Labor expressed the view that nationwide uniformity in transit labor relations is needed within a legal structure that would require full collective bargaining. Restrictions on the right to strike, mandated arbitration, or mandated arrangements for the settlement of other disputes should be set out in a way that is understandable and unambiguous. It was also pointed out that, because transit is a deficit operation, a transit agency operator saves money by shutting down the system; something should be done in law and policy so that it will not be to the advantage of the public transit system to be shut down.

A management representative pointed out that a step toward total communication with the labor unions could be worked out if regular meetings are scheduled to address the current issues. It was also suggested that, because so little of the decision-making process is left to negotiations, representatives of the real decision makers should be invited into the negotiating sessions and regular meetings. Perhaps a negotiating team, representing the political bodies that make the decisions, should be formed to expedite the process and avoid the time that is spent waiting for the decision makers' approval after representatives at the negotiating table have reached a compromise.

Labor questioned the validity of the sunshine laws in connection with collective bargaining. Smith indicated that in Florida negotiations have been fairly nonproductive in the public sector once they have been put into the open. It was noted that it is virtually impossible to bargain collectively when the mayor, public authorities, city council, and others involved in the negotiations are together at the bargaining table. It was felt that the negotiations do not belong in the newspapers but should remain at the negotiating table.

A representative of management then asked Smith to assess the development of section 13c and to suggest a direction management might take in order to avoid arduous collective bargaining confrontations. Smith responded:

One thing that has clearly been accomplished under section 13c in the last 12 years is that collective bargaining as an institution has survived the transfer from private to public ownership. The last years have brought more money into an expanding industry, and some of the new service providers that we anticipated have not materialized. I think the big test affecting section 13c is still to come in whether it is going to be of value or not and what it is going to mean to the industry and other service providers.

The roles of federal, state, and local governments in employee bargaining were questioned repeatedly in the session. There was a feeling that many state governments tend to lump all public employees into the same group as if they are somehow identical. A representative of the federal government added that there are at least three categories of public employees that ought to be distinguished for purposes of collective bargaining and labor-management relations:

1. Those closely related to health and welfare, such as fire and police protection;
2. Those in education, who pose no immediate health and welfare problem if they go on strike; and
3. Those in the transit industry, which has a unique history and funding (both the fare box and tax revenues).

Finally, Smith suggested that it is not realistic to expect passage of a federal law that would be applicable to state and municipal employees but that the implementation of state laws is a substantially different matter. In many areas transit is suffering because it is handled by the same agencies that are promoting the growth of highways and the use of automobiles.

The Impact of Paratransit Innovations on the Job Security of Conventional Transit Employees

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The purpose of this paper is to assess the impact of paratransit innovations on the job security of the present employees of conventional transit service. The major problem in carrying out this task is that we know very little about the ultimate potential of paratransit service modes in the urban transportation system of the future. It is true that interest in paratransit has increased enormously since the concept first became fashionable in the mid-1960s. A variety of federal agencies, including the Urban Mass Transportation Administration, Federal Highway Administration, Federal Energy Administration, and Environmental Protection Agency, have supported paratransit activities, and several state governments have passed legislation or created agencies designed to promote the concept (1). However, transit operators, with a few exceptions, have moved very slowly in the area, and the early enthusiasm of transit labor leaders for dial-a-ride has changed to skepticism as the paratransit concept has expanded to include other modes less attractive to labor. Thus, most paratransit activity has to date escaped the control of the transit industry and the jurisdiction of transit unions. This
raises the specter of competition between paratransit and existing conventional services. At this time, the extent of potential competition is a matter of conjecture because of the limited nature of our experience with paratransit. Nevertheless, I will engage in some speculation about the impact of paratransit on the job security of conventional transit workers.

Let me first define paratransit. My colleague at the Massachusetts Institute of Technology (MIT), Alan Altshuler, defines paratransit as the range of ride-sharing activities that lie between "pickup car pools organized solely at the initiative of the individual members and fixed-route bus service" (1). According to Altshuler, paratransit service is characterized by (a) some degree of formal organization and (b) flexible routing to serve specific origins and destinations rather than simply high-demand corridors. Under this general definition the specific modes most frequently discussed are (a) dial-a-ride transit, (b) shared-ride taxis, (c) subscription bus service, (d) van pools, and (e) formally organized car pools. Special transportation services for the elderly and handicapped, which could employ any of the above modes, are sometimes identified as a separate category. Normal taxi service is explicitly excluded.

Before dealing with each of these service modes, I would like to propose a list of general questions that must be addressed before the job-security problem can be accurately analyzed. The list is probably not complete, current answers are fragmentary and tentative, and not all questions are relevant to all modes; however, if we could answer the questions posed below, we would have a much clearer idea of how paratransit will affect conventional transit employment.

1. Does an effective demand exist for paratransit service? What is the range of incentives and disincentives being contemplated to channel travelers into the mode?
2. What is the relationship between the cost of providing the service and potential revenues generated? How will deficits be financed?
3. How does the total cost of the paratransit service compare with the cost of automobile operation, taxi, transit, and other paratransit modes?
4. Does the mode employ paid labor (full-time or part-time drivers, maintenance workers, dispatchers, and so on), and how important is labor cost as a share of total costs?
5. Who will own and operate the paratransit service? In particular, will the service be provided by transit operators or by taxi fleets, nonprofit institutions, new profit-making independent paratransit operators, employers, public agencies, and other institutions outside of the transit establishment?
6. If the paratransit service is not provided by transit operators, can competition be limited or contained through industry or union influence, in the former case through regulatory bodies and in the latter through section 13c negotiations?
7. If the paratransit service does compete with existing transit service, to what extent will transit riders be diverted to the paratransit service?
8. If paratransit service is provided by transit operators, how will it be combined with existing conventional service? In particular, will the paratransit service be organized as an independent operation or integrated with the company's other services?
9. To what extent will transit unions cooperate in the introduction of paratransit service by transit operators? Will unions make concessions on work rules and permit operational flexibility during the introductory period?
10. Will transit unions be willing and able to organize workers in paratransit services provided by nontransit employers?

DEMAND-RESPONSIVE TRANSIT

Demand-responsive transit (DRT) includes any form of shared-ride passenger transportation that serves the general public and responds spatially or temporally to individual travel demands. Of the paratransit modes previously identified, dial-a-ride transit service, shared-ride taxi, and subscription bus service fit this category. DRT systems have proliferated rapidly in the United States; there were an estimated 200 in 1976 (2, p. 2).

The DRT concept initially received widespread support from local, state, and federal governments; managers and labor leaders in the transit industry; and academics. Enthusiasm for the concept was due in large part to its rosy portrayal in early theoretical studies and reports on initial operating experiences. DRT was supposed to provide service comparable to that of taxis at a cost comparable to that of buses and, in the process, contribute to the reduction of air pollution, the conservation of fuel, and the increased mobility of the transit-dependent population. These expectations have proven to be unrealistically high.

In theory, DRT is ideally suited to serve areas in which population densities are not sufficiently high to justify conventional transit service; the suburbs and small cities are prime examples. DRT service is also supposed to be well suited to serve transportation-deprived groups with special individual needs, e.g., the handicapped and elderly.

New sources of federal assistance should help to create an effective demand for DRT services. Section 5 of the National Mass Transportation Assistance Act of 1974 allocates operating assistance funds among urban areas according to a formula based on population and a population-density weighting factor. The formula will reduce the concentration of federal assistance among transit-intensive urban areas and increase assistance in the suburbs and small cities where DRT is presumably most appropriate. Similarly, section 16b2 earmarks federal funds for the elderly and handicapped, another potential client group for DRT service.

Thus far DRT systems have not been very successful from a cost perspective. Service has been terminated in several well-known projects, including those in Columbus, Fairfax, Haddonfield, Richmond, and Santa Clara, primarily because of unacceptably high costs (2). An MIT study of 16 systems indicates a substantial gap between revenues and costs. Fifteen of the systems were money losers, and fare revenues covered only 8 to 37 percent of total operating costs (the median was about 23 percent). The remaining system covered 100 percent of its operating costs but had an average fare of $2.15 (2, pp. 34 and 50).

Part of the cost problem is due to the experimental nature of the projects (2, pp. 33-58). In some cases, planners were too ambitious in the type of service they sought to provide. By sacrificing flexibility (for example, by reducing the number of destinations served) costs can be significantly reduced. In other cases, systems were not large enough to reduce overhead costs sufficiently. The staffing requirements and technical difficulties of computer dispatching services have consistently been underestimated. Accident rates have been high. The solution of these design and management problems should significantly reduce costs. However, whether costs can be reduced to the point that the service becomes economically possible is an open question.
at this point. If substantial subsidies continue to be required, then other options for serving the same markets will have to be considered. For example, the elderly and handicapped may be better off receiving transportation subsidies that could be spent on existing taxi and transit services. Such an arrangement could prove to be a better investment of public revenues as well.

Driver costs represent a major portion of total cost in nearly all DRT systems, and unionized bus-based systems have the highest hourly compensation rates. Labor-cost considerations therefore tend to favor smaller vehicles and nonunion drivers. These tendencies suggest that services provided by taxi operators and nonprofit institutions will have a significant cost advantage over systems run by transit operators.

If DRT service is only viable if fringe benefits are nonexistent and wages are low, then the whole concept should be reassessed. One of the principal arguments in favor of DRT is that it can serve the transportation needs of the elderly and handicapped and thus increase equity in the transportation system. If transportation equity comes at the expense of labor-market equity, it cannot be justified. In particular, public subsidies that perpetuate an already serious problem of low-wage employment are indefensible.

Section 13c of the Urban Mass Transportation Act provides a lever by which transit unions can influence the development of DRT systems that serve the general population. The section 13c provisions are most relevant in areas currently served by conventional transit. In this general case, unions are in a good position to protect the job-security interests of their members.

DRT systems that serve only the elderly and handicapped and are subsidized through section 16b2 of the act are exempted from section 13c coverage. Because of the limited population served by such systems, their economic viability is seriously in doubt. Where they are established, they will probably only have a marginal impact on the demand for conventional transit. The unions' option in this case is to attempt to organize the systems and establish wage and benefit standards through collective bargaining.

Section 13c considerations will probably not be important in the case of new DRT systems that serve the general population in areas that currently do not have conventional transit service. In this situation, DRT does not threaten the job security of transit-union members. In fact, the establishment of new systems in suburbs and small cities represents a potential expanded jurisdiction for transit unions if the systems can be organized. It should be noted, however, that new DRT systems will compete with taxi operators, and section 13c problems may arise if existing taxi drivers pursue claims (1).

As previously mentioned, DRT systems that are run as part of an existing unionized transit system have for the most part proven to be high-cost operations. To my knowledge, these systems have all been established as largely independent suboperations. They have their own drivers and work rules and are treated as separate cost centers within their overall transit networks. This organizational model may not represent the most effective means of combining conventional and paratransit service. A more fully integrated approach could result in cost savings for the combined system. I will return to this point in the last section of the paper.

In the combined systems, unions have recognized the special problems associated with DRT service. In the case of Cleveland, Local 268 of the Amalgamated Transit Union (ATU) has made very significant concessions on wages, benefits, and work rules from the prevailing standards in the conventional transit component of the system. In Rochester, the ATU has also been flexible in bargaining special work rules designed to solve problems in the DRT component of the system. This flexibility, cooperation, and willingness to compromise are encouraging.

In summary, let me advance the following tentative conclusions. First, the economic viability of DRT has not yet been established. Second, DRT does not appear to be a significant threat to the job security of transit employees. Third, DRT systems have the greatest potential in areas that are not currently served by conventional transit. In competitive situations, DRT systems will probably be confined to the elderly and handicapped and hence will have little impact on overall transit demand. Finally, transit workers may yet gain expanded employment opportunities in combined DRT and conventional transit systems if unions maintain a flexible attitude and management problems can be resolved.

**RIDE SHARING**

This category of paratransit service includes van pooling and formally organized car pooling. The ride-sharing concept includes arrangements in which the vehicle is driven by a work-trip commuter and the riders have made a long-term commitment to the particular ride-sharing group. The distinction between van pools and car pools is not based on the type of vehicle but on the ownership of the vehicle (3). In the former case, the vehicle is owned by some third party, such as an employer or a private, for-profit van-pool organizer; in the latter, the vehicle is owned by the driver.

The two modes have high appeal to transit planners and government agencies for a number of reasons. First, the costs are relatively low and fall primarily on private users and organizers. The major public expenses, if any, are organization and coordination costs and possibly capital grants in the case of van pools. Operating subsidies to support paid drivers are unnecessary. Second, increased ride sharing could result in significant gains in energy saving, pollution reduction, and congestion relief. Third, unlike the transit system, the existing automobile fleet has enormous idle capacity even during peak travel periods. And finally, a number of special transportation needs exist for which ride sharing is particularly well suited, for example, employment sites that are isolated from conventional transit routes, long-distance commuting, and consolidation of automobile travel where parking space is limited.

Ride sharing may be threatening to the transit operators and transit unions because of its potential competition with the transit industry and because it largely lies outside of their institutional control. Unless subsidies are provided by the U.S. Department of Transportation (DOT), van pools are not subject to section 13c regulation. Since drivers are not involved in a wage relationship, influence through collective bargaining is out of the question. Car pools are not classified as common-carrier transportation and thus are not subject to state regulation; the regulatory status of van pools is mixed, but there may be a trend toward deregulation (see Womack's paper in Part 2 of this Special Report). Thus, the normal mechanisms by which leaders in the transit industry and unions seek to protect their interests are far less effective in the case of ride sharing than for other paratransit modes. If ride sharing were widely adopted, it could have a serious impact on the job security of transit workers.

However, the threat of vastly expanded ride sharing does not seem likely to materialize in the absence of a national emergency that would require a severe curtailment of energy use. In this case, not only ride sharing but transit as well would probably benefit from a shift
away from individual automobile use. Under less extreme conditions, the public has responded to formally organized, area-wide car-pool campaigns with a notable lack of enthusiasm. To be sure, millions of people share rides on an informal basis with friends and relatives, but the discomfort of dealing with strangers and the added inconveniences seem to discourage participation in the formal efforts. In the absence of major car-pool incentives or disincentives for individual occupancy of automobiles, broad-based car-pool programs are not likely to be successful.

On the other hand, ride-sharing arrangements centering on large employment sites have greater potential. This is particularly true if the employer promotes the program. The biggest problem here is motivating the employer, since most of the benefits of ride-sharing—clean air, reduced oil imports, and reduced congestion on the highways—do not directly affect the employer, while most of the costs—start-up expenses and valuable management time—do. If the employer has limited parking facilities, alternative uses for parking lots, or a significant number of employees with commuting problems, motivation may not be a serious problem, and the employer may even voluntarily incur expenses to promote a ride-sharing scheme. In the absence of these conditions, incentives (subsidies, tax breaks, or capital grants) or disincentives (parking limitations or legislative requirements) will probably be necessary.

Another point that is important to remember in assessing the demand for ride sharing is that a minimum labor force of 250 to 500 employees is probably necessary to justify a formal program. More than 60 percent of the urban labor force works in establishments that have fewer than 250 employees (5, p. 42). Furthermore, even the most successful of current ride-sharing efforts have succeeded in attracting only a minority of the eligible workers. When the preferences of the public and the operational limitations on ride sharing are considered, the mode does not seem very threatening to transit. A major government program of incentives and disincentives could change this picture but, even if such an effort were undertaken, its potential area of impact would be rather limited, and within this area most ride sharers would probably be diverted from single-occupant automobiles rather than from ride-sharing schemes. For the present, it seems unlikely that ride-sharing activity will have a serious impact on transit employment.

It seems as though the ATU has arrived at this same conclusion. In the single case to date of a DOT demonstration grant to a van-pool project, section 13c negotiations were successfully concluded. In return for a guarantee on the size of the existing conventional transit bargaining unit and an agreement to allow transit employees to perform maintenance work on the vans, the ATU local reached a section 13c agreement with the transit authority. The vans will employ unpaid drivers and operate in the same service area as the conventional transit system. A similar agreement has recently been reached in Norfolk.

PARATRANSPORT AND TRANSIT: SUCCESSFUL INTEGRATION

In this final section, I would like to return to a question raised previously in the discussion of DRT: Can the cost of dial-a-ride transit be reduced through more effective integration with conventional transit service? Dial-a-ride is the mode that holds the greatest promise for successful participation by the transit authority in paratransit developments. However, experience to date suggests that dial-a-ride is a high-cost and low-revenue operation when established as part of a unionized conventional transit system. I believe that economic performance could be improved through more effective integration of the conventional and paratransit components (4).

The performance of dial-a-ride should be evaluated within the context of the entire transit system, and the dial-a-ride component should be designed to maximize the overall performance of the entire system. To date, dial-a-ride systems have been evaluated as separate and independent subsystems, and the operating characteristics of dial-a-ride have been designed primarily with the performance of only that component in mind. This approach is certainly justifiable in the demonstration phase when new technologies, management techniques, service characteristics, and so on are being evaluated but, in the operational phase, integration for systemwide performance is the appropriate approach.

Let me briefly illustrate what this approach might mean in the area of use of staff. Transit systems are faced with a serious problem of personnel allocation because of the large fluctuation in ridership between peak and base periods. Demand for drivers is high in the early morning and late afternoon and low at midday. Transit unions attempt to protect their members by establishing work rules that regulate the structuring of runs in such a way that drivers are not forced, through split and short-work shifts, to bear the burden of the irregular demand patterns. These work rules generally include at least the following provisions: (a) minimum guarantees of 8 h of actual work per day; (b) overtime payments if the actual work is performed in split runs that span a period in excess of a minimum figure, usually 10 or 11 h; and (c) systemwide constraints on the proportion of split runs permissible.

From labor's point of view, these work rules represent an important concession that allows management to deviate from the normal 8-h workday. From management's point of view, the work rules represent costly constraints on staffing patterns and work assignments. The important point here is that the rules are a fact of life in the transit industry.

Scheduling work rules have at least three negative impacts on labor costs: The 8-h-minimum work guarantee results in some underemployment of drivers; overtime payments for split runs raise average hourly labor costs; and systemwide constraints on split runs cause service inflation in base periods (i.e., service levels higher than those justified by actual customer demand). Any measures that increase the demand for transit service in the base period can yield direct labor savings by reducing the above costs. One possibility in this regard is new transit service designed to attract new customers—dial-a-ride is an interesting possibility. Successful limited dial-a-ride service were established during the period between peaks in the conventional system. Some drivers could be employed in both components of the system, working in the conventional component during the peaks and in dial-a-ride during the base period. The gains for labor would include a higher proportion of straight shifts and possibly more employment opportunities. For management, the gains would include the elimination of unnecessary service in the conventional component, reduction of overtime costs, and more effective use of personnel. Revenues might also increase.

I am proposing that the dial-a-ride system be explicitly designed to capitalize on existing inefficiencies in the conventional component of the transit system. In the case outlined above, I have tried to illustrate how dial-a-ride might take advantage of scheduling problems. There are undoubtedly other such staffing problems and
more general problems in conventional systems that intelligently integrated dial-a-ride could help to redress. The point I mean to emphasize in this brief discussion is that dial-a-ride can be more cost-effective if it is designed with systemwide efficiency in mind and if it is evaluated within that context. This style of integration will obviously require a great deal of flexibility on the part of both labor and management but, if it is adopted, it may mean that the transit industry and transit unions will benefit from the growing interest in paratransit.

REFERENCES

Discussion
A representative of management praised the author’s analysis of the possible negative effects of paratransit on traditional transit but felt that the paper missed the opportunity to examine the possible benefits that paratransit may have:

I think we have a great opportunity to probe the possibility that paratransit can help to boost the ridership in traditional transit and that paratransit holds the opportunity for the better utilization of labor. It may enable us to avoid split shifts to a greater extent than would otherwise be possible.

He went on to say that other benefits of paratransit should also be looked at, especially automobile ride sharing as a feeder service for express commuter service. Ride sharing can perform feeder services and boost the ridership of that part of traditional transit that is the most economical:

When two, three, or four people initially get together for the purpose of ride sharing in an automobile, that leads to ride sharing in an 8 to 15-passenger van, and that leads to ride sharing in a 40 or 50-passenger bus. I was observing the operation of one of our commuter buses when it pulled up to a ride-sharing parking lot that was 20 miles outside the city. In such cases it would save money to hire an exclusive-ride taxi.

A representative from the Urban Mass Transportation Administration (UMTA) commented on the latest proposed UMTA policy statement on paratransit:

It denies the conventional transit industry any real opportunity to provide paratransit service because of the mandatory bidding procedure, which requires that no conventional system can provide paratransit service unless it is able to bid competitively with other service providers and operate it at this cost. It will not be possible for conventional systems to compete on this basis.

There was a great deal of concern over the proliferation of transportation services provided by social agencies in many cities. The greatest concern was whether these services could be performed by traditional transit labor without having to cut wages. The costs per passenger that some of these agencies are incurring run to $5 to $7/passenger. In such cases it would save money to hire an exclusive-ride taxi.

A management person then added that this approach to labor shifts results in the possibility of better utilization of labor as well as additional jobs and clarified the point by saying:

I think it is a question of coordinating each system. If the industry begins to carry more and more people, we are going to have more and more jobs. It is not a matter, in my judgment, of using people 10 to 12 h. I think it is a case of more 8-h jobs.