sit operators have tended to move slowly and cautiously in experimenting with demand-responsive transit. Labor had indicated some early enthusiasm for dial-a-ride but has become more skeptical of paratransit as it has expanded, particularly in regard to employee protection. The workshop discussion suggested that the integration of traditional transit and paratransit can help to boost ridership on traditional transit.

**POLITICAL IMPACT**

The framework for collective bargaining must involve organizations that have the capacity to agree and to disagree. A realistic appraisal of public-transit bargaining must therefore recognize that reaching an agreement includes lobbying, electioneering, and politicking, as well as negotiating at the table. In the broader context of a balanced federal role, federal policy should take account of the needs of the region a transit system serves rather than only the needs of its central city.

**EMPLOYEE PROTECTION**

Implementation of the statutory requirements of section 13c for a given property largely reflects the ongoing collective-bargaining relationship between its management and labor. There have undoubtedly been examples of overzealous use of section 13c bargaining; wage rates may, in some instances, have been driven higher than would otherwise have been the case, especially if the availability of federal subsidy dollars was also an issue. On the other hand, the vast majority of section 13c agreements covering operating assistance and capital projects are now negotiated with a minimum of difficulty or dispute.

A critical policy question yet to be resolved is whether section 13c will be extended to cover paratransit and non-fixed-route transit services such as taxis. At some point, Congress will probably have to determine how this kind of transit is to be integrated into the concept of mass transportation; this may require a resolution of appropriate levels of federal assistance for such services as well as the extension of protection to affected employees.

The discussants agreed that for section 13c, as for many of the other subjects covered, the key labor-relations element in increasing the survivability of urban transit is the demonstration of trust and good faith between labor and management.

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Richard U. Miller, Craig A. Olson, and James L. Stern, Industrial Relations Research Institute, University of Wisconsin—Madison

Few institutions in the United States have undergone such rapid and far-reaching changes as the urban transit industry. Although they were largely private in 1960, the systems of every large metropolitan system, save that of New Orleans, had passed into the hands of some unit of government by 1976. The transition to public ownership was facilitated by federal, state, or local financial assistance for capital acquisition, demonstration projects, and operating assistance.

Without government assistance, the privately owned mass transit system could not survive. With governmental assistance, the quality of service has been improved; special services and fares for the elderly, school children, and the disadvantaged have been inaugurated; and technological innovation has been encouraged. Although in the last year or so the industry's ridership and revenues have begun to respond positively (1), the long-term picture, as shown below, has been bleak to say the least.

<table>
<thead>
<tr>
<th>Item</th>
<th>1950</th>
<th>1974</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of employees</td>
<td>240,000</td>
<td>153,100</td>
<td>-36</td>
</tr>
<tr>
<td>Revenue passengers (000,000s)</td>
<td>13,845</td>
<td>56,066</td>
<td>-60</td>
</tr>
<tr>
<td>Operating revenue (000,000s)</td>
<td>14,52</td>
<td>19,40</td>
<td>+34</td>
</tr>
<tr>
<td>Operating expenses (000,000s)</td>
<td>1,297</td>
<td>3,102</td>
<td>+139</td>
</tr>
</tbody>
</table>

Compared with 1950, by 1974 employment had declined by 36 percent, revenue passengers were down by 60 percent, and the shortfall in revenue had reached $1.3 billion (more than $1.7 billion by 1975). Thus, even though the combined operating assistance from public agencies exceeded $1.4 billion, it was short of total operating expenses by $300 million.

Public ownership has ensured that the industry will survive, at least for the time being, but it has clearly not solved the cause of urban transit's ills. Moreover, state and municipal levels of government are strained to the point that continuation of their shares of operating assistance may be severely limited. Reduction or elimination of these contributions would probably spell the end of hopes for recovery of the industry.

A good deal of concern has been focused on the industry's labor relations in general and labor costs in particular. This is to be expected, since urban transit has been well organized since before the turn of the century and its unions are among the most powerful in the American labor movement. This situation, coupled with the fact that labor costs are reported to constitute 65 percent of total operating costs (2), ensures a constant close scrutiny of the labor sector of the industry.

Certain authors believe that the combination of gov-
government subsidies and union strengths gives rise to the following causal chain: union power — high wages — higher labor costs — high deficits — high subsidies — high wages and so on, in a transit-system version of the wage-price spiral. For example, Hilton (3) argued, in criticizing employer-protection requirements, "Through section 13c UMTA [Urban Mass Transportation Administration] strengthens unions in the field and thus tends to solidify the present noncompetitive organization of the industry. Moreover, UMTA strengthens unions in the industry by making the industry more capital intensive...." He contended further, "The high level of wages for unionized drivers makes transit systems opt for a relatively large vehicle, a diesel bus of 50-passenger capacity." Although Hilton was opposed to capital subsidies, Pitch (4) considered this approach preferable to operating subsidies. His rationale was, however, much the same as Hilton's, i.e., operating subsidies might result in the dissipation of funds through union wage gains.

We have several objectives in taking up the issues associated with labor costs in the urban transit industry. First, we wish to report some preliminary results of research on labor relations in the transit industry that is now under way at the University of Wisconsin. Second, issues related to the measurement, collection, and use of data on labor costs and related factors will be explored. Third, on the basis of our research over the past 2 years, we will discuss some alternatives aimed, on the one hand, at improving both the validity and the accessibility of cost data and, on the other hand, at reducing the gap between operating expenses and revenue. Finally, a modest suggestion will be offered for modifying the bargaining approaches of transit labor and management.

**WISCONSIN STUDY**

In the spring of 1975, a study of labor relations in the transit industry was initiated at the Industrial Relations Research Institute of the University of Wisconsin—Madison. The project, supported by a grant from the U.S. Department of Transportation, was divided into four parts: (a) the legal framework for collective bargaining in urban transit, including the role of 13c; (b) an analysis of the Amalgamated Transit Union (ATU), including its structure, bargaining policies, and future role; (c) the effects on bargaining of the transition from private to public ownership, the impact of subsidies, and the use of arbitration in settling interest disputes; and (d) an examination of the determinants of wage rates and labor costs through cross-sectional and longitudinal statistical analysis.

Data were gathered in a variety of ways, including field interviews with labor and management at 25 properties. In addition, a sample of 60 properties that had supplied annual data to the American Public Transit Association (APTA) from 1960 to 1973 was used as the basis for wage and labor cost studies. An outline of operating statistics derived from U.S. Department of Labor data for 32 properties is shown in Table 1. One final point to note is that rail and multimodal systems were excluded from the analysis.

**Legal Framework for Bargaining**

A major initial task of the project was to unravel the legal tangle that envelops labor relations in urban transit. The job proved more onerous than had been anticipated and has not been resolved entirely to our satisfaction. Nevertheless, several generalizations can be drawn from our work.

First, the so-called Memphis formula, whereby the transit system's governmental owners contract with a management service firm that then bargains with the unions, is not legally viable as a means of providing private-sector status for what are essentially government-owned properties (5, pp. 7–24). A review of National Labor Relations Board (NLRB) decisions clearly shows that, if the issue is raised with the NLRB, it will decline jurisdiction. This has obvious implications for the handling of representation issues, unfair labor practices, and the legality of work stoppages. In the future, the parties will therefore have to accommodate their bargaining activities, including the requirements of section 13c, to the state and local legal frameworks.

With regard to section 13c, our interviews with labor and management at the 25 properties visited, as well as those with appropriate government officials, suggest that, at least as far as the capital grants program is concerned, section 13c has not been the impediment to the acquisition of capital grants that was predicted. Whether this will be equally true of the operating subsidies remains to be seen.

Nothing else will come through from the analysis, one central fact must be recognized: Transit properties are now organizational extensions of government, and transit workers are thus public employees, despite the instrument of private management firms. The labor-relations issues of urban mass transit will therefore themselves be extensions of the social, economic, and political problems of the cities. Labor and management can neither insulate their bargaining from their urban environments nor expect that the outcomes of such bargaining will be left in the hands of the parties. Just as is happening in health-care bargaining, the third-party payers may choose to exercise their veto powers. Transit systems in cities like New York may not find this a new or startling conclusion. For other systems, however, political criteria may increase in importance. Benchmarks for determining wage increases may be the increases won by other city employees instead of gains made by private-sector workers and transit employees in other areas.

**Labor Costs and Wages**

One of the first concerns of our research was to attempt to identify factors that significantly affect transit wages. The findings suggest that manufacturing earnings in the local private-sector labor market and city size are the key variables for explaining differences in transit wages. A second area of concern was to evaluate the impact of public ownership on wages and labor costs. Our findings indicate that there is no statistically significant dif-

### Table 1. Operating statistics for 32 bus properties in 1965 and 1973.

<table>
<thead>
<tr>
<th>Item</th>
<th>1965</th>
<th>1973</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total revenue passengers</td>
<td>774,980,000</td>
<td>668,610,000</td>
<td>-10.25</td>
</tr>
<tr>
<td>Total number of employees</td>
<td>38,415</td>
<td>28,814</td>
<td>-21.7</td>
</tr>
<tr>
<td>Operating revenue, $</td>
<td>214,660,000</td>
<td>240,210,000</td>
<td>+11.90</td>
</tr>
<tr>
<td>Operating expenses, $</td>
<td>200,580,000</td>
<td>297,520,000</td>
<td>+48.33</td>
</tr>
<tr>
<td>Compensation to bus operators, $</td>
<td>83,347,000</td>
<td>153,340,000</td>
<td>+83.98</td>
</tr>
<tr>
<td>Full-time operator wage rate (avg), $</td>
<td>2.44</td>
<td>2.35</td>
<td>-4.14</td>
</tr>
<tr>
<td>Bus-hours</td>
<td>25,000,000</td>
<td>24,606,000</td>
<td>-1.47</td>
</tr>
<tr>
<td>Bus-kilometers</td>
<td>462,820,000</td>
<td>479,550,000</td>
<td>+3.62</td>
</tr>
<tr>
<td>Avg change in ridership in each system</td>
<td>-19.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg fare, cents</td>
<td>29</td>
<td>36</td>
<td>+24.11</td>
</tr>
<tr>
<td>Penalty time</td>
<td>1,333</td>
<td>1,466</td>
<td>+9.98</td>
</tr>
<tr>
<td>Consumer price index (1967 = 100)</td>
<td>94.5</td>
<td>133.1</td>
<td>+40.85</td>
</tr>
<tr>
<td>Avg hourly manufacturing earnings (non-supervisory personnel), $</td>
<td>2.61</td>
<td>4.07</td>
<td>+55.9</td>
</tr>
</tbody>
</table>

Note: 1 km = 0.6 mile.
ference between wages paid in public and private systems, but these findings are not consistent with those of other researchers (6). The differences in the results are probably due to differences in the samples of properties analyzed and the quality of the data available. Although no wage differences across systems were found for any single year, over time the wages of transit employees in relation to manufacturing earnings changed significantly. For our sample of 32 transit systems, operator's wages were almost 10 percent lower than the earnings for nonsupervisory personnel in the manufacturing sector in 1965. By 1973 the transit union rate was about 4.4 percent higher than hourly manufacturing earnings.

Beyond the issue of wage levels in public systems, there is the more basic question of what happens to wages when public capital or operating subsidies are available. It was argued during the course of Congressional hearings on the various mass transit bills that federal subsidies would be of more benefit to transit employees than to transit riders (7). Analysis of the data for the properties in our sample does not confirm the hypothesis that higher operating subsidies in public systems lead to increases in transit wages. It is, therefore, premature to conclude, as have such critics of the subsidy program as Hilton (3), Fitch (4), and Tye (7), that operating and capital assistance are being dissipated through excessive union wage gains.

These results must be interpreted cautiously because of the nature of the data available for analysis. We believe the quality of the data reported varies tremendously from system to system and that this may be a major factor contributing to the findings of no relationship between wages, subsidies, and public ownership.

LABOR COSTS IN TRANSIT: MEASUREMENT, DETERMINATION, AND CONTROL

It is appropriate to keep in mind that labor cost is customarily divided into three categories: (a) direct wage payments; (b) indirect compensation, including deferred payments through pensions, premium or penalty payments, payments for time not worked (such as vacations, holidays, lay-up or turn-in time), and payroll taxes, to name just a few; and (c) overhead that is related to the administration of employment or labor-relations programs (such overhead may be handled in a variety of ways, some of which may not recognize it as a labor cost).

Note that changes in a number of the items in these categories may not be a consequence of collective bargaining. For example, payroll taxes have risen rapidly in recent years as Congress has expanded the Social Security and related systems. In addition, the rapid spiraling of health costs has meant that the cost of providing health insurance programs to employees has become increasingly exorbitant.

The level of labor costs is also a function of the level of service provided by the system. Thus, as bus-hours increase, so too may the need for operator-hours—a need filled by hiring more drivers or scheduling more overtime at higher rates.

The greatest impact on labor costs of the transition from private to public ownership may be in the area of expanded service. As social and community goals have tended to replace strictly economic criteria, service has been added at times with only minimal regard for whether the added revenues would cover the additional operating expenses.

Absolute levels of expenditures for labor costs need to be related to physical output or revenue to be made more meaningful. It is therefore customary to relate various measures of labor cost (such as total payroll, compensation received by bus operators, or average hourly wages), to such transit output measures as number of passengers, bus-hours, bus-kilometers, and revenue passengers.

Care must be taken in the use of these measures to avoid misleading conclusions, as could happen in the case of the well-known long-term decline in ridership, a phenomenon that is for the most part beyond the control of both labor and management. For example, in one of the larger midwestern cities in our sample, service was expanded by 15 percent between the years 1965 and 1974. During this same period, the labor cost per revenue passenger increased from 9 to 28 cents. Unfortunately, ridership also declined by 24 percent; had it remained at the 1965 level, the increase in labor cost per revenue passenger would have been only 18 cents, a figure more in line with the service expansion undertaken by the system.

The fare policies of particular transit systems are of obvious importance in the calculation of labor cost-efficiency figures. Fares may be set on the basis of social goals or political considerations. Thus, reduced fares for senior citizens or school children, liberal free-rider provisions, and restrictions on raising fares in line with costs all have distorted the figures on industry revenue. Evidence of this is not hard to find. For example, the average fare for the industry as a whole was 20 cents in 1965 and 32 cents in 1973 (4). When the 1973 figure is translated into 1965 dollars, it is only 23 cents. A further case in point is our own sample of properties, which reveals that, in real terms, the average fare was lower in 1973 than in 1965 (25 cents as opposed to 29 cents).

In the original research undertaken for UMTA at the University of Wisconsin, an attempt was made to measure the relationships of four aspects of labor cost to collective bargaining: the wage rate, health and welfare benefits, penalty payments and payment for time not worked, and the supply of transit services. The first and fourth aspects were discussed previously. The second aspect, health and welfare benefits, could not be fully analyzed for transit because of the lack of available data. Unfortunately, there is almost no public information that would permit an evaluation of the benefits and funding levels of the various pension plans in the industry. This limitation is serious because of the major role these benefits play in employee compensation. Although we know very little about the health and welfare benefits in the industry, we can say that both wages and fringe benefits are influenced by compensation levels in the community and industry.

The last component of labor cost considered in our research was payment for nonproductive or penalty hours, by which we mean the number of straight-time equivalent hours in excess of bus-hours. For example, if a bus operator works for 1 h beyond the scheduled limit for the run and the penalty rate is 1 1/2 times the hourly rate, we would call this a half hour of penalty time. This component of labor cost can be calculated for each system if we know the number of bus-hours, the total compensation to bus operators, and the union wage rate. In practical terms, this figure is simply one plus the ratio of nonproductive hours and penalty hours to total bus-hours. If there is no measurement error in either bus-hours or the union wage rate received by operators, we would expect this penalty measure to be greater than one. A value greater than one reflects the nature of the demand for service in the transit industry and the contract protections that have evolved.

The penalty times for the systems in our sample for
1965 and 1973 are shown in Table 1. In 1965 the payment to bus operators for 1 bus-h of service was 1.333 times the wage rate for full-time operators, and in 1973 it was 1.466 times the wage rate. Although the labor-contract provisions that provide for vacation, holiday, and penalty-time payments affect the amount of the penalty time, the increase during this period is probably due to increases in vacations, holidays, and sick leave rather than to more restrictive work practices.

Differences between systems and changes over time in this penalty figure are determined by many factors other than collective bargaining. For example, ridership patterns and the efficiency with which the system is managed have a significant impact. We would expect a high ratio of penalty time to bus-hours in systems in which the peak-to-base ratio and length of time between morning and evening service peaks are high. Although these ridership patterns may be marginally influenced by management's marketing policies, they are, to a very large degree, uncontrollable and certainly outside the normal scope of collective bargaining. In similar fashion, differences in management efficiency in route and run scheduling may also be important in explaining differences in penalty time.

Attempts to statistically analyze differences in penalty time between systems were not very fruitful. The reasons for lack of results are again basically a consequence of inadequacies in industry data. This is doubly unfortunate since, where there is adequate historical data on costs and labor-contract terms, this measure can be a valuable aid to both sides in bargaining. One of the problems that occurs in bargaining about changes in work rules is that management and the union have trouble determining and agreeing on the cost savings that would occur as a result of a contract change. This inability to determine the savings that result from a change makes it almost impossible for agreement to be reached on how the savings should be distributed between the parties. With good operating information, the penalty-time measure suggested here could assist the parties in solving the thornier issues of work rules that currently plague the industry.

INADEQUACY OF CURRENT LABOR COST DATA

The discussion of labor costs in this paper and the more elaborate analysis forthcoming in our report are based on statistics made available by APTA. Without their cooperation a good part of our work could obviously not have been conducted. However, through no fault of theirs, the data they have collected have several severe limitations.

First, the available information was not sufficient to permit examination of those aspects of labor cost that are a function of differences in pension levels, funding, and cost. Another lack is that of data on numbers and expenditures for nonunion, nonoperating, and management personnel. Statistics for a group of bus systems that are included in the 1974 APTA Operating Report show that bus operators represent 66 percent of all transit employees and receive about 59 percent of the total compensation. It is reported as payroll costs. While much of the remaining payroll cost is accounted for by wages and salaries of members of the bargaining unit who are not bus operators, it is also likely that professional nonunion support personnel receive a large share of this remaining payroll. Have the earnings and numbers of these people increased faster than the earnings and numbers of operators? If so, responsibility for the rapid changes in labor costs must be shared by this group of transit employees, but the information required to respond adequately to this question is not available.

A second problem with the existing data is related to the philosophical notion of open government and public access to information. The APTA data are not public information but, for almost all purposes, the industry is a publicly owned service that is heavily subsidized by federal, state, and local government. For this reason, there ought to be system-by-system data available to all levels of government and the public so that meaningful policy discussion can occur.

Public access to system-by-system data is required because the aggregate statistics often available for a group of systems can be misinterpreted. This problem can be demonstrated by examining the two ridership figures reported in Table 1. The total ridership change for the sample systems was a decline of about 10 percent between 1965 and 1973. However, the average decline in ridership for the system was almost 20 percent. The reason for the difference is that the change in number of passengers in the first measure is weighted by the size of the system. The first figure is equal to

$$1 - \frac{\sum_{i=1}^{32} \text{passengers in 1973}}{\sum_{i=1}^{32} \text{passengers in 1965}}$$

(1)

whereas the second figure is equal to

$$\left(1 - \frac{\sum_{i=1}^{32} \text{passengers in 1973}}{\sum_{i=1}^{32} \text{passengers in 1965}}\right)/32$$

(2)

Neither one of the measures is correct for all uses. The former measure indicates how the total industry (32 observations in this example) has changed. The second figure tells us the average decline in ridership for the 32 systems. Without access to property-by-property data, interested individuals cannot compare the two figures.

In addition, the fact that reporting has historically been voluntary has created gaps in the data record. Omitted data, variability of definitions, and inaccuracies in reporting were a major obstacle to the proper statistical analysis of the wage and labor cost data. For example, in 1965 and 1973, there were only 32 bus systems that reported the information we needed for both years. The original sample of 60 properties at times provided useful information on 32 to 39 systems, and the larger sample of 110 was eventually reduced to only 66 usable transit properties. This makes a longitudinal examination of changes in the industry difficult. Also, the differences made by which systems report data each year can make the aggregate statistics as reported in the APTA Fact Book misleading. In 1974 many more systems filed operating data with APTA than had in 1973. Thus, the increase in total revenue passengers reported in the Fact Book between 1973 and 1974 may be due to the larger number of systems reporting rather than to a real increase in passengers.

There is therefore great anticipation among the policymakers, transit managers, and scholars awaiting the implementation of Project FARE (Uniform Financial Accounting and Reporting Elements). The project is an outgrowth of a study undertaken by Arthur Andersen and Company in conjunction with UMTA and an 18-member Transit Industry Control Board (8). Project FARE is designed to provide, among other objectives, standardized and reliable operating and financial data from individual transit properties. Data would be reported to UMTA on a mandatory basis beginning in 1978 and would be a condition of participation in the section 5 grants.

By providing mandatory, systematic, and neutral data collection and reporting, Project FARE should, in the
future, create a much better base for the analysis of transit cost, productivity, and related data. In the meantime, answers to the kinds of questions posed in the research reported here can only be made tentatively and accepted even more cautiously.

**URBAN MASS TRANSIT AS A PUBLIC-SECTOR INDUSTRY**

Greater acceptance of the fact that urban transit is no longer a private-sector industry is in order. As stated earlier, the fate of mass transit is inseparably tied to the social and economic plight of the cities being served. The force of events is increasingly imposing this point of view on the parties but under conditions that seem to be dysfunctional for the industry and its labor-management relationships. We are suggesting that, if the transition to full city or urban governmental status could be planned, the integration of transit units could be achieved more smoothly.

Among the implications of recognition and acceptance of urban public-sector status might be reduction in overhead labor costs, since the recruiting, hiring, and initial training of transit personnel might be shifted to the urban government itself and administered through a central personnel office. In addition, the problems of staffing under peak rider demand might be handled by shifting other city employees into transit activities as the need arises. Meter maids, other vehicle operators, or (perhaps, given the dangers of bus driving these days) even police officers might be assigned temporary driving duty. The effort would be to match the public services that have different consumption peaks, thereby allocating penalty time beyond the boundaries of the transit system.

In the same vein, an alternative approach to handling peak loads might be to use a pool of part-time drivers retired from the transit system. At a time in which retirement benefits are generally not keeping pace with cost-of-living increases, qualified retirees might be quite happy to return to work on a limited basis, assuming that, if the retirees were over 65, the scheduling of hours worked would be in keeping with the dollar limits established by the Social Security Administration. The use of transit retirees would have several advantages. First, the union would be protected, because nonunion, nontransit employees are not being employed; second, driver efficiency would be quite high and training costs would be minimal; and, finally, indirect wage costs and penalty payments would be reduced. Obviously, a proposal such as this would have to be implemented jointly by the parties, incorporating income and job guarantees for all full-time employees who wish to work full time.

Recognition of transit as a public employer also raises direct issues for collective bargaining. If the NLRB in fact does not have jurisdiction, the legality of the strike is in question. Very few states permit strikes by public employees, and those that do generally allow it only on a limited basis (5). Historical experience with collective bargaining supports the conclusion that, if the strike weapon is to be curtailed, there must be a substitute. If one assumes that urban transportation is an essential service and that state public-sector laws, although liberalized to a degree, will not permit strikes in essential services, the likely substitute will be some form of arbitration. There is, of course, precedence for the use of interest arbitration in the industry going back to the early 1900s and its adoption as an international policy of the ATU during the presidency of William Mahon.

If the possible counterproductiveness of the strike was clear in those days, it would not appear that circumstances are any more favorable today. The limited financial resources of urban areas, the potential long-term loss of ridership, and the knowledge that the costs of the strike may be borne most heavily by disadvantaged social groups all reinforce the belief that the ATU's 75-year-old arbitration policy should be strengthened and made more efficient. With regard to this last point, arbitration as a device for conflict resolution cannot work efficiently when hearings require weeks, awards are delayed months, and costs incurred for the process run beyond $50,000 to $60,000 each.

**EMPLOYMENT SECURITY AND PRODUCTIVITY COMMITTEES FOR THE TRANSIT INDUSTRY**

"There must be a better way" is now a widely proclaimed theme of the Federal Mediation and Conciliation Service. Unfortunately, the better way has not yet emerged in the transit industry. Nontransit industry participants in the University of North Florida's Conference on Unions, Management Rights, and the Public Interest in Mass Transit, held March 22 to 24, 1976, must have been struck by the often hawkish rhetoric that labor and management directed at each other during the sessions. One of the conference participants, Larry Yud, Special Assistant for Mass Transit of the U.S. Department of Labor, argued that a number of signs indicate that collective bargaining in transit is breaking down; there is now more bargaining through newspapers, increasing numbers of arbitrated settlements, continuing threats to take the issues to Congress, and a hardening of the ideological positions of the parties. Yud's solution was the adoption of creative collective bargaining, described by James J. Healy (9).

Creative collective bargaining should, in fact, be considered as a means of finding a problem-solving approach to the transit industry's labor-management troubles. We would recommend, rather than the 1965 directions proposed by Healy, an example much closer at hand—the Experimental Negotiating Agreement adopted by the steel industry in 1974. In many respects, the steel industry's situation resembled that of mass transit: Employment was down, labor-management relations were characterized by increasing conflict, and there was a tendency on the part of critics to argue that it no longer made sense for the United States to maintain a basic steel industry. The heart of the agreement is, on the one hand, to send unresolved national disputes over new contract terms to arbitration, and, on the other hand, to create at the level of the plant labor-management productivity committees. As their name implies, the Employment Security and Productivity Committees are designed to seek ways of increasing productivity and controlling costs, while at the same time not endangering the jobs and income of the union's members. No layoffs are to be allowed as a result of productivity improvements (labor savings were to be handled by attrition), and emphasis was to be placed on the reduction of scrap, improved maintenance, and reduced absenteeism and turnover, among other factors.

Labor-management productivity committees are, of course, not innovations; they were used extensively during World War II. The strong support for joint productivity committees by both the Steel Workers Union and steel management, along with the experiences in retail food and a number of communities, however, have brought renewed emphasis. Perhaps, with the appropriate modification, union and management can develop a better way to solve transit problems. New approaches must be
explored voluntarily by the parties; the alternative is that government will dictate the solutions.

REFERENCES


Discussion

Miller's paper led to a discussion of appropriate and adequate measures of labor costs. Representatives of transit management felt that a sufficient amount of data was being collected and that this information was readily available. This observation was qualified by the reminder that, as good as the APTA data are, they vary in quality, depending on the number of systems that respond.

Both labor and management recognized that a data base is an essential element in collective bargaining. It was observed that many data are considered to be contaminated because the ATU, the APTA, or a source that may be preparing it for use in bargaining has provided it. A representative of management addressed the problems of the internal exchange of information and its critical part in negotiations in terms of what other cities are paying and how one's own city has been related to this amount in the past. That is the negotiator's guide, and the negotiator is careful not to give away something to the union that his or her counterpart in another city will have to suffer for later. The speaker noted that many times the exchange of information is unofficial or sub rosa and expressed the belief that the union has the same objectives and works the same way.

While both labor and management have their own internal information-gathering mechanisms, problems concerning data do occur during negotiation and arbitra-

tion. A representative of labor described what is happening in New York today as a perfect illustration of the inability of the transit industry to disclosure to people outside the industry what its costs are. The transit authority agreed to a cost-of-living increase to be achieved through productivity savings. The Emergency Financial Control Board struggled with the transit authority for some months over the data and said that the employees did produce the necessary savings through productivity gains, but there were no data to support it.

This prompted a discussion of the utility of common denominators that could be used throughout the industry. The problem with universal labels is the inherent uniqueness of the various transit situations. One participant stated: "I cannot conceive of any sort of a system to report what we do with the New York City Transit Authority and have it be relevant to the other properties; I am afraid the reverse is also true."

Although both labor and management appeared to be satisfied with the existing internal data-collection mechanisms, the federal government has an increasing need for data that would be used both in policy determination and in reporting to Congress. To this end, Project FARE was enacted into law. Effective in 1978, all transit systems will have to make standardized reports to the federal government, including a considerable amount of labor data broken down into the various kinds of wage and fringe-benefit costs. A representative of the federal government noted that DOT is currently reviewing the section 5 operating subsidy program: "It is very difficult to make assessments about how well the program is working, what kinds of changes should be made, and what kinds of formulas to apply because of the data and the definitions of problems. Making this information available in a few years will be a good first step."

A representative of management questioned whether UMTA is going to be used to penalize certain cities that it feels are not operating efficiently, perhaps cutting back their operating assistance. He also asked whether UMTA is going to say that one area is experimenting with its high-cost new services too much or not enough and whether it is going to start determining a national labor-contract approach, negotiating contracts in Washington instead of in each area. The DOT official replied: "We do not have the authority to do that. In the future we will be asked to make recommendations on subsidy formulas and who should get what under what conditions. We cannot do that without more information than we now have."

It appeared to management that DOT's goal was eventually to negotiate a national labor contract for the industry, to which DOT responded that one option might be a block grant program. This prompted management to observe that this is an area that both management and labor ought to be very concerned about—an area that they can agree on because we are going to see more federal dictates to the local areas, unions, management, and citizenry as a result of Project FARE. Labor, however, did not agree with this assessment.

There is no question that when billions of federal dollars go into an operating-assistance program there is going to be a legitimate concern in how that money is being spent and how it can be used more productively. It is not very productive for transit management and the transit unions to agree to it is a bad idea. It is in the interest of management and labor to see that data are provided that will be as impartial and accurate as they can be, data that can be used by management and the unions in making their own recommendations and by government in making recommendations to the Congress as to how the programs should be shaped. Labor is very unhappy with current efforts on the part of the government in collecting data because we have had no input whatsoever in Project FARE, and we do not accept what is currently being done as impartial. What we see is sort of a conspiracy between the government and industry to find ways to put labor in a box. Labor feels that there
should be an impartial body established that can review and assess the data collecting and to see that the proper information is provided and made available to all industry parties. At this stage, it would seem that this is a very important issue. There needs to be a better data base and it needs to be made available as soon as possible.

The discussion ended with a comment on the costs of transit as seen in a societal context. One of the purposes of transit may be to improve the economic base of the community. A project designed to enhance that economic base may look very bad in terms of transit costs. If a report goes to Washington, a transit facility could be penalized because of these high costs although the project may be the lifeblood of the community. DOT will have to broaden its scope in examining financial reports to include more indicators of the economic viability of the community.

Growth of Productivity and Labor Relations in Urban Mass Transit

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The urban mass transit industry is clearly in great difficulty. Transit patronage has steadily declined; in 1975 it was barely one-fourth the level of its peak in the 1940s. Many transit firms have gone out of business, especially in smaller urban areas and in the suburbs. Among those firms that remain in operation, service has usually been cut back, sometimes severely. The decline in patronage has continued, moreover, despite efforts by the remaining properties, especially in the past 15 years, to raise fares and cut back service only slowly. In the face of inflation and ridership losses, these fare and service policies led to enormous and rapidly growing deficits, usually publicly subsidized and accompanied by public ownership. By the mid-1970s, publicly owned properties probably carried 90 percent of all transit riders; passenger-fare receipts barely covered half of the industry's operating costs and a much smaller proportion of its total costs. Reliable estimates of the transit industry's nonoperating costs are not available, but estimates of ridership in publicly owned firms, passenger revenues, and operating expenses can be found in the Transit Fact Book (1).

Some observers suspect that the postwar decline of transit is partly attributable to the failure of growth in productivity in the industry to keep pace with growth in other industries. Slow growth in productivity undoubtedly contributed to transit's current difficulties, and an improved record of productivity would surely be helpful, although it might not be sufficient to reverse the industry's financial decline. To achieve improved productivity, labor-management cooperation will be important, in part because the most important opportunities for improvement in productivity commonly involve adjustments in long-standing work rules or other labor practices. If labor and management recognize that they have a common interest in the financial health of their industry and thus in increased productivity, a variety of possible strategies for improvement in productivity might be pursued.

IMPORTANCE OF IMPROVING PRODUCTIVITY

Productivity is the ratio of outputs produced to inputs consumed. Transit productivity must keep pace with that in other industries or the industry's services will become more expensive and less competitive than the services of other industries. Productivity can be improved either by increasing outputs while inputs are held constant or by decreasing inputs to achieve a specified output. In transit, this generally means providing services more highly valued by the industry's patrons without using extra labor or capital inputs (thus generating more revenue) or making the existing service provision more efficient by cutting costs without affecting output or revenue.

A slow rate of growth of productivity is not the only possible, and probably not even the leading, explanation for the transit industry's current difficulties. At least three trends beyond the industry's control have contributed to transit's decline over the past 30 years and are likely to continue to do so in the future.

The most important of these adverse trends is the rising level of personal incomes. Higher personal incomes increase the amounts people are willing to spend on travel, thereby making the automobile, with its privacy, relatively high comfort level, instant availability, and door-to-door service, a more attractive alternative. Transit cannot provide as comfortable, convenient, or rapid service as cars. Slow growing productivity undoubtedly contributed to transit's current difficulties, and an improved record of productivity would surely be helpful, although it might not be sufficient to reverse the industry's financial decline. To achieve improved productivity, labor-management cooperation will be important, in part because the most important opportunities for improvement in productivity commonly involve adjustments in long-standing work rules or other labor practices. If labor and management recognize that they have a common interest in the financial health of their industry and thus in increased productivity, a variety of possible strategies for improvement in productivity might be pursued.

A second trend contributing to reduced transit rider-