a series of wage freezes and other concessions. It has been argued that New York City's problems had a "demonstration effect" on wage settlements in other municipalities.[54/]

The taxpayer revolt of the late 1970s also seemed to depress public-sector wage adjustments. Table 3 divides government jurisdictions into those with full-time public workforces which had above and below-average unionization rates in 1979. Over the period 1975-79, government wages at the state, local, and school-district levels rose more slowly in the heavily-unionized jurisdictions than in the lightly-unionized ones. The heavily-unionized jurisdictions tended to be in states where per-capita incomes and private-sector wages were also rising more slowly than in other areas. However, even within the two unionization categories, government wages seemed to rise more slowly than private-sector wages.

A second point on the period after 1973 is that the slump in productivity improvement may have made its influence felt in some major contract settlements. It is true that union wages were more insulated from the productivity decline than nonunion. But the "3% plus escalator" formula enshrined in the 1948 General Motors contract showed some erosion. Since escalators generally provide less than 100% protection against inflation, high rates of price increase erode the real value of the 3% factor. Beginning in autos in 1973, and then in auto parts, metals, apparel and other industries, escalator "diversions" became commonplace. Typically, these consisted of putting some part of the wage increases specified by the escalator into the financing of some benefit, often pension improvements.[55/] In the 1979 auto settlements the 3% factor was further eroded by applying it to the base wage <u>excluding</u> the cost-of-living allowance.[56/]

It is true, however, that during the 1973-75 recession, wage concessions were less visible than has been the case recently. Table 4 tracks a selected group of major union negotiations over the period 1973-1981. The table shows the actual results of settlements reached during the period 1973-1978. (Thereafter, a 10% price inflation is assumed for escalated contracts). Settlements with relatively low rates of increase in 1973 (electrical, petroleum, tires, and trucking) were negotiated during the first half of the year. Although inflation had begun accelerating from the low point reached in 1972 (3.4% on the Consumer Price Index), the rate of inflation that had been achieved earlier may have moderated these initial settlements. In addition, wage and price controls were still in effect.

The larger settlements reached later in 1973 (meatpacking and autos) were concluded in a period when it was clear that inflation was accelerating and wage-price controls were being lifted. In 1974, inflation as measured by the CPI reached a (then) post-World War II peak and wage-price controls were terminated. The 1974 settlements reflect these inflationary pressures.

It is evident from Table 4 that the existence of an escalator clause in contracts reached in 1973-74 made a large difference in the wage increase actually received. The 1973 contracts providing the lowest rates of wage increase either had no escalator (petroleum refining, tires) or had escalators with "caps" which prevented inflation above a specified level from influencing wage adjustments (electrical equipment and trucking). In 1974, petroleum proved an exception to this generalization. Although the nonescalated contract did not expire until 1975, and contained no re-opener clause, the oil companies agreed to an unscheduled 6% wage increase on top of what the contract specified for the second year. At the time, the substantial boost in OPEC prices had dramatically raised oil industry profits, gasoline shortages had occurred, and the industry was not in a position to play the hard-hearted employer. After all, even less well off employers were making similar adjustments.[57]

Despite the occasional availability of such unscheduled wage adjustments for inflation, the importance of escalator adjustments to the union sector is clear from Table 5. Since 1973, roughly one-fifth to one-third of the annual wage adjustment experienced in the major union sector (private agreements covering 1,000 or more workers) has come from escalators. This proportion tends to rise and fall with the rate of CPI inflation and with the percentage of workers covered by escalator clauses, a percentage that increased dramatically during the contract negotiations of 1974 and 1975.

Beginning in 1976, the Bureau of Labor Statistics has made available tabulations of the wage increases experienced under expiring major union agreements by escalator status. The estimates tend to understate the wage increases experienced under escalated contracts, since the BLS makes its calculations just prior to the year of expiration and does not impute further CPI increases for that year. Nevertheless, Table 5 indicates that wage increases under escalated contracts have consistently outpaced those under unindexed agreements. In particular, for contracts expiring in 1976 (which were negotiated during 1973-75), the escalated/nonescalated wage ratio appears to have risen significantly.

Apart from the issue of escalation, accidents of timing conditioned the outcomes of wage settlements beginning in 1973. Officially, the recession of 1973-75 did not get underway until November 1973. By that time, all of the 1973 contracts shown on Table 4 were settled or largely concluded. The only signs of a concession in the 1973 contracts were certain less favorable terms negotiated for workers at the electrical equipment divisions of General Motors (Delco and Frigidaire), where auto-pattern wages had reportedly gotten out of line with those of competing electrical firms.[58]

Even in early 1974, there was still a good deal of uncertainty about what was happening to the economy. The oil embargo and price controls together produced gasoline shortages that particularly affected industries such as automobiles and mobile homes. It would have been possible to confuse the beginnings of a recession with the transitory effects of a gasoline supply problem. Inventories piled up in the fourth quarter of 1973--a symptom of unanticipated or misunderstood recession--and actual disinvestment of inventories did not occur until early 1975.

The major industry which negotiated in 1974, and which might have been expected to be recession-prone, was steel. Normally, the steel negotiations would have taken place over the summer, since the contracts expired on August 1. However, the parties to the basic steel agreement--ever mindful of the traumatic steel strike of 1959--had created the "Experimental Negotiating Agreement" (ENA) in March 1973. ENA prohibited national strikes and created an arbitration panel to make a binding settlement if the parties had not reached one on their own by April 15, 1974. A settlement was reached privately before the self-imposed deadline. In exchange for its no-strike pledge, the union had received a guarantee that the 1974 agreement would contain at least an increase of 3% plus the escalator for each of the next three years.[59/] Thus, the basic steel wage formula for 1974 was locked in by early 1973.

Table 6 shows the cyclical responses of output and employment in the nine industries whose contracts were reviewed on Table 4. Over 1973-75, declines occurred in output and employment in electrical equipment, autos, tires, trucking, and steel. Meat-packing showed a slight decline in employment; its figures are distorted by the meat shortage of 1973. Output decreases in petroleum refining occurred, but as noted earlier, the oil industry was in no position to claim poverty, either in 1974 or 1975. Coal mining output and employment increased in response to the rise in energy prices. Hence, there was no reason to expect a restrained wage settlement in that industry. Finally, although employment fell in telephone communications, output rose, reflecting strong secular productivity performance.

Thus, the story of the 1973-75 recession's impact (or lack thereof) on union wage settlements is partly one of timing and partly one of the surge in price inflation and its wage impact through escalation. Most settlements came too early to be affected by the recession. Those that came later (coal, petroleum under the unscheduled 1974 reopener and in 1975, and telephones) were not hurt by the recession. However, even though the early contracts were "wrapped up" before the recession began, it would still have been possible for the parties mutually to agree to reopen early in the light of the recession, as has recently occurred. Hence, the 1973-75 recession story is not complete without an explanation of why such reopenings did not occur.

i. Marginalism versus Inframarginalism

There is a long history in labor economics of attempts to model union wage setting. In many cases, the models basically picture the union as a labor-supplying firm which faces a demand curve (the derived demand for labor) and maximizes some goal under that constraint. The maximand may be the wage bill--as in some early models--or "utility" in later versions.[60/] There are difficulties with this approach. First, it suggests that a "marginalist" model well describes union behavior. The union is pictured as facing a "wage-employment" trade-off (the downward-sloping demand curve for labor) and as making incremental adjustments to obtain the optimum mix of the two "goods,", wage rate and employment. Second, such models tend to neglect the bargaining nature of the negotiations process, i.e., that the wage outcome is determined by the interaction of two parties, not just dictated by the union.

An obvious issue raised by a marginalist approach is the degree to which a wage-employment trade-off exists, especially in the short run. Handy estimates of elasticities of labor demand are not available, although some research suggests unions face inelastic demand curves.[61/] However, examination of the ratio of labor costs to total costs can provide an indication of the degree of demand elasticity.[62/] Table 7 provides such estimates for 1972, i.e., for the year just prior to the 1973-75 recession.

Barring substitution of other factors for labor (a reasonable short-run assumption) and assuming a labor cost pass through, the percentage reduction in price that could result from a reduction in labor costs is simply the ratio of labor cost to total cost multiplied by the percentage labor cost reduction. That is, a 20% labor cost ratio suggests that a 10% wage cut could translate into a 2% price reduction. The output effect can be estimated as the product elasticity of demand for the employer's output times the price reduction.

Table 7 shows that the labor cost ratio was 33% or less in steel, petroleum, autos, meatpacking, and tires. The relatively high ratios appear in telephones and coal mining, which were experiencing increased output during the 1973-75 recession, and in trucking (where regulation held down nonunion competition). Only in electrical equipment was there a relatively high ratio (still below 50%) and no insulation from recession. Generally, if unions were sensitive to marginal wage-employment trade-offs, they might have found few gains at the margin from wage concessions due to low labor-demand elasticities.

In principle, unions might have raised the effective elasticities up to unity by making combination deals involving wage concessions and employment guarantees. As a first approximation, an employer might be indifferent between a 10% layoff and a 10% wage cut (below what wages would otherwise be). Either adjustment cuts the payroll by the same 10%. Since the deal would have to be made through a bargaining process, the effective elasticity that might be obtained could be less than one. An employer might be reluctant to guarantee both a wage (even at a reduced level) and a level of employment, thus turning labor into a totally-fixed cost in the face of uncertain product-market conditions. But even assuming that a one-for-one trade-off could be obtained, the political process in the union might not find it to be acceptable.

There is recent recognition in the labor economics literature that union decision making responds to senior workers who are inframarginal with regard to layoffs--thanks to the seniority systems which they themselves helped to impose.[63/]

It is unlikely therefore, that small marginal gains in employment that might be obtained from wage concessions would appeal to such workers. Unless the "median voter's" job is threatened, concessions would simply produce income reductions for the majority in exchange for extra employment for the minority.

Thus, unless there are imminent threats of bankruptcy or permanent plant closings--crisis situations which threaten senior workers--it is unlikely that union wage behavior will be strongly sensitive to recessions. The 1973-75 recession created sharp job losses, but not a sense that these losses would be permanent unless remedied by a wage concession. In 1973, the target auto company chosen by the Autoworkers to set the wage pattern for the "Big 3" was Chrysler. Clearly, the union did not perceive Chrysler to be a marginal firm whose existence might be threatened by strike. Similarly, Ford was chosen in 1976. These choices are in sharp contrast to the 1979 bargaining round

in which GM was selected as the industry's most viable firm. Had Chrysler and Ford been perceived as being in imminent danger during the 1973-75 recession, unscheduled contract reopenings might well have occurred.

ii. Bargaining Costs

An infra-marginal model is helpful in a short-run context. However, it does not explain why unions during the 1973-75 recession did not take account of the long-term consequences of existing wage formulas--such as 3% plus escalator--consequences which would not appear until the late 1970s and early 1980s. Obviously, it would have taken a good deal of foresight to project these consequences, and that is surely part of the explanation. But some of the explanation is also to be found in the nature of the collective-bargaining process itself. That process focuses attention on short-run strategic considerations and away from possible long-term results.

The primary way in which unions obtain above-market settlements on wages and other conditions is by threatening to strike. A strike, in many industries, will impose substantial costs on the employer. However, the employer is in a position to impose costs on union members, by deciding to "take" a strike or, in some cases, through lockouts. For major contracts, strikes at the time of contract negotiations are not rare. Kaufman, for example, calculated that 13% of major contract negotiations in manufacturing during 1954-1975 resulted in a strike.[64/] Strikes occurred in 11-15% of the negotiating situations monitored by the Federal Mediation and Conciliation Service during fiscal 1971-1980.[65/] In some industries, such as autos, a strike at renegotiation time was the usual course of events. Major auto strikes occurred at every contract expiration from 1955 through 1976.[66/] Only in 1979 was this pattern of behavior altered.

In many negotiations, therefore, the strategic considerations regarding potential strike costs will dwarf the long-term consequences of particular wage formulas. The temptations for bluffing are evident to both sides and a union is likely to be cautious about accepting an "ability to pay" argument from management. Even if the union accepts the argument, it must be careful about its response. If management comes to believe that the union will easily back down when faced with economic arguments, future conflicts might develop when the union finds it has to "teach" management that its members are truly militant.

It is extremely difficult to specify a rigorous, yet realistic, model of strategic behavior. However, any such model of union-management bargaining must include strike costs, bluffing, and the fact that today's stance in negotiations can affect tomorrow's perceptions. These considerations make it difficult for the parties to collective bargaining to deal with long-term, hypothetical consequences of their behavior. Only when the long run finally arrives does the need for changes in outcomes become apparent.[67/]

V. Bargaining After the 1973-75 Recession

The trough of the 1973-75 recession was reached in early 1975. Table 6 shows that in all but one of the industries included on that table, output rose during the 1975-76 period. These output gains translated into employment gains except in telephones (where the long-term rate of rapid productivity improvement continued) and tires (where a lengthy strike reduced the annual employment totals). There was every reason for bargainers to believe in 1976 and 1977 that the employment outlook was bright.

Although inflation slowed markedly in 1976, union negotiators had recently weathered an extremely inflationary period. Demands were made in 1976 and 1977, for escalator clauses where none existed and for the removal of caps on those escalators which had such provisions. Except for the petroleum workers--who remained on two-year contracts--these demands were met. An escalator was added to the rubber contracts (see Table 4) and the cap was removed in trucking. A cap was also removed in electrical equipment, although the new escalator was qualified by a "corridor." Management at General Electric--the lead company in the electrical negotiations--apparently decided in 1976 that improved relations with its unions was a matter of priority.[68/]

The only contract on Table 6 in which an escalator was dropped was in coal mining. This contract expired in 1977. The coal industry has a history of difficult labor relations. The 1977 negotiations were made more complicated by cuts in pensions shortly before the contract expiration due to an insufficiency in the pension fund and earlier "wildcat" strikes.[69/] A prolonged strike ensued, marked by several tentative settlements and rejections, during which the fate of the escalator teetered uncertainly. In the eventual settlement in 1978, although the escalator was removed, a certain component of the wage increase was labeled as "cost of living."[70/]

Generally, the climate during the period 1976-79 favored an acceleration of wage settlements. Employment was rising and price inflation was accelerating. This climate proved frustrating for the Carter administration which persistently expected inflation to decelerate. In early 1978, the administration proposed a voluntary price and wage "deceleration" program.71/ Technically, the 1978 coal settlement did represent a wage deceleration from the previous contract. However, the administration became convinced--apparently erroneously--that an energy emergency was being created by the coal strike and attempted to obtain a Taft-Hartley injunction. When this attempt failed, the public perceived the administration as having been unable to influence a major settlement.72/

Subsequently, the administration announced a more formal program with a 7% guideline for wage increases. The evidence on the effect of this program on aggregate price and wage indexes is mixed.73/ It is obviously even more difficult to judge its impact on individual contracts although some agreements were explicitly tied to the guidelines.74/ There did appear to be an initial impact on the petroleum contracts in early 1979. Although the first-year adjustment exceeded 7%, over the contracts' two-year duration the annual increase would have averaged about 7%. This "front loading" was permitted under the guidelines. The parties, however, inserted a reopener clause for the beginning of the second year and took advantage of the liberalized 1980 guidelines.

Table 4 shows the escalated contracts for the period beginning in 1979 costed on the assumption of a 10% per annum CPI inflation. Although all exceeded the nominal 7% standard (and the later 7.5 - 9.5% standard for 1980 contracts), many of the contracts met the technical requirements of the guidelines. Under the guidelines program, escalated increases were costed prospectively under modest inflation assumptions. This procedure was initially adopted to encourage escalation at a time when the administration anticipated a slowdown in inflation. In the case of the Teamsters contract, the administration also made various rule changes permitting certain components of the settlement to be excluded from the computation.[75/] In other cases such as in autos, the administration found the settlement to be acceptable after a stipulation from the employer not to pass the full cost into prices.[76/]

To some extent, the period beginning in 1979 resembled the early phases of the 1973-75 episode. A second OPEC shock led to sharp oil price increases. Oil price controls and turmoil in Iran combined to produce a gasoline shortage. This, in turn, swung American consumers away from large domestic-built cars, causing particular distress in the auto and tire industries. Initially, damage was sectoral and might well have been perceived as a temporary aberration.

The tire contracts expired in April. By that time there had been sharp increases in gasoline prices, which might have suggested tough times ahead for the tire industry. If such a situation was foreseen, however, its impact seemed to be a weakening on the management side. In March, Firestone announced that it would pull out of the industry's mutual assistance pact which provided aid to struck employers. It promised the Rubber Workers that it would accept whatever was negotiated with the other companies in return for a no-strike pledge.[77/]

As in 1973, the onset of recession was late to influence several of the 1979 settlements. Its major impact was seen in the Chrysler case, but even the Chrysler outcome was largely dictated by Congress (as the price of loan guarantees) and then by the loan authorities. Prior to federal intervention, the Autoworkers gave Chrysler only limited relief on fringes and delays in implementing certain wage increases. (see Table 2).

Two major contracts in 1980, telephones and steel, show little evidence of the recession. In the telephone case, employment expanded in 1979-80. Thus no impact might have been expected. The Communications Workers noted at the time of the telephone negotiations that the economic outlook was "confused."[78/] Steel was again negotiating early under the ENA, and the "3% plus escalator" rule was already embedded in that arrangement. In fact, despite ENA's guarantee, the basic wage increase was less than 3%, perhaps a weak sign that the recession was having some impact.[79/] Finally, the 1981 coal settlement did show some signs of concern about job opportunities and nonunion competition. The rank and file rejected an agreement which would have removed the "tax" imposed on coal tonnage, union and nonunion, on the grounds that this would stimulate substitution of nonunion coal. As a result, the tax--which is used to finance benefits--remained in the contract.[80/] Internal dissension in the Mineworkers union made other adaptations unlikely.

VI. Has a Turning Point Been Reached?

The recent wave of wage concessions and early re-negotiations has led to predictions of a "turning point" in industrial relations. As one observer put it, "...We're seeing the beginnings of a whole new collective bargaining process that should make many more companies ultimately capable of competing in their markets."[81/] But before engaging in such speculation, it is important to consider what might be meant by a turning point.

Consider equation (1) as representative of a large family of empirical wage-change equations which have been estimated over the past two decades.

(1) $$\%W = a + bU^{-1} + c\%P + dD_c + eD_f$$

Let $\%W$ = the annual rate of wage change in the union sector, U^{-1} = the inverse of the unemployment rate (or some other pro-cyclical measure), $\%P$ = the rate of price inflation (presumably lagged), D_c = a dummy variable equal to 1 in the current period, and D_f = a dummy variable equal to 1 in some future period. Significant dummies could indicate what Perry calls a "norm shift."[82/]

Various possible outcomes might emerge from the current period of wage concessions. It might simply be the case that $d<0$ and $e = 0$, i.e., that wage change in the current period will be below expected levels. If this is the only effect, wage levels in the indefinite future will be lower, but the process of future wage change will be indistinguishable from previous experience. On the other hand, it is also possible that $d<0$ and $e>0$. Under such circumstances, current wage moderation might be wholly or partly transitory; wage concessions today will be offset (or partially offset) by "catch-up" adjustments in the future. Once the catch-up occurs, the basic wage-change process remains what it was in the past. Under both these outcomes, union wage change might well fall short of nonunion for a time--a break from the past as shown on Tables 1A and 1B.

More complex outcomes are also possible. The basic behavioral coefficients, a, b, and c, might be altered. A fall in "a" might be interpreted as a reduction in the expected basic wage adjustment, e.g., 3% plus escalator might become 1.5% plus escalator. This outcome, too, might lead to cessation--and possibly reversal--of both the short-term and the secular rise in the union-nonunion wage ratio.

A still more fundamental change would be an increase in the "b" coefficient. A larger "b" would imply that union wage settlements would become more sensitive to real business cycle conditions. For such a change to occur, at least one of three behavioral modifications would have to take place. The parties could cease to negotiate long-term contracts (or could place frequent reopeners in long-term contracts) and thereafter demonstrate substantial sensitivity in the resulting short-duration contracts to real business conditions. Or the parties could negotiate long-term contracts as they have in the past, but add to them contingency clauses sensitive to the business cycle. Thus, a contract might contain a provision tying some element of compensation to profits, sales, output, or productivity (all cyclically sensitive) just as escalator clauses have tied compensation to movements in the CPI. Finally, the parties could negotiate long-term contracts as in the past, but correctly anticipate business-cycle swings and build wage responsiveness to those anticipated swings into the agreement.

The impact of a behavioral change on the "c" coefficient is unclear. Theoretically, it is often argued that the "c" coefficient should be equal to 1, i.e., that bargaining should take place in real terms. However, it is in the long-term escalated agreements that the coefficient has most clearly fulfilled this expectation.82a/ If contracts were to be shortened, or if escalator clauses were to be dropped, the "c" coefficient might fall below unity. If %P is lagged, a drop in "c" would suggest reduced inflation momentum; last period's inflation would have a smaller effect on current inflation.

Employers in economically-distressed industries would undoubtedly prefer a situation in which $d<0$ and "a" is reduced. However, distressed employers might obtain sufficient relief to survive, even if the only effect turned out to be $d<0$, $e>0$. Much depends on the short-term course of aggregate demand. A failure to scale down "a" might ultimately threaten such employers, but here much depends on whether the productivity slowdown of the 1970s is reversed in the 1980s. Some researchers have argued that the productivity slump was largely a one-shot affair; if so a scaling down of "a" might be unnecessary.83/ In any event, it has already been noted that the 3% plus escalator formula eroded in real terms during the 1970s due to escalator diversions and escalators providing less than 100% protection. This erosion may suggest a scaling down of "a".

There is reason to think that old tendencies in labor-management relationships were based on strong motivational factors and that previous behavior will tend to reassert itself, absent some external intervention. The existence of the long-term contract is intimately tied to strike avoidance. In distressed times, both parties may be especially concerned about the impact of strikes and may be able to work out cooperative relationships without long-term contracts. The procyclical nature of strike incidence has long been noted in the labor economics literature.84/ However, ultimately there is no reason to suppose that long-term contracts are a thing of the past.

In order to negotiate sensitive long-term contracts either accurate forecasts must be made of the future course of economic events or contingency clauses must be added. Previous experience suggests that the one contingency clause that regularly has been built into contracts is the escalator. But contingencies based on events other than inflation have been built into contracts. Some union workers are covered by profit-sharing or other gain-sharing plans. Rarely have unions demanded such plans, however. Where they exist, such plans were often established before the union came on the scene.85/

During periods of distress, gain-sharing arrangements, which effectively raise the "b" coefficient, are sometimes put in place to make concessions more palatable. In such times, gain sharing may really be loss sharing, but coupled with the hope that if conditions improve some recoupment of the loss may be possible. Gain-sharing plans are typically geared to the employer's economic condition and thus questions can be raised by the union concerning the accuracy of the index used. Such problems do not arise with escalator clauses since the CPI is published by a neutral government agency. Thus, with gain sharing may come demands to open the employer's books to union scrutiny. When employers are suffering losses, they may be amenable to such demands; in more prosperous periods they may resist them.

Also accompanying gain sharing may be demands for union participation in management. Although the firm's fortunes may depend heavily on general business-cycle conditions, there can be a wide diversity of interfirm performance related to management quality and foresight. The historical record suggests that both union-management cooperation and gain sharing are fostered during periods of distress. But such arrangements can erode when circumstances improve. The various cooperative arrangements which arose during the "management hardening" period of the early 1960s--discussed earlier--have long since ceased to operate.

In short, the current wave of wage concessions and re-negotiations may well result in lower union wage levels--at least for a time--than past trends would have suggested. There might even be a change in the old 3%-plus-escalator formula toward a more modest goal. Indeed, this adaptation may have already begun in the 1970s. A permanent shift to short-duration contracts seems unlikely as does a permanent increase in sensitivity to business cycle conditions (an increase in "b"). These conclusions assume no external intervention in the contract-determination process.

VII. The Public Policy Question

A key issue for public policy is whether there should be some type of intervention. In the recent past, intervention in bargaining has meant controls and guidelines. While some might argue that such intervention is still warranted--that government should reinforce the downward pressure on wages with suggested or mandatory ceilings for anti-inflationary purposes--the prospects for such programs are nil. Nor is it evident that controls and guidelines would be desirable. But there have been suggestions that other forms of intervention should be contemplated.

Some observers have argued that long-term union contracts have contributed to wage rigidity in the U.S. relative to other countries. One recent proposal has called for a ban on long-term contracts and escalator clauses.[86/] The goal of such a proposal is to raise the "b" coefficient. Were "b" higher, wage inflation would react more quickly to economic slack, thus raising the efficiency of demand restraint as an anti-inflationary device.

An obvious difficulty with a ban on long-term contracts is that it would increase the frequency of negotiations and therefore the risk of strikes. Moreover, it is not clear now such a ban would be enforced. Long-term contracts might be made legally nonbinding, but parties would still be free to maintain a "gentlemen's agreement." Union contracts were not made legally enforceable in federal courts until the Taft-Hartley Act of 1947 and their status in state courts prior to that date was ambiguous in many jurisdictions.[87/] Contracts were made enforceable largely at the behest of management groups who wanted guaranteed periods of extended labor peace.[88/] Yet the parties generally lived up to their agreements before Taft-Hartley. Even after Taft-Hartley, the legal enforceability of grievance arbitration clauses was not established at the federal level until 1957 by a Supreme Court decision.[89/] But such clauses had become almost universal in union contracts by that time despite their lack of legal status.

It might be possible to reinforce the tendency toward profit and gain-sharing which accompanies wage concessions. Currently, profit-sharing plans enjoy tax advantages if their bonuses are used for retirement or other deferred purposes. Broader tax incentives could be created to encourage gain-sharing arrangements, if it were considered desirable to raise the sensitivity of wage change to business-cycle conditions. Tax incentives could create a change in the background conditions considered by the parties in framing contracts. The union sector responded to the post-World War II tax incentives for pensions, life insurance, and health and welfare plans. Yet prior to World War II, unions often opposed benefits such as employer-paid pensions.[90/]

Apart from tax incentives, government agencies such as the Federal Mediation and Conciliation Service could play a role in fostering interest in gain-sharing plans. During World War II, the War Labor Board played such an educational role with regard to various contractual arrangements such as grievance arbitration. At the present time, a combination of economic distress and concern about productivity and international competiton has created a greater receptivity toward "new" ideas in labor-management relationships. Discussion of "Theory Z," the quality of worklife, worker participation in management, and co-determination is in the air.

The receptive climate for such experiments is fragile. If conditions improve, management loses interest. But deteriorating conditions can have the same effect on the union side. In the early 1930s, union interest in labor-management cooperative experiments established in the 1920s quickly diminished in the face of growing worker anger and militancy.[91/] A case can be made, therefore, for federal reinforcement of experiments containing gain sharing.

VIII. Possible Spillovers from Concessions

The Reagan administration has taken the position that there should be no intervention in the wage decisions of financially-distressed industries or any others.[91a/] Thus, it is reasonable to assume that institutional changes in wage determination will not be deliberately encouraged. Given that assumption, the main question for public policy becomes the degree to which the wage concessions in the distressed unionized industries will "spill over" into other wage decisions. To the extent that there is substantial spillover, the effectiveness of monetary restraint in inducing disinflation will be enhanced.

Two kinds of spillover can be considered. It can first be asked whether there will be substantial spillover into areas of the union sector which are not facing severe threats of bankruptcy and permanent plant closings. The answer for any particular unionized unit will probably turn out to depend heavily on the extent of pattern following in the past. Spheres of union wage setting have been evident for many years. For example, wage settlements in auto parts, truck manufacturing, and farm equipment have traditionally been patterned after the auto settlements with the major firms. The basic steel wage settlements have been linked to settlements in smaller steel companies, nonferrous metals, and metal containers. Intercity trucking settlements have an influence on local trucking negotiations and on the settlements for truckers in retail foodstores.[92/]

The key settlements are not imitated exactly in any of these pattern-following situations. There may be variations allowed for fringe benefits, the timing of wage adjustments, the precise formula used for the escalator, and in "noneconomic" areas such as workrules. In periods of distress, pattern following shows some tendency to erode. For example, American Motors Corporation has periodically been permitted to deviate from the auto pattern, although with the apparent intent to restore wage comparability when conditions improve.[93/] Thus, where traditional pattern-following spheres of imitation exist, the likely outcome of current contract concessions in the key units is both more diversity in the wage settlements within the sphere plus some spillover from the key settlements to the followers.

Union settlements outside the spheres of the distressed industries are likely to be reduced in 1982 relative to 1981, but largely because of reduced inflationary pressures generally. Perhaps the oil industry is a good illustration of this trend. As shown on Table 4, the 1980 settlements called for an annual rate of wage increase of 10.5% per annum over two years with no escalator. The two-year oil contracts reached in early 1982 call for about 8% per year with an increase of 9% during the first year.[94]

In the nonunion sector, the question of possible spillover of union wage concessions is of special interest, since a heavy-majority of the workforce is unorganized. There have been attempts to estimate econometrically the degree of union-to-nonunion and nonunion-to-union spillover. The technique used has been to insert into a wage-change equation a variable measuring the union-nonunion wage differential. A negative and significant coefficient for this variable in the union equation might be taken to indicate nonunion-to-union spillover. A positive and significant coefficient in the nonunion equation might suggest spillover running in the opposite direction.

Using this technique, Johnson and Flanagan found evidence for nonunion-to-union spillovers but none running in the opposite direction.[95] However, there are three problems with their interpretation of the statistical record. First, the results are not robust. Susan Vroman and I have shown that a change in the data source can reverse the results.[96] Second, it is easy to show that relative wage coefficients in wage-change equations can represent a form of "regression to the mean." If union and nonunion wage adjustments are determined by the same independent variables, but do not interact, the relative wage variable is essentially a proxy for "aberrant" behavior in the past. By definition, aberrant behavior is eventually corrected, thus giving the relative wage coefficient significance and the expected sign.[97] Third, there is other evidence that nonunion pay is influenced by union wage developments.

There have been periodic case studies of nonunion firms that follow union pay patterns as a matter of policy.[98] It is known that union wage concessions have already spilled over into nonunion decisions in the firms given the concessions. For example, during the 1979-81 period, nonunion Chrysler workers were affected by the union wage freeze. Firms seeking wage concessions from unions are expected to have their executives and other nonunion personnel share in the sacrifice.99/ In addition, there are legal requirements for some public and private employers to follow the results of pay surveys that may be influenced by union wages.100/

Some direct evidence exists concerning pay setting practices. The Bureau of National Affairs, Inc. polls personnel executives (private and public) concerning various aspects of their wage and other policies. Table 8 summarizes the highlights of two recent polls. The table suggests that the use of surveys of wages external to the employer is almost universal, at least among firms large enough to enter the BNA sample. Of those employers which use wage surveys, 85% indicate that the resulting information is "very helpful" to "essential" in making wage decisions. The opinions expressed by large and small employers are quite similar. To the extent that union wages are included in wage surveys taken by nonunion employers, some spillover is likely.

Twenty-two percent of employers report that they have a standard policy for their nonunion employees of matching or exceeding the wage settlements they reach for their unionized workers. Sixty-three percent indicate that they "review" the relationship between union and nonunion pay within their organizations, although sixty-nine percent indicate that they have no mechanical policy for adjusting nonunion wages based on their union settlements. Large employers--which (by definition) contain a disproportionate fraction of the workforce--seem more likely to be influenced by union pay outcomes within their firms than small employers.

The limited evidence available suggests that union contract concessions will have a significant impact on the pay of nonunion workers in the enterprise receiving the concession. To some extent, nonunion employers will be influenced by union wage concessions--and union settlements generally--through their survey methodology. Purely nonunion employers, however, are less likely to be influenced by union concessions than those which are partially unionized.

Although the current rash of union wage concessions has past precedents, it is still an unusual episode. Thus, there is danger in simply extrapolating from previous behavior established during "normal" periods. Perry has cited evidence that wage-adjustment "norms" develop in the labor market which may be influenced by special events.101/ Because of the wide publicity given to union wage concessions in major industries, it is possible that wage norms may shift in response. Precisely because such behavior is discrete, it cannot be readily predicted in advance.

Nonunion pay is rarely determined by explicit contract. However, it has become recognized in the economics literature that contract-like regularities may exist in the nonunion sector. Some authors attribute these implicit contracts to turnover costs and/or to differential risk preferences between employers and employees.102/ There is additionally historical evidence that the threat of unionization played a role in encouraging the centralization and bureaucratization of the personnel function in modern corporations.103/ More recently, these tendencies have been reinforced by various regulatory policies in the labor market--most notably requirements for equal employment opportunity--which have injected the courts into personnel matters and added pressure for central control of personnel decisions. Finally, courts have begun to suggest that nonunion workers may be entitled to forms of "due process" previously required only in union contracts.104/

Thus, while nonunion pay may be more market-sensitive than union pay, contract-like regularities associated with bureaucratic decision-making can be expected to create some inflation momentum in wage setting. A survey of pay decisions for salaried workers (largely nonunion) planned for 1982, as of summer 1981, indicated that raises in the 9% range were being budgeted.105/ This rate of increase is comparable to the first year of the recent oil settlement in the union sector. It is obviously easier to alter a proposed budget than a legally-enforceable contract. But some inertia in nonunion pay decisions should be expected. Given the increases in Social

Security taxes and continuing pressures of health-care inflation on fringe-benefit costs, forecasters in late 1981 and early 1982 were reluctant to project increases in compensation per hour of substantially less than 8% for 1982.[106/] To get substantially below that level, they would have had to assume either a dramatic break from past wage behavior throughout the labor market or much lower rates of price inflation than they were predicting.

It can be said that a sharp break from past behavior was not in evidence in the union sector during 1981 and into early 1982. Table 9 presents the results of a survey by the Bureau of National Affairs, Inc. of median first-year union wage adjustments from 1978 through January 1982. These figures are distorted by the exclusion of escalator payments from the settlement estimates. However, they do provide a rough index of wage developments.

Manufacturing wage settlements began to run at a flat 9% in 1980. The 1981 quarterly figures and the estimates for January 1982 show no deviation from this pattern. Figures for nonmanufacturing excluding construction are more erratic but averaged 9.5% from 1980 into early 1982. Construction settlements are too seasonal to appear except in the second and third quarters. But on an annual basis, construction wage agreements showed an accelerating rate of wage adjustment during 1978-81.

The imperturbability of these figures is remarkable in view of the accelerating pace of contract concessions reported on Table 2. In particular, during the fourth quarter of 1981, both the Teamsters and the Autoworkers underwent a well-publicized period of soul-searching about re-opening their contracts and finally agreed to do so. Apparently, other negotiators were not impressed.

IX. Summary and Conclusions

Although it is always dangerous to perform an instant analysis of current events, several conclusions seem warranted about the recent rash of union wage concessions. First, there have been similar episodes of wage concessions in the past triggered by recession and economic slackness. Accompanying these episodes has been a paradoxical mix of a management hard line and a flowering of rhetoric about, and experimentation with, new forms of labor-management cooperation. The current discussion of worker participation in management, quality circles, gain sharing, and the "Japanese" style of labor-management relations has parallels with earlier concession periods.

Second, although there has been much speculation about whether union wage concessions herald a "turning point" in industrial relations, there has been no attempt to define what a turning point might mean. While the traditional mode of labor-management relationships may be disrupted for a time, there is little reason to expect permanent abandonment of such devices as the multi-year contract and the cost-of-living escalator clause. These devices reflect strong incentives for the parties to regularize their relationship and avoid the risk of annual strikes. However, it might be possible to take advantage of the current shock to the collective-bargaining sector and encourage gain-sharing systems which would make pay more responsive to business-cycle pressures. Such encouragement could come through tax incentives and other forms of promotion.

Third, the history of union contract negotiations in the 1970s shows the importance of the timing of multi-year contract expirations in determining the response to recession. Although the 1973-75 recession was severe, the major contracts had essentially been negotiated before it was evident that a recession was under way. By the time these contracts re-opened in 1976-77, the recession was over and recovery had clearly begun. Similarly, the bargaining round which began in 1979 also came too early to reflect the recessionary pressures that were beginning to develop.

Fourth, union wage concessions can be induced by recession, but only if demand restraint is pushed to the point where bankruptcy, permanent plant closings, and massive layoffs are imminent. Only in those cases is the job security of senior union workers sufficiently threatened to influence the union's decision-making process. Moreover, the parties to collective bargaining are limited in their ability to consider the long-term implications of their current wage decisions. It might have been anticipated that a secular rise in the union-nonunion wage differential would eventually cause "trouble" in some industries. But only when the trouble actually arrived did it become a factor in negotiations.

Fifth, and finally, it is difficult to forecast the "spillover" effects of particular union wage concessions on the wages of workers who are not directly covered by those settlements. The current wave of concessions, although not without earlier precedents, is a sufficiently discrete event to make generalization from past behavior dangerous. However, it is reasonable to assume that wages of union workers in units which have traditionally followed wage patterns of those making the concessions will be influenced. Nonunion workers in firms receiving union concessions will probably find that those concessions are reflected in their own wage determinations. Employers in the nonunion sector who rely heavily on wage surveys in making pay decisions will detect union concessions and may pass along the influence of those concessions to their employees. However, much of the workforce is nonunion and it has increasingly been recognized that nonunion wage decisions are often made in the context of bureaucratic momentum and contract-like regularities. For many nonunion workers, decisions on 1982 pay adjustments have already been programmed and will be implemented regardless of the actions of the Teamsters, Autoworkers, or other major unions.

Table 1A

Annualized Change in Hourly Earnings in Heavily and Lightly-Unionized Industries, 1953-76

Period	Heavily-Unionized Industries[1/]	Lightly-Unionized Industries[1/]
1953-58	4.4%	3.9%
1958-64	3.3	3.2
1964-68	4.4	4.6
1968-71	6.1	6.1
1971-73	7.8	6.1
1975-76	9.0	8.0
1953-76	5.3	4.8

[1/] Industries with above-average (below-average) unionization rates are classified as heavily (lightly) unionized. Unionization rates are based on contract file of Bureau of Labor Statistics. Alternative estimates based on other data on unionization can be found in source.

Source: Daniel J.B. Mitchell, Unions, Wages, and Inflation (Washington: Brookings Institution 1980), p.40.

Table 1B

Employment Cost Index for Union and Nonunion Sectors, 1976-81

Year	Union Sector	Nonunion Sector
1976	8.1%	6.8%
1977	7.6	6.6
1978	8.0	7.6
1979	9.0	8.5
1980	10.9	8.0
1981	9.7[1/]	9.2[1/]

[1/] First nine months at annual rate.

Source: Current Wage Developments, various issues.

Table 2

Selected Union Agreements, 1979-Early 1982

Employer(s) and Union(s)	Wage cut	Wage Freeze	Existing contract prematurely renegotiated	Workrule restrictions eased	Other concession	Comments
Washington Star; Eleven unions, Jan. 1979			X	X		5-year agreement signed; employer went out of business August. 1981. Reference: CWD, 1/79, pp.1-2
Liberal Markets (Dayton, Ohio); Meatcutters and Clerks (both merged into UFCW), April 1979	X		X			Cut to be restored at end of contract. Reference: CWD, 4/79,pp.1-2
Conrail: BRAC, May 1979					X	Nonwage features negotiated to aid carrier. Reference: CWD, 5/79, p.2
General Tire; URW, July 1979	X			(see comments)		After cut workers continue to get general pattern wage increases for tire industry. If company builds new plant, workrules will be eased. Reference: CWD, 7/79,pp.1-2
Chrysler; UAW, October 1979					X	First round of Chrysler concessions. Wage increases delayed relative to GM and Ford and other deviations regarding pensions permitted for "saving" of $203 million. Reference: CWD,11/79,p.1

Employer(s) and Union(s)	Wage Cut	Wage Freeze	Existing contract prematurely renegotiated	Workrule restrictions eased	Other concessions	Comments
U.S. Steel (American Bridge Div.); USA Nov. -Dec. 1979			X		X	"Basic" wage frozen. Limited escalator payments permitted. Reference: CWD, 2/80, p.9
Chrysler; UAW Jan. 1980			X		X	Second round of Chrysler concessions. Further delays in pay and reductions in paid leave. Additional "saving" of $243 million. Required to obtain federal loan guarantee. Reference: CWD, 1/80, p.1
Wheeling-Pittsburgh (Allenport); USA, Early 1980, date unclear	X					Cuts made in incentive rates to bring pay in line with competitors. Reference: MLR, 3/80, p.62
Dunlop Tire; URW, June 1980	X		X		X	12-13% wage cut for 5 months with half restored thereafter. Future escalator payments cut in half. Reference: DLR, 6/27/80, p.A2; 11/4/80, pp.A6-A7
Uniroyal; URW, July 1980	X	X	X			Cut of 12/9% for 17 months. Some escalator payments permitted toward end of contract. Reference: DLR, 7/23/80, p.A12; CWD, 8/80, p.1; CWD 11/81, p.6

Employer(s) and Union(s)	Wage cut	Wage freeze	Existing contract prematurely renegotiated	Workrule restrictions eased	Other concessions	Comments
Wheeling-Pittsburgh; USA Aug. 1980		X	X			Temporary delay of escalator and other increases. Reference: DLR, 8/22/80, p. A1; CWD, 9/80, p.3
Kaiser Steel (Fontana); USA Aug. 1980	X		X			Local union accepted concessions but national union vetoed any change. Plant may be closed. Reference: DLR, 8/22/80, p. A1; CWD, 10/80, p.2
Milwaukee Railroad; various unions, Aug. 1980	X		X			Bankrupt railroad will cut pay 10% with savings to go into employee stock ownership plan if railroad is successfully reorganized. Agreement pursuant to Milwaukee Railroad Restructuring Act of 1979. Reference: DLR, 8/22/80, pp.A3-A4; CWD, 9/80, p.3.
Dayton Press; Graphic Arts and 12 other unions, Sept. 1980	X		?			Wages cut 14%. Employees to take over firm with an employee stockownership plan. Reference: CWD, 9/80, p.3
Various local trucking companies, IBT Late 1980, date unclear				X		Concessions reported in such cities as Omaha and Louisville. Reference: CWD 10/80, p.2

Employer(s) and Union(s)	Wage cut	Wage freeze	Existing contract prematurely renegotiated	Workrule restrictions eased	Other concessions	Comments
Kroger (Pittsburgh); UFCW Dec. 1980	(See comments)				X	Newly-hired workers to be subject to pay freeze, lower benefits, and lower shifts differentials. Reference: CWD, 12/80, p.1
Baltimore Sun, Evening News, News American; ITU December 1980				X		10 year contract with modest wage increases for first 3 years. Thereafter, workers will get raises equal to those of other printing employees. Reference: CWD, 12/80, p.1
General Tire (Marion, Ohio); URW Jan. 1981	X	X	X			$1.55 cut at plastics plant. Contract extended to 8/82. Supplemental unemployment benefits plan canceled. Reference: CWD, 1/81, pp.1-2
Chrysler; UAW Feb. 1981	X	X	X			Third round of Chrysler concessions. Previous escalator payments eliminated producing a cut in pay. All future scheduled and escalator increases suspended. Reference: CWD, 2/81, p.1

Employer(s) and Union(s)	Wage cut	Wage freeze	Existing contract prematurely renegotiated	Workrule restrictions eased	Other concessions	Comments
Firestone (Memphis and Nashville); URW Feb. 1981			X	X	X	Various restructurings of pay system reported. Reference: CWD, 2/81, pp.1-2
Yellow Freight Systems (St. Louis); IBT March 1981			?	X		Workers reversed earlier decision to reject management demands after layoffs were threatened. Similar episodes reported at other trucking companies. Reference: CWD, 3/81, p.2
Ford (Steel operations); UAW April 1981	X		X			Ford indicated that if cuts were not accepted it would drastically curtail steel production. Reference: CWD, 4/81, p.1
Acme, A & P, UFCW April 1981					X	Escalator terminated in new contract in exchange for advance notice of store closings. Reference: CWD, 4/81, pp.1-2

Employer(s) and Union(s)	Wage cut	Wage freeze	Existing contract prematurely renegotiated	Workrule restrictions eased	Other concessions	Comments
Braniff; IBT, IAM, ALPA, Dispatchers, Flight Attendants April 1981	X		X			10% wage cut with resulting savings diverted to a "profit sharing account." IBT rejected an earlier version of concessions in late 1980 but accepted this arrangement. Reference: CWD, 4/81, p.1
Mesta Machine; USA May 1981		X				Freeze accepted in first years of contract. Strike ended amidst threats to close plant. Some escalator payments to be "withheld" in second and third year. Reference: CWD, 5/81, pp.2-3
General Tire (Logansport); URW June 1981		X	X			Some wage increase to be allowed in 1982. Escalator and supplemental unemployment benefits terminated. Union refused concessions in 1980 and company reduced employment. Reference: CWD, 6/81, p.1
Certain construction employers in northern California; IUOE June 1981	(See comments)		X			$4 per hour cut in privately-financed projects to counter nonunion competition Reference: CWD, 6/81, p.1

Employer(s) and Union(s)	Wage cut	Wage freeze	Existing contract prematurely renegotiated	Workrule restrictions eased	Other concessions	Comments
Philadelphia Bulletin; 8 unions Sept. 1981				X	X	Cut in shift differentials. Profit-sharing plan installed. Newspaper put up for sale in Jan. 1982. Reference: CWD, 9/81, p.2, L.A. Times, 1/7/82, Part 1, p.6
Goodyear (Topeka) URW Sept. 1981			X		X	Cut in shift differentials. Reference: CWD, 9/81, p.2
A.O. Smith; USA and 6 other unions Sept. 1981		X	X			Employer got GM parts contract after getting unions to accept freeze. Reference: CWD, 9/81, p.2
System 99; IBT Sept. 1981	(See comments)		?			15% of pay contributed to trucking employer as a loan. Reference: CWD, 9/81, p.2
Schluderberg-Kurdle; UFCW and IBT Sept. 1981	X	X				Employer indicated concessions were required to avoid shutdown of meat-packing plant. Reference: CWD, 9/81, p.3
Meijec; UFCW Oct. 1981					X	Foodstore workers in Western Michigan will receive less than those in Eastern Michigan due to nonunion and other competition. Reference: CWD, 10/81, pp.1-2

Employer(s) and Union(s)	Wage cut	Wage freeze	Existing contract prematurely renegotiated	Workrule restrictions eased	Other concessions	Comments
United Airlines; ALPA Oct. 1981				X	X	Pay computations and work-rules eased. Employer promises not to start a nonunion subsidiary. Reference: CWD, 10/81, p.2
Pan Am; TWU, other unions Oct. 1981	X	X	X			10% wage cut; scheduled pay increases to be delayed. Reference: CWD, 10/81, p.2; 12/81, p.15
International Harvester (Indianapolis); UAW Oct. 1981			X	X		Concessions made to aid employer obtain contract to produce engines for Ford. Similar outcome reported with another union at Columbus, Ohio. Reference: CWD, 10/81, p.2
American Shipbuilding (Lorain and Toledo); 6 unions Oct. 1981			(See comments)	X		Concessions negotiated under contract reopener at Lorain. Contract interrupted at Toledo. Reference: CWD 10/81, pp.2
International Paper; IWA Oct. 1981	X					20% wage cut to avert plant closing. Reference: CWD, 10/81, p.3

Employer(s) and Union(s)	Wage cut	Wage freeze	Existing contract prematurely renegotiated	Workrule restrictions eased	Other concessions	Comments
Conrail; Various unions Nov. 1981					X	Conrail will follow general railroad pattern being regulated at time of agreement. But only a portion of negotiated increments will actually be paid, depending on amount of increments. Terms specified under Northeast Rail Service Act of 1981. Reference: CWD, 11/81, p.2
Armour and Wilson; UFCW Dec. 1981	(See comments)	X	X			Wage freeze until reopener in Sept. 1984. Reduced starting pay for new hires. One Armour plant will reduce pay. Lump-sum payment in Dec. 1983 for escalator increases lost in interrupted contract. Employers promise no plant closings for 18 months. Reference: AFL-CIO News 12/26/81, pp.1,7.
Western Airlines; ALPA, IBT, TWU, Flight Attendents, Air Transport Employees Jan. 1982	X					10% wage cut. Unions successfully resisted management demands for workrule concessions. Pilot placed on Board of Directors. Reference: L.A. Times, 1/7/82, Part 4, pp.1,4; L.A. Times, 1/9/82, Part 3, p.18

Employer(s) and Union(s)	Wage cut	Wage freeze	Existing contract prematurely renegotiated	Workrule restrictions eased	Other concessions	Comments
Milwaukee Railroad, various unions Jan. 1982	X			(See comments)		7% wage cut for bankrupt railroad. Negotiations for workrule concessions reportedly under way. Reference: DLR, 1/27/82,p.A1
Swift and Hormel; UFCW Jan. 1982		X	X			Concessions patterned after earlier agreements reached at Armour and Wilson Reference: DLR, 2/3/82, pp.A1-A2.
Trucking Management, Inc.; IBT Jan. 1982			X	X	X	New contract runs 39 months with possible reopeners in April 1984 based on industry conditions. Workers to receive a portion of escalator payment due at end of old contract with remainder diverted to fringes (up to 100%) No guaranteed wage increase included. Employers agree not to open nonunion subsidiaries. Rules limiting local activities of intercity drivers relaxed. Reference: DLR, 2/3/82, pp.A8-A9.
Ford: UAW Feb. 1982		X	X		X	New contract to run until Sept. 1984 with reopener based on company sales. Elimination of basic (3%) wage increases. Loss of personal leave and other time off. Suspension of escalator until Dec. 1982. Deferred escalator increases to be restored in Sept. 1983. Profit sharing to begin in 1983. Income guarantees for workers with 15 years or more of seniority equal to 50-75% of base pay until retirement age. Two-year moratorium on plant closings due to outsourcing. Reference: L.A. Times, Part 1, pp.1,17

Note: 45 Contracts are listed in this table.

By the time the article emerged, GM settled with the UAW. For purposes of the table, GM is the same as Ford. Hence, 46 contracts are reported in the published paper.

Note: Abbreviations used:

CWD = Current Wage Developments
DLR = Daily Labor Report
MLR = Monthly Labor Review
ALPA = Air Line Pilots Association
BRAC = Brotherhood of Railway, Airline and Steamship Clerks, Freight Handlers, Express and Station Employees
IAM = International Association of Machinists and Aerospace Workers
IBT = International Brotherhood of Teamsters, Chauffers, Warehousemen and Helpers of America
ITU = International Typographical Union
IUOE = International Union of Operating Engineers
IWA = International Woodworkers of America
TWU = Transport Workers' Union of America
UAW = International Union of Automobile, Aerospace and Agricultural Implement Workers of America
UFCW = United Food and Commercial Workers International Union
URW = United Rubber, Cork, Linoleum and Plastic Workers of America
USA = United Steelworkers of America

Table 3

Wage Trends of State and Local Government Workers by Degree of Unionization, 1975-1979

	Average Annual rates of Change in Wages and Per-capita Incomes	
	Heavily-Unionized Jurisdictions[1]	Lightly-Unionized Jurisdictions[1]
State Governments		
Government Wage[3]	6.5%	7.4%
State Manufacturing Wage[4]	8.4	9.0
State Per-capita income	9.6	10.6
Local Governments		
Government Wage[3]	6.7	7.1
State Manufacturing Wage[4]	8.6	9.0
State Per-capita Income	10.0	10.5
School Districts[2]		
Government Wage[3]	6.9	7.1
State Manufacturing Wage[4]	8.6	9.3
State Per-capita Income	10.5	10.5

[1] Jurisdictions with unionization rates above average (below average) for that type of jurisdiction are classified as heavily (lightly) unionized. Unionization rate is percent of full-time employees in bargaining units in 1979.

[2] School districts are a subcategory of local governments.

[3] Wage per full-time employee as of October.

[4] Average hourly earnings in manufacturing as of October.

Source: Derived from data presented in Robert J. Flanagan and Daniel J.B. Mitchell, "Wage Determination and Public Policy," UCLA Institute of Industrial Relations Working Paper Number 37, December 1981.

Table 4

Union Wage Settlements in Selected Industries, 1973-1980
(Percentage Annual Rate of Wage Change)

	Actual Experience						Experience at 10% Inflation Rate			Year of termination
	1973	1974	1975	1976	1977	1978	1979	1980	1981	
Petroleum	6.0	11.4[1]	12.6		9.1		8.9	10.5[2]		1982
Electrical	6.6**			9.9***			8.8*			1982
Meatpacking	12.1*			10.0*			10-11*			1982
Autos										
GM-Ford	9.7*			9.0*			9.7*[3]			1982
Chrysler	9.7*			9.0*			1.7[3]			1982
Tires	5.5			13.3*			11.7*			1982
Trucking	6.6**			9.3*			9.4*			1982
Coal		14.4*				9.4[4]			9.5	1984
Telephones		9.5*			9.2*			10.6*		1983
Steel		9.6*			11.4*			10.3*		1983

*Uncapped escalator clause in use. **Capped Escalator clause in use. ***Uncapped escalator clause with corridor in use.

[1] Original two-year contract negotiated in 1973 provided 5.6% per annum. Management added an additional 6% in June 1974.

[2] Negotiated under reopener clause.

[3] Reflect contract concessions. See Table 2.

[4] Previous contract expired in 1977. Strike delayed settlement until 1978.

Source: Bureau of National Affairs, Inc. 1981 Briefing Sessions on Collective Bargaining (Washington: BNA, 1981), p.76; Daniel J.B. Mitchell, "Union Wage Determination: Policy Implications and Outlook," Brookings Papers on Economic Activity (3: 1978), p.573; U.S. Council on Wage and Price Stability, Collective Bargaining (Washington: COWPS, 1977), pp.41, 50; U.S. Council on Wage and Price Stability, "Steel Settlement Analyzed by CWPS," press release dated June 1, 1977, p.2; Current Wage Developments (February 1977), p.5; (February 1975), pp.2-3, 9; (July 1976) p.3; October 1976), p.2; February 1979), p.3, (September 1979), p.3; (January 1978), p.3, (January 1977), p.2; Monthly Labor Review (March 1973), p.73; "Threatened Strike Against Bell System Averted with Last Minute Settlement," Daily Labor Report, August 11, 1980, p.A7; U.S. Council on Wage and Price Stability, Quarterly Report, 2nd Quarter, 1978 (Washington: GPO, 1978), p.6.

Table 5

Escalation and Union Wage Change, 1973-81
(Major Private Agreements)

Year	Effective wage change in major union sector	Proportion of effective union wage change due to escalators	Life-of-contract annual wage change experienced in major contracts expiring in year shown: Escalated[1/]	Life-of-contract annual wage change experienced in major contracts expiring in year shown: Nonescalated	Annual change in Consumer Price Index[2/]	Proportion of workers under major agreements covered by escalators at beginning of year
1972	6.6%	10.6%	n.a.	n.a.	3.4%	41%
1973	7.0	18.6	n.a.	n.a.	8.8	39
1974	9.4	20.2	n.a.	n.a.	12.2	39
1975	8.7	25.3	n.a.	n.a.	7.0	51
1976	8.1	19.8	7.8%	6.6%	4.8	59
1977	8.0	21.3	8.8	8.6	6.8	61
1978	8.2	29.3	8.1	7.2	9.0	60
1979	9.1	34.1	8.4	7.3	13.4	59
1980	9.9	28.3	8.4	7.5	12.5	58
1981	9.7[3/]	31.0[3/]	8.6	7.7	10.6[3/]	58
1982	n.a.	n.a.	8.8	7.4	n.a.	57

1/ Underestimated. See text.

2/ CPI-W on a December-to-December basis.

3/ First nine months at annual rate.

Source: Monthly Labor Review, reviews of bargaining calendar and deferred increases, various issues; Current Wage Developments, various issues.

Table 6

Percentage Change in Output and Employment of Production and Nonsupervisory Workers, Selected Industries, 1973-1980

Industry	Category	1973-75	1975-76	1975-79	1979-80
Petroleum	Output	- 3.4[1/]	+ 7.6	+16.0	- 7.6
	Employment	+ 2.3[1/]	+ 4.1	+11.8	-11.0
Electrical	Output	-18.6	+15.7	+50.2	- 1.3
	Employment	-18.8	+ 6.3	+27.2	- 3.7
Meatpacking	Output	+ 5.0[2/]	+ 7.9	+ 2.8	+ 3.7
	Employment	- .8[2/]	+ 3.0	+ 8.5	- .2
Autos	Output	-25.3	+27.8	+43.9	-25.6
	Employment	-20.2	+13.3	+26.9	-27.1
Tires	Output	-16.4	+ 0.7[3/]	+10.7[4/]	-22.9
	Employment	- 6.5	-20.2[3/]	+ 2.0	- 7.6
Trucking	Output	-19.4	+15.6	+36.9	-18.0
	Employment	- 7.9	+ 4.2	+22.4	- 5.4
Coal	Output	+ 8.2	+ 3.3	+15.7	+ 8.2
	Employment	+31.6	+ 5.4	+20.8	- 1.2
Telephone	Output	+11.3	+ 7.1	+44.1	+ 9.0
	Employment	- 3.9	- 1.6	+ 4.6	+ 1.3
Steel	Output	-20.2	+ 7.9	+21.9	-18.4
	Employment	-11.7	+ .6	+ 5.2	-12.7

1/ Influenced by oil embargo and shortages.

2/ Influenced by meat shortage.

3/ Influenced by strike.

4/ 1979 data omit tires for motorcycles and mobile homes, producing underestimate.

Note: The Federal Reserve Board indexes of industrial production are used as output measures for petroleum, electrical, autos (motor vehicles and parts), steel (iron and steel), and coal. For meatpacking, output is measured by total meat production. Tire output is measured by production of pneumatic casings, automotive. These series are reported in the Survey of Current Business. Telephone output is measured by the index of output for telephone communications appearing in U.S. Bureau of Labor Statistics, Productivity Measurers for Selected Industries, 1954-79, bulletin 2093 (Washington: GPO, 1981), p.183. Revised data provided to author by BLS. Employment data are from Employment and Earnings and refer to the following S.I.C. codes: 291, 36, 201, 371, 301, 421-3, 12, 481, 331.

Table 7

Compensation of Employees Per Dollar of Output in
Selected Industries, 1972
(percent)

Industry	Compensation per dollar of output	Industry	Compensation per dollar of output
Petroleum	7%	Trucking	44%
Electrical	46	Coal Mining	45
Meatpacking	11	Telephones	51
Autos	25	Steel	33
Tires	25		

Note: For electrical, autos, and coal mining, the figures shown are the ratio of employee compensation per dollar of industry output (excluding intra-industry consumption) for input-output industries number 53-58, 59, and 7, respectively. Source: Philip M. Ritz, Eugene P. Roberts, and Paula C. Young, "Dollar-Value Tables for the 1972 Input-Output Study," Survey of Current Business, Vol.59 (April 1979), pp.62-67. The trucking figure is employee compensation per dollar of operating revenue for Class 1 motor carriers. Source: Statistical Abstract of the United States 1980 (Washington: GPO, 1980), p.658. The telephone estimate refers to wages and salaries of the Bell System divided by operating revenue. This ratio was then multiplied by the ratio of compensation to wages and salaries from the national income accounts for telephone and telegraph. Source: U.S. Bureau of the Census, Statistical Abstract of the United States 1977 (Washington: GPO, 1977), p.576. For petroleum, meatpacking, tires, and steel the ratio of payroll to shipments (for SIC 291, 201, 301, and 331) was multiplied by the ratio of compensation to wage and salary for the corresponding two-digit industry in the national income accounts. To adjust for intra-industry shipments, the ratio of such shipments to total industry output was calculated from the 1972 input-output "use" table for industries 31.01, 14.0101-14.0104, 32.01, and 37.0101-37.1015. Source: U.S. Bureau of the Census, Statistical Abstract of the United States 1975 (Washington: GPO, 1975), pp.742-747; U.S. Bureau of Economic Analysis, The Detailed Input-Output Structure of the U.S. Economy: 1972 (Washington: GPO, 1979), vol. 1, Table 1. National income accounts data are from U.S. Bureau of Economic Analysis, The National Income and Product Accounts of the United States, 1929-76, Statistical Tables (Washington: GPO, 1981), Tables 6.5B and 6.6B.

Table 8

Policy Practices of Surveyed Employers

Pay Practices and Attitudes	Proportion of Employers with Practice or Attitude All	Large[1]	Small[1]
Wage surveys used for setting pay[2]	93%	95%	92%
Surveys are:[3]			
Essential/absolutely necessary	55	59	50
Very helpful	30	26	35
Of some use	15	15	15
Pay Scales reviewed for equitable treatment between union versus non-union groups[4]	63	65	60
Same or higher pay increase granted to non-union employees when increase is negotiated with a union[4]	22	26	15
No standard policy for non-union pay when increase is negotiated with a union[4]	69	58	85

1/Large employers are those with 1,000 or more employees; small employers have less than 1,000 employees.

2/Based on responses of 183 personnel esecutives who were members of the 1979-80 Personnel Policies Forum.

3/Figures are percentages of those employers who use wage surveys.

4/Based on responses of 128 personnel executives who were members of the 1977-78 Personnel Policies Forum.

Source: Bureau of National Affairs, Inc., Wage and Salary Administration, PPF Survey No. 131 (Washington: BNA, 1981), p.3; Bureau of National Affairs, Inc., Policies for Unorganized Employees, PPF Survey No. 125 (Washington: BNA, 1979), p.13.

Table 9

First-Year Median Union Wage Settlements, 1978-1982[1]

	Manufacturing	Nonmanufacturing except construction	Construction
1978	8.5%	7.5%	6.2%
1979	8.3	8.5	8.5
1980	9.0	9.5	11.3
1981	9.0	9.5	11.8
1981-I	9.0	9.8	*
1981-II	9.0	9.0	11.6
1981-III	9.0	9.2	11.8
1981-IV	9.0	9.6	*
Jan. 1982	9.0	9.5	*

*Insufficient data.

[1] Data Exclude escalator payments. "First year" is defined as first 10 months of contract. Survey includes settlements involving 50 or more workers.

Source: Daily Labor Report, January 22, 1982, p.B1; February 5, 1982, p.B1; Bureau of National Affairs, Inc., 1981 and 1980 Briefing Sessions on Collective Bargaining (Washington: BNA, 1981, 1980), p.1 of both editions.

Footnotes

1. For example, "Unions on the Run," U.S. News and World Reports, September 14, 1981, pp.61-65. On the reaction of the union movement to the Reagan administration, see A.H. Raskin, "Unionist in Reaganland," The New Yorker, September 7, 1981, pp.50-113.

2. U.S. Bureau of Labor Statistics, Handbook of Labor Statistics, bulletin 2070 (Washington: GPO, 1980), p.412.

3. The data available for 1980 do not make the distinction between unions and "associations." See U.S. Bureau of Labor Statistics, press release USDL: 81-446, September 18, 1981.

4. Daniel J.B. Mitchell, "The Economic Significance of Unions: Past and Future" in J. Fred Weston and Michael E. Granfield, eds., Corporate Enterprise in a New Environment (New York: New York University Press, 1982), forthcoming.

5. Daniel J.B. Mitchell, "The Employment Relationship in the 1980s" in Eric Flamholtz, ed., Human Resource Productivity in the 1980s (Los Angeles: Institute of Industrial Relations, forthcoming).

6. Daniel J.B. Mitchell, "Collective Bargaining and the Economy" in Jack Stieber, Robert B. McKersie, and D. Quinn Mills, eds., U.S. Industrial Relations 1950-1980: A Critical Assessment (Madison, Wisc.: Industrial Relations Research Association, 1981), pp.15-19; Daniel J.B. Mitchell, "Collective Bargaining and Wage Determination in the 1970s" in Proceedings of the Industrial Relations Research Association, September 1980, pp.135-142. The former paper gives evidence on the slippage in unionization based on Census and area wage survey data. The latter provides evidence based on major agreement data.

7. Jules Bernstein, Union Busting and the Law: From Benign Neglect to Malignant Growth (Washington: Center to Protect Workers' Rights, 1980).

8. Jules J. Justin, Managing without a Union: Public and Private Sectors (New York: Industrial Relations Workshop Seminars, 1978).

9. Everett M. Kassalow, "Industrial Conflict and Consensus in the United States and Western Europe: A Comparative Analysis" in Proceedings of the Industrial Relations Research Association, December 1977, p.120.

10. The classic study of this period is Sumner H. Slichter, James J. Healy, and E. Robert Livernash, The Impact of Collective Bargaining on Management (Washington: Brookings Institution, 1960).

11. Daniel J.B. Mitchell, Unions, Wages, and Inflation (Washington: Brookings Institution, 1980), pp.39-53.

12. For a recent review, see Richard B. Freeman and James L. Medoff, "The Impact of Collective Bargaining: Illusion or Reality?" in Stieber et al, U.S. Industrial Relations, op. cit., pp.47-97.

13. Henry S. Farber and Daniel H. Saks, "Why Workers Want Unions: The Role of Relative Wages and Job Characteristics," Journal of Political Economy, vol.88 (April 1980), pp.349-368; Thomas A. Kochan, "How American Workers View Labor Unions," Monthly Labor Review, vol.102 (April 1979), pp.23-31.

14. In my earlier Brookings study, I included a relative wage variable in wage-change equations for various union contracts. The variable was defined as the ratio of the wage in the industry to the average wage in the private, nonfarm economy. The coefficient was invariably negative, suggesting that wages which rise relative to the average tend to exhibit slower future wage growth. The union wage figures of Table 1 suggest a widening of the wage gap of about 3.8% over 1976-81, relative to average hourly earnings. Multiplying .038 by the REL coefficients in equations (3) and (4) of Table 4-7 of Unions, Wages, and Inflation produces the results described in the text.

15. Nominal wage cuts involve an overt taking away of compensation by the employer. Great strikes in U.S. history, such as the Pullman strike of 1894, have arisen from wage cuts, even during periods when prices were declining (as they were in 1894). See John R. Commons, et al, History of Labor in the United States (New York: MacMillan, 1918), volume 2, pp.501-503.

16. The Federal Trade Commission and the Justice Department disagreed over whether an Autoworkers representative on the board of both AMC and Chrysler would violate federal law. As a result, AMC refused to proceed. See "Union Representation on Boards of Competing Firms Does Not Violate Antitrust Law, FTC Opinion States," Daily Labor Report, May 5, 1981, p.A1.

17. Ben Fischer, "Taking Combat Out of Labor Relations," Business Week, September 21, 1981, p.17. Fischer is a former official of the Steelworkers union.

18. For example, workers at the Hayes Albion Company (auto parts) rejected a wage cut and the employer closed the plant. See Current Wage Developments, vol.33 (September 1981), p.2. The Philadelphia Journal closed after a rejection of a wage cut combined with profit sharing. See "A Philadelphia Daily Folds After Unions Refused Demands," Los Angeles Times, Part IV, December 17, 1981, p.2.

19. See the Kaiser (Fontana) case listed on Table 2. This case was included on the table because the local union accepted the cut.

20. Some workers experiencing wage cuts or freezes may have received escalator payments; such payments are not included in BLS estimates of negotiated adjustments. The average first-year adjustment was 10.1% excluding escalator payments. Source: "First-Year Wage Gains Averaged 10.1% in 1981 for Major Contracts," Daily Labor Report, January 29, 1982, pp.B1-B7.

20a. John T. Dunlop, Wage Determination Under Trade Unions (New York: Augustus M. Kelley, 1950), pp.48,67.

21. Dunlop, Wage Determination Under Trade Unions, ibid., p.67.

22. "Teamsters Agree to Master Freight Reopener, Talks on New Pact Will Begin in Two Months," Daily Labor Report, September 16, 1981, p.A2.

23. The construction union wage index fell 17% from 1930 to 1933. The printing union index rose slightly in 1930 and then fell 6% from 1931 to 1933. Source: U.S. Bureau of Labor Statistics, Handbook of Labor Statistics 1975--Reference Edition, bulletin 1865 (Washington:GPO, 1975), pp.225,316.

24. George P. Shultz, Pressures on Wage Decisions: A Case Study in the Shoe Industry (New York: Technology Press and John Wiley & Sons, 1950), chapter 5.

25. Information concerning events in this period is drawn from the "Developments in Industrial Relations" and "The Labor Month in Review" sections of the Monthly Labor Review. On garment and textile wage cuts, see May 1954, pp.III,565-566; June 1954, pp.668, IV; August 1954, pp.906-907.

26. "The Cole Wage-Reduction Proposal," Labor Law Journal, vol. 4 (March 1953), p.165.

27. For example, escalator reductions occurred in autos in 1952, 1953, 1954, and 1956. See U.S. Bureau of Labor Statistics, Ford Motor Company, June 1941-September 1973, bulletin 1787 (Washington: GPO, 1973), pp.11-12.

28. For example, the escalator was dropped from the railroad contracts for operating employees just before it would have produced a one-cent wage cut in late 1954. See Monthly Labor Review, February 1955, p.221.

29. Monthly Labor Review (August 1954), p.III.

30. Monthly Labor Review (January 1955), pp.100-101.

31. Monthly Labor Review (May 1954), p.III.

32. Monthly Labor Review (September 1954), pp.1014-1015;(February 1955), pp.222-223.

33. Monthly Labor Review (June 1954), p.668; (January 1955), p.51.

34. The number of strikes fell from 5,091 in 1953 to 3,468 in 1954. Source: U.S. Bureau of Labor Statistics, Handbook of Labor Statistics, bulletin 2070, op. cit., p.415.

35. The hosiery industry was an example of such behavior. See Monthly Labor Review (August 1954), p.908.

36. Monthly Labor Review (July 1954), p.189.

37. Dunlop, Wage Determination Under Trade Unions, op. cit., pp.65-66.

38. SUB plans were incorporated in other negotiations involving the Autoworkers in farm equipment and auto parts. Unemployment benefit plans were also reported in the glass industry (with individual accounts), cans, and in the maritime industry. Source: Monthly Labor Review (August 1955), p.928; September 1955), p.1033; (October 1955), pp.1169; 1171; (November 1955), p.1284; (January 1956), p.81.

39. See Jack Barbash, "Union Response to the 'Hard Line'", Industrial Relations, vol. 1 (October 1961), pp.25-38; Herbert R. Northrup, "Management's 'New Look' in Labor Relations," Industrial Relations, vol. 1 (October 1961), pp.9-24.

40. William H. McPherson, "Cooperation Among Auto Managements in Collective Bargaining," Labor Law Journal, vol.11 (July 1960), pp.607-614.

41. Frank C. Pierson, "Recent Employer Alliances in Perspective," Industrial Relations, vol.1 (October 1961), pp.39-55.

42. Ruth Benny, "Wage Developments in Manufacturing," Monthly Labor Review, vol.88 (October 1965), p.1185.

43. George L. Perry, "Wages and the Guideposts," American Economic Review, vol. 57 (September 1967), pp.897-904. For a review of such studies, see John Sheahan, The Wage-Price Guideposts (Washington: Brookings Institution, 1967), pp.83-92.

44. John A. Orr, "The Steelworker Election of 1965--The Reasons for the Upset," Labor Law Journal, vol.20 (February 1969), pp.100-112.

45. Lincoln Fairley, Facing Mechanization: The West Coast Longshore Plan (Los Angeles: UCLA Institute of Industrial Relations, 1979).

46. Gerald E. Balsley, "The Kaiser Steel-United Steelworkers of America Long Range Sharing Plan," Proceedings of the Industrial Relations Research Association, (December 1973), pp.48-58.

47. Harold E. Brooks, "The Armour Automation Committee Experience," Proceedings of the Industrial Relations Research Association, December 1968, pp.137-143.

48. Current Wage Developments (July 1974), p.1; (October 1974), pp.1-2; (February 1976), p.1.

49. Current Wage Developments (March 1976), p.2.

50. Current Wage Developments (March 1975), pp. 1-2; (March 1976), p.2.

51. Current Wage Developments (November 1973), p.2; January 1975), p.1; (May 1975), p.2; (July 1975), p.2; (August 1975), p.2; (October 1975), p.3; (November 1975), p.1; April 1977), pp.1-2; (August 1977), pp.1-2; Monthly Labor Review (July 1973), p.61.

52. For an apocalyptic view of government unions--published just when their strength seemed to wane--see Robert A. Nisbet, "Public Unions and the Decline of Social Trust" in A. Lawrence Chickering, ed., Public Employee Unions: A Study of the Crisis in Public Sector Labor Relations (San Francisco: Institute for Contemporary Studies, 1976), pp.13-33.

53. Even in the early 1970s, this trend seemed to reverse, with the exception of the Postal Service where collective bargaining was adopted. See Daniel J.B. Mitchell, "The Impact of Collective Bargaining on Compensation in the Public Sector" in Benjamin Aaron, Joseph R. Grodin, and James L. Stern, eds., Public-Sector Bargaining (Washington: Bureau of National Affairs, 1979), pp.126-127.

54. Current Wage Developments (September 1975), p.2; Harry C. Katz, "Municipal Pay Determination: The Case of San Francisco," Industrial Relations, vol. 18 (Winter 1979), pp.55-56.

55. In the apparel case, some of the guaranteed deferred adjustment was also diverted. See Current Wage Developments (October 1973), p.1; (June 1975), p.2; (October 1979), pp.1,17; (February 1980), p.1; (May 1980), p.1; (June 1980), p.13; October 1980), pp. 1,10; (January 1981), pp.1,13. During 1968-77, the rate of escalator protection was 57% in major indexed contracts. See Victor J. Sheifer, "Cost-of-Living Adjustment: Keeping Up with Inflation," Monthly Labor Review, vol.102 (June 1979), pp.14-17.

56. In the 1973 auto settlements, although the 3% factor was applied to the base wage, an additional 12¢ was added. The 1976 settlements provided an add-on of 20¢. However, in the 1979 settlements, no add-on was included. See "Auto Workers Summary of New Contract with General Motors," Daily Labor Report, September 19, 1979, p.D1.

57. Employers in the lumber industry granted an unscheduled 3% wage increase to their unionized workers in 1974. See Current Wage Developments (August 1974), p.1.

58. These workers were not represented by the Autoworkers but by the Electrical Workers (IUE). The wage concessions at Frigidaire began in 1971. Later, GM sold its Frigidaire division, thus alleviating the tension between auto industry and electrical industry wage levels. See Current Wage Developments (January 1974), pp.1-2.

59. Monthly Labor Review (May 1973), p.62.

60. Dunlop, Wage Determination Under Trade Unions, op. cit., pp.28-44; Henry S. Farber "The United Mineworkers and the Demand for Coal" in Ronald G. Ehrenberg, ed., Research in Labor Economics, vol.2 (Greenwich, Conn.: JAI Press, 1978), pp.1-74.

61. Richard B. Freeman and James L. Medoff, "Substitution Between Production Labor and Other Inputs in Unionized and Non-Unionized Manufacturing," discussion paper number 581 (Harvard University, Institute of Economic Research, October 1977).

62. Alfred Marshall pointed out that the elasticity of labor demand will tend to be low when the ratio of labor costs to total costs is low. This influence can be overriden by substitution effects, as Hicks later pointed out, but such effects are excluded by assumption in the text below. See J.R. Hicks, The Theory of Wages, second edition (New York: St. Martin's Press, 1963), pp.241-246.

63. For example, Freeman and Medoff, "The Impact of Collective Bargaining: Illusion or Reality", op. cit., pp.56-57, note the importance of the seniority system to union workers and suggest that the union provides a "voice" for immobile workers which substitutes for quitting when conditions deteriorate.

64. Bruce E. Kaufman, "The Propensity to Strike in American Manufacturing" in Proceedings of the Industrial Relations Research Association, December 1977, p.423.

65. Federal Mediation and Conciliation Service, Thirty-Third Annual Report, Fiscal Year 1980 (Washington: GPO, 1981), p.20.

66. U.S. Bureau of Labor Statistics, Collective Bargaining in the Motor Vehicle and Equipment Industry, report 574 (Washington: BLS, 1979), pp.7-12.

67. I have argued elsewhere that in a bargaining context, many unions can operate without regard to the wage-employment trade-off and, indeed, may not perceive that it exists. This is because management resistance is likely to be correlated with demand elasticity. See Mitchell, Unions, Wages, and Inflation, op. cit., pp.64-77.

68. General Electric had a tradition of taking a hard line with its unions after World War II. In the 1960s, the various unions represented at GE countered with a strategy of coalition bargaining. See James Kuhn, "Electrical Products" in Gerald G. Somers, ed., Collective Bargaining: Contemporary American Experience, (Madison, Wisc.: Industrial Relations Research Association, 1980), p.247. A corridor in an escalator clause is a provision that a certain amount of inflation will be ignored in calculating the adjustment. In the electrical case in 1976, the corridor provided that the escalator would reflect inflation up to 7% per annum and above 9% per annum with no credit for the 7-9% interval. See Current Wage Developments (July 1976), p.1.

69. Current Wage Developments (July 1977), p.2. A general review of industrial-relations problems in coal mining can be found in William H. Miernyk, "Coal" in Somers, Collective Bargaining: Contemporary American Experience, op. cit. pp.1-48

70. Current Wage Developments (April 1978), p.1.

71. U.S. President, Economic Report of the President, January 1978 (Washington: GPO, 1978), pp.152-156.

72. For a review of the handling of the coal strike, see John A. Ackerman, "The Impact of the Coal Strike of 1977-1978," Industrial and Labor Relations Review, vol. 32 (January 1979), pp.175-188.

73. The Council on Wage and Price Stability (COWPS) argued that the guidelines held down prices and wages below what would normally have been expected. A report by the General Accounting Office disputed these claims and found fault with the statistical analysis represented by COWPS. See U.S. General Accounting Office, The Voluntary Pay and Price Standards Have Had No Discernible Effect on Inflation, PAD-81-02 (Washington: GPO, 1980), pp.47-70; U.S. Council on Wage and Price Stability, The Pay/Price Standards Program: Evaluation and Third-Year Issues, report dated July 8, 1980, pp.4-40,A1-A9.

74. Such clauses were reported at Avco Corporation, Pennsylvania Power and Light, the Jacksonville Shipyards, and Union Carbide. Source: Current Wage Developments (September 1979), pp.15-16,22, and (January 1980), p.5.

75. Jack Meyer, "Bending the Guidelines: The 1979 Teamsters Settlement," The AEI Economist (June 1979), pp.1-6.

76. GM promised to hold down its price increases; Ford promised to hold down nonunion pay. Current Wage Developments (May 1980), p.4.

77. Current Wage Developments (March 1980), p.1.

78. An official statement of the union made public in March 1980 noted: "Bargaining in 1980 will take place against the backdrop of a confused economy. Leading economists have been forecasting a recession since mid-1979. However, each time they are ready to declare that a recession is upon us, some economic indicator moves in an unanticipated direction which causes cancellation of the announcement." Source: "Bargaining Resolution by CWA's Bell System Bargaining Council," Daily Labor Report, March 13, 1980, p.E1.

79. The basic increase for the first year was 25¢, 2.6% of the basic straight-time wage. Moreover the escalator formula was not updated and some escalator money was diverted to fringe benefits. The second and third year adjustments were still smaller, 20¢ and 15¢, respectively. Source: "Steel Industry Pact Achieved Without Arbitration; Future of ENA Uncertain," Daily Labor Report, April 15, 1980, pp.AA1-AA2.

80. Current Wage Developments (July 1981), p.1.

81. Allen Sinai of Data Resources Inc. quoted in Tom Redburn, "Economists See Recovery, Then Tailspin," Los Angeles Times January 19, 1982, Part 4, pp.1,4.

82. George L. Perry, "Inflation in Theory and in Practice', Brookings Papers on Economic Activity (1:1980), pp.207-241.

82a. Daniel J.B. Mitchell, Unions, Wages and Inflation, op. cit., p.147.

83. Martin Neil Baily, "Productivity and the Services of Capital and Labor," Brookings Papers on Economic Activity (1: 1981), pp.1-50.

84. Albert Rees, "Industrial Conflict and Business Fluctuations," Journal of Political Economy, vol.60 (October 1952), pp.371-382.

85. For example, at Xerox the union agreement includes profit sharing. However, the original plan was put into effect for salaried workers in 1945 and later extended to union workers. Source: Bert L. Metzger, Profit Sharing in 38 Large Companies (Evanston, Ill.: Profit Sharing Research Foundation, 1975), p.237.

86. Barry Bosworth, "Policy Choices for Controlling Inflation," Alternatives for the 1980's (1: 1981), pp.16-22. See also Robert J. Gordon "Why U.S. Wage and Employment Behavior Differs from That in Britain and Japan," National Bureau of Economic Research, Working Paper No. 809, November 1981.

87. The Labor Management Relations Act of 1947, 61 Stat. 136, Section 301, provides for suits for violation of contract. On the legal status of union contracts prior to that time, see Arthur Lenhoff, "The Present Status of Collective Contracts in the American Legal System," Michigan Law Review, vol. 39 (May 1941), pp.1109-1153.

88. See the management statements in U.S. Department of Labor, Division of Labor Standards, The President's National Labor-Management Conference, November 5-30, 1945 (Washington: GPO, 1946), pp.55-56.

89. Textile Workers vs. Lincoln Mills, 77 S.Ct. 912, 918 (1957). Some states had previous adopted arbitration statutes. See Frank Elkouri and Edna Asper Elkouri, How Arbitration Works, third edition (Washington: Bureau of National Affairs, 1973), pp.26-43.

90. William C. Greenough and Francis P. King, Pension Plans and Public Policy (New York: Columbia University Press, 1976), p.42.

91. Sanford Jacoby, "Union-Management Cooperation: An Historical Perspective," UCLA Institute of Industrial Relations, working paper no. 32, April 1981.

91a. "Donovan Rejects Government Interference in 1982 Contract Talks, Outlines 1982 Goals," Daily Labor Report, January 12, 1982, pp.A3-A5.

92. Mitchell, Unions, Wages, and Inflation, op. cit., pp.190-196.

93. After a period of deviations from the Big 3 auto settlements, the Autoworkers had planned to bring American Motors back to the compensation levels of the major firms by 1976. The 1973-75 recession frustrated this plan and American Motors was given short-duration contracts with various concessions. Source: Current Wage Developments (March 1977), p.1; (October 1977), pp.1-2.

94. "Oil Workers Accept Offer from Gulf as Pattern for Industry Settlement," Daily Labor Report, January 12, 1982, p.A9.

95. George E. Johnson, "The Determination of Wages in the Union and Non-union Sectors," British Journal of Industrial Relations, vol.15 (July 1977), pp.211-225; Robert J. Flanagan, "Wage Interdependence in Unionized Labor Markets," Brookings Papers on Economic Activity (3: 1976), pp.635-673.

96. Susan Vroman, "Union/Non-union Spillovers" and Daniel J.B. Mitchell, "Union/Non-union Spillovers: A Note," British Journal of Industrial Relations, vol.18 (November 1980), pp.369-376.

97. Daniel J.B. Mitchell, "How to Find Wage Spillovers (Where None Exist): A Note of Caution," UCLA Institute of Industrial Relations, Working Paper No. 34, September 1981.

98. Eaton H. Conant, "Defenses of Nonunion Employers: A Study from Company Sources," Labor Law Journal, vol.10 (February 1959), pp.100-109; Nicholas S. Perna, "Wage Determination in a Nonunion Firm" (Ph.D. dissertation, Massachusetts Institute of Technology, 1970).

99. In January 1982, the Autoworkers broke off discussions of wage concessions for International Harvester after the company granted bonuses to its white-collar (non-union) workers. "The UAW Broke Off Talks with International Harvester," Los Angeles Times, January 21, 1982, Part 4, p.2.

100. Many government employers have prevailing wage statutes requiring that government pay be based on surveys of wages in the labor market. The Davis-Bacon Act requires federally-funded construction contractors to pay prevailing wages as determined by the U.S. Department of Labor. Prevailing-wage determinations often are influenced by union wage rates. There are other related federal statutes and similar arrangements for contractors of many state governments.

101. George L. Perry, "Inflation in Theory and Practice," Brookings Papers on Economic Activity, op. cit., pp.207-241.

102. Arthur M. Okun, Prices and Quantities: A Macroeconomic Analysis (Washington: Brookings Institution, 1981), chapters 2 and 3; Martin Neil Baily, "Wages and Employment Under Uncertain Demand," Review of Economic Studies, vol.41 (January 1974), pp.37-50; Robert E. Hall and David M. Lillien, "Efficient Wage Bargains Under Uncertain Supply and Demand," American Economic Review, vol.69 (December 1979), pp.868-879.

103. Jacoby finds that the importance of personnel departments and personnel management techniques rose sharply in two periods: World War I and the 1930s. These were both periods when union membership was expanding rapidly. The influence of personnel departments declined in the 1920s as unionization also declined. See Sanford Jacoby, "The 'Human Factor': An Historical Perspective on Internal Labor Markets in American Manufacturing Firms," UCLA Institute of Industrial Relations, Working Paper No. 21, May 1980.

104. Theodore A. Olsen, "Wrongful Discharge Claims Raised by At Will Employees: A New Legal Concern for Employers," Labor Law Journal, vol.32 (May 1981), pp.265-297.

105. American Compensation Association, 1981-1982 Salary Budget Survey (Scottsdale, Ariz.: ACA, 1981), p.1. The figure refers to "salary structure increases," i.e., general wage adjustments excluding merit increases. See the footnote below.

106. The December 1981 UCLA Business Forecast estimate for compensation per hour increases in 1982 was 8.1% on a year-over-year basis and 7.5% on a fourth-quarter-to-fourth-quarter basis. Data Resources, Inc. forecast for the same figures as of

January 1982 was 8.5% and 8.3%, respectively. The January 1982 forecast of Goldman Sachs for compensation per hour was 9.4% and 9.3%. Source: UCLA Business Forecasting Project, The UCLA National Business Forecast (December 1981), Table 1; Data Resources, Inc., The Data Resources Review of the U.S. Economy (January 1982), p.1.8; Goldman Sachs, Economic Research (January 1982), p.4.

The American Compensation Association study cited in the previous footnote had a good track record in forecasting actual adjustments until 1979-80. The 1979 forecast--made before the guidelines were imposed--had an underestimate of .4 to .8 percentage points. The 1980 forecast turned out to be an overestimate of 1.3 to 1.5 percentage points. These errors can be interpreted as the results of unanticipated imposition and loosening of the guidelines. (Data provided to the author by the ACA).