

vate, nonprofit corporation in Los Angeles, Commuter Computer, has also done well in organizing car pools, establishing van pools, and developing a data base. Atlantic Richfield, one of the parent companies of Commuter Computer, has been a leader in organizing its employees for SCRTD-provided subscription bus services.

The test of success for the brokerage concept will be when it enters the more difficult stage 3 and attempts to fully coordinate all transit and paratransit services.

APPLICABILITY TO LARGER CITIES

The use of the airline model to explain the application of the Knoxville experience to larger cities is of interest. There are severe limitations, however, in the use of the airline model (a private-industry model) to describe the ideal situation for transit (a public industry).

1. In transportation, a full range of services is needed in both high-demand-density and low-demand-density areas. The airline model works because the low-density services (air charters) can charge fares high enough to make low-density runs economically feasible, but low-density transit cannot.
2. Those wishing long-distance transportation in low-demand areas have low-cost alternatives available (buses or trains). Transit has only the automobile as a low-cost option and lack of automobile availability is the usual reason for using transit in the first place.

An obvious problem with transferability to larger cities, unrelated to the airline model, is that the larger the population and area, the larger the number of specialized services that must be coordinated. In areas such as Los Angeles County [which has 10 577 km² (4083 mile²) and 7 million people], the coordination problem is much more complex than in Knoxville [which has 1367 km² (528 mile²) and 310 000 people]. Because of the proliferation of services in Los Angeles County (there are

760 providers of specialized transportation), substantial changes in state and national legislation would be necessary before a brokerage concept could be implemented.

REQUIREMENTS FOR THE BROKER

Finally, Davis and Aex do not approach the question of the requirements for the broker. Obviously, because the broker has the power to decide on service allocation, it should be nonpartisan. Ties to city council persons, county supervisors, and other politicians should be avoided. The broker should also be careful to avoid increasing service to one specialized group while decreasing service to the population as a whole, and system integrity should be maintained.

Other areas have discovered, as has Los Angeles County, that the problem of turfism is serious, especially among the 760 social-service-agency operators of paratransit. A broker modeled after that in Knoxville treads a thin line in dealing with individual agency turf. The broker plan stresses cooperation, but the actions required to coordinate agencies and eliminate turf may eventually require coercion.

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Involving the Private Operator

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Issues related to the use of the excess capacity in paratransit resources provided by taxicab operators are discussed, and recommendations are made. The local nature of the daily surface transportation of people is stressed. The decisions regarding options available under federal and state public transportation programs that most directly affect efforts to more effectively use existing public transportation resources, including private operators, are local. The states should provide technical assistance to those local governmental entities that lack the staff and economic resources to support permanent public transportation research and planning. The states should also exercise leadership in harmonizing public transportation planning and optimizing state and local programs and funding mechanisms to supplement federal efforts. Before additional paratransit funding sources are approved, the states should identify and understand the use of the paratransit funds already available in their jurisdictions through federally funded categorical programs. They should seek to reallocate these existing monies to purchase paratransit services more effectively than is possible under present circumstances of fragmentation, duplication, and waste. Reforms at the federal level are ultimately necessary to achieve this. More must be done at the regional level to identify existing public and private paratransit services and resources. Advisory committees to metropolitan planning organizations are recommended composed of public transportation decision makers, users, and public and private providers. The need for local re-

regulation to implement innovations in meeting paratransit demand is addressed. The roles of independent owner drivers and lease drivers, shared-ride taxi services, and fuel-tax relief equal to that granted transit are discussed as reforms required to enable the private operator to gain control over operating costs and provide for easier entry into the taxi market for entrepreneurial drivers. Labor considerations under section 13c of the Urban Mass Transportation Act of 1964 need not have only negative connotations in the use of private operators for paratransit service. As taxicab operators move into shared-ride services and function as mass transportation companies, with or without Urban Mass Transportation Administration monies, their employees may qualify for section 13c protection whether or not they are unionized.

BACKGROUND

Paratransit, by its very nature, is responsive to local demands, socioeconomic conditions, and geographic configurations. These types of services are constantly evolving, changing, and adapting to market demand. The pace of paratransit activity has quickened dramatically in recent years because of public policy developments at

the federal and state levels, and there are now a bewildering number and variety of paratransit services throughout the country. It is a constant challenge to keep up with all that is going on. Both private operators and public officials, therefore, are often unaware of or inadequately informed about the options available to them for mutually beneficial relations that could lead to more effective delivery of paratransit services in their communities.

There is a traditional parochialism in the public and private sectors with regard to one another. For years, the private automobile has been (as it is likely to remain) the primary surface mode for personal mobility in the United States. The impact of the automobile on land use and development and the concurrent decline or lack of development of public transportation in most areas have fostered a climate of benign neglect of each other by the public and private sectors in public transportation. Until the recent increases in inflation and development of environmental considerations, public interest and political pressure favored the private automobile. Public officials, accustomed to private providers of public transportation surviving as best they could in the marketplace, merely collected licensing revenues and maintained a supervisory role over the provision of a reasonable level of service at appropriate and accountable rates.

At the same time, taxi operators were pleased to have as little as possible to do with public officials because their firms were often diversified and pursued a variety of markets, providing services far beyond the stereotypical exclusive ride. It is quite common for a medium-sized taxi firm with a fleet of 40 to 50 vehicles to provide transportation services for specialized markets such as clients of social service agencies, school children, employees on the job, the elderly, and package, message, and mail delivery. Taxi firms often operate airport limousines, charter limousines and buses, automobile rentals, ambulances, and even tow trucks. This diversity and experience, which constitutes an in-place paratransit resource in most communities, was developed in spite of the dominance of the private automobile and before the era of federal and state subsidies for paratransit services. It has produced private operators who, as small businesses, take pride in their ability to operate on a narrow margin of profit, survive, and remain independent.

Increasingly, public policies are supporting public transportation programs and attempts to diminish the degree of reliance on the private automobile for surface transportation. Government monies are now available for paratransit services under contract with private operators that will offer transportation officials a range of new choices and arrangements for the delivery of these services. Many operators, however, have neither the time, economic resources, nor information to pursue these new opportunities. And where aggressive taxi operators have attempted to develop proposals in accord with the new subsidy programs, they have often been rebuffed at the local level by public officials who are unaware of the possibilities for paratransit services or, because of attitudes conditioned by restrictive local taxi ordinances, are unable to imagine taxis providing any transportation service other than exclusive ride. Moreover, the natural conservatism of public administrative officials often makes them reluctant to change the way things are done.

There remains a general unwillingness on the part of both the private and the public sectors in transportation to deal with each other at the local level. This is aggravated by a persistent lack of awareness on both sides of continuing developments in federal and state programs

for paratransit and the various approaches and combinations of approaches available to imaginative decision makers. Both sides need leadership and the motivation to take the first steps toward joint efforts to deliver paratransit services more economically and effectively in their communities.

THE STATES

For the public and private sectors to effectively contract for the delivery of paratransit services, the various sources of government funds should be minimized and unified so that they can be identified and pursued in an accountable and orderly manner by local public and private transportation officials. The present situation has been described by Brooks (1).

The disaggregated nature of human service delivery structures at the local level is most profoundly evident in the transportation minisystems that carry human services clients to primary program services. The U.S. Department of Health, Education and Welfare, the U.S. Department of Labor, the Community Service Administration, and others expend funds for client transportation services in more than 50 federally funded programs.

State transportation agencies have long had a strong role in decisions related to the private automobile. This role has ranged from allocation of financial resources to providing technical assistance where local jurisdictions find it unrealistic to maintain large professional staffs. In this new era of multimodal transportation, these agencies should also exercise leadership and initiative in making information and consulting services available to the public and private sectors at the local level. For example, model paratransit ordinances should be developed and promulgated.

There is a great need for state transportation agencies to work with other governmental agencies to coordinate and unify the categorical fragmentation that characterizes public financing of paratransit. Agencies that administer health and welfare programs and programs for the elderly and handicapped, as well as agencies that regulate and license transportation services, should all be involved in securing changes in federal and state legislation and departmental regulations so as to harmonize and rationalize the sources of funding for paratransit. This would free paratransit funds from the categorical programs in which they are now buried so that they could take their place with the transit and highway funds.

Saltzman (2) has indicated that it is impossible to know with precision the annual amount of federal funds being spent on paratransit programs through such agencies as the Urban Mass Transportation Administration (UMTA), the Federal Highway Administration, the Federal Energy Administration, the U.S. Department of Health, Education, and Welfare, and the U.S. Department of Housing and Urban Development. His estimate places the amount between a conservative \$500 million/year and a liberal \$1 billion/year.

To illustrate, California, which has approximately 10 percent of the nation's population, may receive about 10 percent of these funds. It is therefore possible that \$50 to \$100 million/year in federal funds alone are being expended for paratransit in California, a sharp contrast to the supposed shortfall in meeting paratransit needs in the state.

According to the California Taxicab Owners Association (CTOA), in 1973, taxi operations in California transported 32.6 million unsubsidized passengers, producing a revenue of \$59.6 million. Coordinated, competent purchase of paratransit services with the \$50 to \$100 million of federal funds currently being expended, but

unaccounted for, would substantially expand and improve the delivery of these services. The most conservative reallocation of the smaller estimate for purchase of paratransit service from taxi operators would approximately double the size of the current market of 32.6 million unsubsidized exclusive-ride taxi passengers. The economies of shared-ride taxi could result in the purchase and delivery of paratransit services in a market more than double the current one served by taxi operators.

METROPOLITAN PLANNING ORGANIZATIONS

The involvement of the private operator is meaningless unless it can include involvement in the transportation planning process, and this is also true of users, public providers, and local and state government representatives. There should be regional and local task forces, or at least advisory committees, to provide a forum for contact, communication, and involvement in transportation decision making by all the affected parties. This type of contact and participation would generate mutual education and commitment to improved delivery of paratransit services.

Planning procedures should include an inventory of the available resources—a task that should come early in the procedure. Metropolitan planning organizations are in a position to aid federal, state, and local transportation officials by engaging in essential research on the taxicab resources within the area under their jurisdiction. The inventory should also include the social-service-agency transportation services being offered. This would identify the paratransit resources and funds available in the area and document the inefficient allocation of funds, the duplication of service, the waste, and the excess capacity. These are the initial steps required before developing alternative approaches involving private operators.

Regulatory restraints to service delivery soon become apparent in any inquiry into paratransit services. Metropolitan planning organizations can assist in the improvement of private-operator involvement by inventorying the local regulatory ordinances and analyzing them to identify changes that will foster broader and more flexible participation of taxi operators.

Those involved in the transportation system, from the federal government at one end to the users of services at the other, must become active on the issue of paratransit. State, regional, and local governments and private providers, as well as users, require a framework of communication and interaction that is oriented toward more effective and cost-efficient delivery of paratransit services. Without the involvement and commitment of these intermediate elements, there will be more of the same fragmentation and scattered demonstration projects, but no ongoing funding or implementation of a recognizable paratransit program.

APPROACHES TO INVOLVING THE PRIVATE OPERATOR

A diversity of services has been successfully provided in various forms and under various names by the taxi industry for many years (3).

Taxicabs perform a wide variety of paratransit functions. The taxicab company is a many-faceted service. Shared riding, jitney, multiple load, limousine, livery, school service, contract service, subscription service, dial-a-ride and package delivery have and continue to be an important part of taxicab operations for many companies.

With the probable exceptions of limousine and livery services and package delivery, these services have all been the subjects of recent studies and demonstration projects. The persistent cost-efficient performance of taxi operators in the delivery of these services offers a sound basis for involving the private operator in publicly subsidized paratransit programs.

The design of paratransit programs involving the private operator is affected by local physical, geographical, demographic, economic, and political conditions and mainly limited by the imagination of public transportation decision makers. Basically, however, there are two approaches to subsidizing paratransit services pursuant to contract with private operators: the userside subsidy and the serviceside subsidy.

Userside Subsidy

Many communities have found that a desirable, efficient method of matching transportation services to transportation users is to provide the subsidy directly to the user. This places the buying power in the hands of the user, who can purchase the service at a time and in a manner suited to personal convenience. The advantage to the subsidizer is that the funding is on a service-performed basis. The public sector does not assume the capital outlay and administrative burden of going into the transportation business, and service is paid for only when it is used. The problem of using a private enterprise and yet not subsidizing it is resolved by providing the subsidy directly to the user.

Accounting and administrative procedures are relatively simple in this approach. Normally, a coupon or charge-slip system is used to pay for the trip. Such questions as discounts, subsidies, and eligibility are determined and administered as a matter of local public policy. Many communities provide userside subsidies for paratransit to groups ranging from the entire population to narrow segments determined by such factors as age, income, or handicaps.

Taxi operators are accustomed to this type of system and find it easily adaptable to their services. System design and rates are pursuant to agreement between the private operator and the public sector. The coupons or charge slips are submitted by the provider for payment on a regular basis.

In El Cajon, California, a city having an area of 31 km² (12 mile²) revenue-sharing funds are used to subsidize tickets that all residents can purchase at \$0.50 each. The local taxi company provides communications equipment, vehicles, and drivers for the El Cajon Express, which operates as a dial-a-ride. The tickets will purchase a ride anywhere within the city limits; the average trip length is approximately 4 km (2.5 miles). The taxi operator keeps logs of the number of passengers, the distances they travel, and the tickets used. The city only has to monitor this data to ensure its accuracy, issue the tickets, and pay the proper subsidy to the provider on a weekly basis. The August 1977 data are typical: In that month the system carried 19 962 passengers, and the city paid a subsidy of \$1.05/passenger.

Oklahoma City has embarked on an interesting demonstration project funded under section 5 of the Urban Mass Transportation Act of 1964 called share-a-fare that uses shared-ride taxi service provided by four taxi companies between 9 a.m. and 5 p.m. to meet the transit needs of the elderly and handicapped. Handicapped or elderly persons qualifying for share-a-fare can buy a book of coupons for \$5.00. The initial purchase must be made in person, but renewals can be ordered by mail. When participants need transportation, they call a special share-a-fare number at least 1 h before the service is

needed. This allows the grouping together of riders who are traveling in the same general direction. A solo rider pays the fare shown on the meter. If there are two or more riders, each pays a proportional share of the fare, which is calculated from the first rider's starting point to the last rider's destination with a \$0.50 charge for each additional person. The total fare is divided by the number of riders in the taxi. For example, if the fare from a beginning point to an end point is \$2.00 and there are four people in the taxi, the total charge will be \$1.50 for the three extra people plus the \$2.00 fare charge (i.e., \$3.50), and this is divided among the four passengers. When rides are shared, the rider is given the approximate cost of the trip when the call is made to order the ride (4).

Danville, Illinois, is using an UMTA Service and Methods Demonstration grant to fund a userside subsidy, taxi discount on a shared-ride taxi service. Taxi Transit in Danville operates 24 h/d, 7 d/week. Under the taxi discount feature of this project, the operator charges the normal fare, but the passenger pays only a portion of this in cash on the spot. The difference is paid to the operator with project funds. The group eligible for the service includes all persons 65 years old and over and handicapped persons under 65 years of age.

The Danville Planning Department certifies the riders and provides them with identification cards. The average fare is \$1.37/passenger. The average share paid by the rider is \$0.34; thus, \$1.03 is charged to the project. The riders also pay an average \$0.05 in tip. Hidden administrative and start-up costs, not seen by the operator or rider, have been about \$0.25/trip, a cost absorbed by the project. Thus, the total real cost per trip (not counting tip) is \$1.62, of which \$0.34 is paid by the rider and \$1.28 by the project (5).

Serviceside Subsidy

A serviceside subsidy goes directly to the private operator pursuant to a contractual arrangement that usually specifies an hourly rate of compensation for the time the transportation service is provided. In some of these arrangements, the operators are allowed to keep the fares as an incentive to increase the ridership. In others, the operators must return all fares to the public authority. The hourly operating costs and subsidies are arranged by negotiation or in response to terms and specifications for service issued by the public authority calling for bids to provide the service.

Long Beach, California, implemented a specialized system for the elderly and handicapped in February 1976, following recommendations of a committee that included members of the handicapped community. Handicapped persons in Long Beach did not want to use hydraulic lifts on regular transit buses because of the danger and inconvenience of rolling their wheelchairs down the street at night or in bad weather. In addition, the local curbs were not built for wheelchairs, which would have had to travel down the streets in a lane of traffic. The handicapped community unanimously requested that the Long Beach Public Transportation Company (LBPTC) use special small buses with hydraulic lifts and operated on a dial-a-ride basis limited to the elderly and handicapped.

The LBPTC now owns six hydraulic-lift-equipped small buses, and the Diamond Cab Company has a contract to operate the service. LBPTC maintains control of the quality of service and the approval of applications and also subsidizes the operation at an average rate of \$10.05/service h/vehicle. Eligible riders obtain special identification cards that permit them to ride at a cost of \$0.50/trip or by using 10-ride books that cost \$3.50.

As an incentive, the taxi operator is allowed to keep the fares. This arrangement is not only a more economical method of operation, but also more practical, because the cab company can use its fully experienced dispatchers. The buses are running to capacity. In 1976, it cost about \$4.00/passenger to operate the service, and ridership averaged 3000 to 3200/month (6).

The contractual arrangement enables LBPTC to provide the service at a saving of approximately one-third the cost by the public sector. The private operator's cost for drivers is 40 percent less than that of the public operator, his dispatching cost is 30 percent less, and his maintenance cost is 40 percent less. The private operator's drivers are represented by a labor union whose members and leadership are receptive and accustomed to the innovative approaches that characterize paratransit operations. This allows for flexibility and personalized attention to the individual needs of the handicapped users of the service.

Fullerton, California, provides an example of a unique relationship—that between the Orange County Transit District (OCTD) and the Yellow Cab Company of North Orange County. Dial-a-ride service is provided by using five 19-passenger buses leased to the cab company by OCTD and five cab company sedans. The buses and the sedans are dedicated to the dial-a-ride service and bear the OCTD colors and identification symbols as well as the Fullerton dial-a-ride seal and telephone number.

The cab company keeps all the fares it receives as an incentive to increase ridership and receives an OCTD subsidy of \$9.65/service·h/vehicle. The cab company operates and maintains the vehicles and is responsible for hiring and supervising all personnel, including drivers, dispatchers, supervisors, and maintenance employees.

OCTD vehicles in fixed-route transit service operate at a cost of \$25.00/service·h. The transit district has no experience with or data for demand-responsive services provided by the district itself. The total cost to OCTD for implementing and monitoring the dial-a-ride service is \$470 000/year. The funds are derived from existing budgeted allocations; no capital investment was required. The service operates Monday through Saturday from 6 a.m. to 7 p.m. The small buses are used during peak travel periods.

The Fullerton dial-a-ride meets community needs beyond the fixed-route service and offers transfers to the fixed-route service and neighboring dial-a-ride services. Regular fares are \$0.50; fares for the elderly are \$0.25; handicapped persons and students pay \$0.15; and handicapped persons with a special pass, riders with transfers, and children under 6 years of age ride free. Ridership for August 1977 was 11 500.

Peterborough, Ontario, withdrew its fixed-route bus service from a suburban area west of the city in May 1974 and instituted a taxi-feeder service instead. The Peterborough Trans-Cab service is provided by one taxi company under contract with the city. Passengers are transported between the bus stops at the eastern boundary of the transfer area and points within the area. Bus riders pay \$0.10 more than regular bus fare for this transfer service. The taxi operator is subsidized by the city at the normal meter rate. The contract provides no incentives for shared rides and the resulting reduced costs.

During the first 9 months of service, monthly ridership averaged 3894, with a deficit of \$0.60/passenger. The former fixed-route bus service in the area had had a deficit of \$2.34/passenger. Trans-Cab tripled ridership; therefore, the total deficit faced by the city for transportation in this area stayed almost constant (7).

PROBLEMS AND ISSUES

Paratransit programs involving taxi operators usually reflect unorthodox and innovative approaches on the part of both the public and the private sectors. The programs cited above to illustrate userside and serviceside subsidies are not examples of taxi service in the traditional sense. Many local regulations limit taxicabs to exclusive-ride service in vehicles driven by the employees of the taxi operator. Exclusive-ride service may be defined as a taxi ride in which a single passenger is normally in charge of the trip and the time of pickup, point of origin, intermediate stops, route, destination, and even, at times, speed, are specified by the passenger. The result is low vehicle productivity and high operating costs and fares. Exclusive ride is an expensive service, beyond the purchasing power of a large portion of the population. A transportation resource that is already available in most communities is underused and left with excess capacity because of local regulatory restrictions.

Regulatory Reform

The need for regulatory reform is expressed in the UMTA statement on Proposed Policy for Paratransit Services [41 Federal Register, 46 412 (1976)].

Outmoded local laws, regulations, and ordinances often constitute a barrier to paratransit implementation. Local and state agencies are encouraged to review existing laws, regulations, and ordinances pertaining to paratransit operation, and eliminate or revise obsolete requirements or prohibitions that constrain or inhibit the introduction of paratransit services.

There appears to be a need at the municipal level for more knowledge and understanding of public transportation policy and the developments taking place at national and state levels as well as of the response developing within the private sector. Taxi operators who attempt to secure ordinance changes and obtain a greater share of the growing public transportation market often find that local officials are unwilling to view taxi service in other than stereotypical exclusive-ride terms. Local officials are seldom aware of the untapped potential offered by taxicabs as a public transportation resource already present in most communities. Restrictive points of view and restrictive regulations at the local level often preclude the delivery of innovative demand-responsive services by professional taxicab-industry managers.

Federal and state transportation administrators are increasingly sensitive to the crisis in transportation financing that promises to persist for the foreseeable future. These people are recognizing that taxicabs offer significant advantages for cost-effective delivery of a variety of paratransit services. The time has come for municipal officials to reevaluate local regulations toward the goals of increasing taxi productivity, reducing taxi operating costs, pursuing innovative contractual arrangements with taxi operators, and thereby purchasing the optimum paratransit services possible for their communities under public financing programs.

A case in California offers an example of a failure on the part of the public and private sectors to work cooperatively with each other in providing an innovative public transportation service.

In the early 1970s, the Yellow Cab Company of Merced, California, pioneered a reduced-rate tariff on a shared-ride basis, and by 1973, these tariffs accounted for more than 50 percent of its revenue. In 1973, the city of Merced instituted a publicly funded demand-responsive system with lower subsidized fares than those offered by the unsubsidized shared-ride taxi-

cab service. The city service charged a fare of \$0.25/passenger for any destination in the city while the taxicab service charged \$1.00/passenger, except that 2 or more passengers going from a common origin to a common destination could ride for \$0.50 each. The publicly funded system operated, for the most part, during weekday daylight hours. The taxicab shared-ride and exclusive-ride service was available 24 h/d, 7 d/week.

The public system diluted both the shared-ride and the exclusive-ride revenues of the private operator, which led to a reduction in the number of private-operator vehicles from 25 to 10 by the summer of 1976. In the fall of 1976, the city announced plans to expand the public system. The private operator then terminated his taxicab operations in an atmosphere of personality clashes and misunderstandings with city employees and officials, and the matter continues in a costly litigation process.

The lack of effective communication and understanding between the private operator and the city precluded a mutually informed approach to the question of providing low-cost transportation for the transit-dependent of the area. If both parties had attempted to approach the matter rationally and with knowledge of each other's purposes and capabilities, the unfortunate ill will, attendant publicity, and loss of an existing transportation resource might have been avoided. The public sector and the private operator in this community could have provided an example of a joint public transportation effort by city transportation officials and private enterprise at a cost and service level that benefited the users, the public, and the private operator.

Shared Ride

The federal requirement that shared-ride services be included to qualify for financial assistance is a principal element of UMTA policy. Municipal authorities will be faced with this in their continuing attempts to obtain increased public transportation from existing community resources. The demand for paratransit service is already strong, and it will grow as inflationary pressures and the economic effects of environmental protection policies increasingly affect the dependence on the private automobile.

Shared ride is a recognized priority with the taxicab industry. The International Taxicab Association (ITA) has developed an official industry description of this service.

The purpose of shared riding (other than exclusive-use taxi service) is to increase productivity of taxi service and lower customer charges by encouraging concurrent use of a taxi vehicle. It is a taxi trip where passengers enter at one or more origins and depart at one or more destinations, paying individual fares. Such service is typified by advance arrangement and has been designated dial-a-ride or plan-a-ride, among other names. The rate is usually fixed in advance and is reduced from exclusive-use charges for each passenger. It may be calculated by taximeter or zone maps or be a predetermined flat rate.

Greater vehicle productivity will mean greater use of currently unused capacity in the taxicab industry and more economical delivery of paratransit service to passengers. To increase the involvement of taxi operators in paratransit delivery systems, it is important that local authorities review this matter and enact regulatory provisions that provide for both shared-ride and exclusive-use taxicab services.

Independent Contractor Drivers

Many local ordinances restrict taxi operators and their drivers to an employer-employee relationship. Contrac-

tual relationships between operators and independent owner drivers or lease drivers are often explicitly forbidden by local regulations. However, labor costs account for as much as 70 percent of taxicab operating costs and have become an important factor in the rising rates that are pricing taxi service out of the reach of significant numbers of people. When ridership decreases, an operator's driver force must be reduced. The upward movement of labor costs is motivating taxi operators to look for alternative types of arrangements with drivers beyond the employer-employee relationship.

Taxicab ordinances should allow a variety of driver relationships so that operators and drivers can choose the one that best suits their needs. Ordinance changes in this area would benefit all concerned: taxi drivers, taxi operators, and the general public.

Independent contracting in the taxi industry offers an entry into the market for independent driver business persons. Recent experiences in Los Angeles, San Francisco, and San Diego have shown that many drivers are eager to seek independent contractor status. Becoming an owner driver or a lease driver, functioning under the authority of a licensed taxi organization, can be the entry into the market for a small entrepreneur as well as providing him or her economical access to important support services such as volume purchasing, maintenance, insurance, marketing, and, above all, radio dispatching. Most paratransit services require skillful dispatching of vehicles pursuant to telephone orders so that equipment can be allocated efficiently and services matched to demand.

Benefits to Drivers

Taxi drivers would benefit from contractor status by enjoying the independence of a small business entity. Employee status brings with it employer-mandated work rules regarding such matters as hours and location of trip orders. Many drivers would be attracted to the incentives and options open to an independent entrepreneur in the marketplace and under the tax laws. Independent contractor drivers, prompted by the profit motive, tend to develop a spirit of competitiveness and satisfaction by promoting business for themselves through personal contacts in the community or by providing business cards to passengers.

Independent contracting in the taxicab industry can provide business opportunities for the disadvantaged and unskilled unemployed by offering entry into the market for a relatively modest capital investment and avoidance of costly overhead and support service by purchasing these from authorized operators for reasonable fees.

Benefits to Operators

Taxi operators are giving high priority to curbing the rising operating costs that have resulted in unprecedented rate increases since 1973. Taxis, like transit, suffer a loss of ridership whenever a rate increase goes into effect. Unfortunately, demand in the taxicab market is elastic, and many passengers who leave it do not return. ITA reports that more than 60 percent of taxicab trips are by housewives, students, the unemployed, the elderly, or the handicapped. When taxicab transportation is priced out of their reach, comparable mobility—in terms of accessibility, comfort, safety, and convenience—is simply not available to them.

Independent contracting with drivers would relieve taxi operators of the burden of inflated labor costs by eliminating driver payrolls, legally mandated payroll taxes, and the overhead costs associated with the administration of payrolls and supervision.

Fuel is a critical cost factor for operators. Drivers who contract independently commonly purchase their own fuel. They are consequently much more concerned with its consumption as a cost of doing business and tend to use less.

Benefits to General Public

The general public should find an improved level of taxi service with independent contractor drivers. Drivers who are independent entrepreneurs are directly responsible for their own success. Competition and incentive require a clean and attractive vehicle and courteous and personalized service. More cabs can be expected to be at the public's disposal because the capital investment required for vehicles will be spread among many drivers, rather than concentrated among a few authorized operators. More economic resources can be devoted to marketing by authorized operators who would be in the position of selling their services to independent contractors. Marketing would, therefore, be an important service and an attraction for contractors to purchase.

The lower labor costs and increased taxicab productivity that would result from business promotion by independent contractor drivers and marketing by authorized operators would be an effective economic defense against the pace of rate increases. In communities where taxi service is threatened by costs (and, therefore, rates) that are too high for a significant portion of the market to pay, the option of independent contracting could maintain service in the community at more affordable rates. And the survival of the taxi resource will make it available for subsidized paratransit service to the transit-dependent at a reasonable cost.

Enforcement

Taxi operators cannot control the manner in which independent contractor drivers perform their work. This, of course, is not the case with employee drivers. The exercise of such control over independent contractor drivers would result in the loss of the nonemployer status and the benefits accruing to that status.

Local regulators must be aware that independent contractor drivers are not required to follow the rules and regulations of the taxi operator. This problem can be solved by writing into the local taxi ordinance specific rules and regulations regarding levels of service to be maintained by independent contractor drivers (e.g., response to duly dispatched telephone orders for service, even in unattractive outlying areas). The local ordinance should provide for the revocation or nonrenewal of the public-vehicle-driver permit of a taxi driver who violates service levels. The franchised operator could then refuse to enter into or maintain a contractual relationship with drivers who had rendered themselves legally incapable of performing the contract.

Finally, and most important from the public point of view, independent contracting under the umbrella of authorized operators provides regulatory authorities with a centralized point of access to mandated information collection and records. This allows them to monitor the operation for enforcement purposes and ensures service levels for the protection of the public interest.

Regulatory reform in the area of shared-ride and independent contractor drivers will enable transportation decision makers to more fully involve taxi operators in paratransit service.

Fuel Tax Relief for Taxicabs

The taxicab industry operates under particularly inequi-

table provisions in the laws relating to fuel taxes. Since 1964, the federal government has granted rebates to local transit systems for the federal tax on fuel. Revenues from federal fuel taxes have been used to aid local transit systems with capital grants and operating funds pursuant to the Federal-Aid Highway Act of 1974. Many states also provide fuel-tax relief and financial aid to local transit systems. The proposed Energy Tax Act of 1977 would extend fuel-tax exemption to intercity, local, and school bus operations.

In many areas, taxicabs compete for paratransit business directly with these tax-favored systems. Should taxicabs continue to face imposition of fuel taxes, the industry will be forced to subsidize its competition.

Whenever the taxicab industry has been allowed to bid on services to the elderly and handicapped, it has consistently been a low bidder despite its subsidized competition. The stereotypes of the expense-account taxi passenger and exclusive-use taxicabs are not supported by reality. More than 60 percent of taxi riders are transit dependent. In many cities, shared-ride taxi services are operating that, when used efficiently, can be as cost-effective and energy efficient as other forms of public transportation.

The scale of taxi operations is comparable with those of other forms of public transportation. In 1975, the taxicab industry transported 3.4 billion passengers as compared with 5.6 billion by transit. There were 5387 taxicab companies, 947 transit authorities and companies, and 950 intercity bus companies. Taxicab operations employ more than 0.5 million workers, transit employs 200 000, and intercity bus employs 46 000.

The taxicab industry is composed of small businesses; ITA data indicate that the average company fleet has 55 vehicles, and more than 1300 companies have fewer than 10. Glassman (8) has described the situation.

It would appear . . . that the taxicab industry is aggressively servicing existing and new markets and therefore should be a profitable industry. Unfortunately, the industry has not been able to keep pace with inflation, particularly in the areas of insurance and fuel. The taxicab industry has had its fuel costs increased from approximately 6 to 12 percent of the total operating costs. A similar increase has occurred in insurance in 3 years. In this year alone, we have seen an additional increase in the cost of gasoline of approximately 4.5 cents nationally.

A study by Control Data Corporation and Wells Research Company, *Taxicab Operating Characteristics* (March 1977, page S-4) states, "Taxicab fleet operators have evidently experienced profit decline from 1970 to 1974. In 1975, the revenues of nearly 50 percent of the companies did not cover total costs (including capital costs). Revenues of 25 percent of the companies did not cover out of pocket costs. This tends to verify observed conditions in the industry resulting from drastic increases in fuel, insurance, and labor costs."

Simply stated, this means 25 percent of the companies will not be able to remain in business.

In a 1973 survey there were 6467 taxicab operators and the 1975 survey listed 5387. Some went bankrupt; others merged; many small companies simply closed their doors.

Virginia, Michigan, and Wisconsin have granted taxicab operations a full rebate on state gasoline taxes. Similar legislation is being considered in a number of other states. Considerations of equity lead to the conclusion that taxicabs should receive fuel-tax relief comparable with that given to other forms of public transportation.

Cost-efficient demand-responsive paratransit is a vital element in making public transportation competitive with the private automobile. Relief from fuel taxes for taxicabs would assist in controlling the cost of fares and provide another opportunity for the integration of taxicabs, transit, and intercity buses into effective public transportation systems.

Fuel-tax relief at the federal and state levels is a

major requirement for continued investment of capital, time, and effort by private operators of taxicabs. In the absence of equity in this critical area of operating costs, taxicabs will continue to cease operations in their communities, and a valuable transportation resource will be lost.

LABOR PROTECTION CONSIDERATIONS

Section 13c of the Urban Mass Transportation Act of 1964 provides protection of the interests of employees affected by assistance under the act. It is not clear from a reading of this section which employees are affected. No mention is made, however, of union or nonunion employees, and it would appear reasonable that the provisions of section 3e of the act would require interpretation in favor of employees of mass transportation companies.

The paratransit-services policy statement proposed by UMTA [41 Federal Register 46 413 (1976)] requires that to be eligible for assistance, a private operator must provide shared-ride transportation on a regularly available basis to the public. The policy further states that the paratransit service must be more than an incidental adjunct to its main business for the private operation to be considered a mass transportation company within the meaning of section 3e, or a system with employees entitled to protection under section 13c.

If shared-ride, taxi-operated transportation services are eligible for subsidies from UMTA funds, it would follow that the employees of such services are covered by section 13c protection. This would be particularly true if UMTA funds were used for demand-responsive programs in competition with taxi-operated services.

In jurisdictions where shared-ride taxi operations exist pursuant to appropriate local ordinance provisions or where taxi-operated paratransit systems have come into existence with local, state, or federal sources other than UMTA funds (e.g., user-side subsidies from categorical social-service-program funds), claims for section 13c protection might be made by taxi employees.

Ideally, labor protection issues that arise in the course of planning and developing integrated paratransit and transit systems should be resolved in a climate of cooperation. The goal is to meet the growing public transportation demands within the buying power of increasingly scarce public funds. Efficiently operated paratransit services are an essential element in building ridership for transit services. As additional passengers are attracted from the private automobile, additional employment opportunities will become available in all public transportation modes. The alternative is declining transit service and jobs because of inability to deliver riders from their homes to fixed routes within the limits of available funds.

CONCLUSIONS

Most of the daily surface transportation of people takes place at the local level. The decision to exercise the options available under federal and state public transportation programs rests ultimately with local and regional decision makers. Their task is to analyze the existing transportation resources and relate the alternative transportation modes to each other and to the private automobile and avoid duplication; in short, to use existing resources, both public and private, more effectively.

These decisions can be assisted if the states assume leadership comparable with that which they exercise in decision making and allocation of financial resources relating to the private automobile. The primary decisions for public transportation are appropriately made at the local level. The states, however, can fill the need for

technical assistance in research and planning in local communities that lack the economic resources to support local full-time staffs. The states can work cooperatively with regional and local governments to harmonize public transportation planning and develop programs and funding mechanisms to supplement federal and local efforts.

The states should become directly involved in identifying and understanding the use of the paratransit funds already present in their jurisdictions through federally funded categorical programs. Before responding to demands for additional funding, the states may be able to reallocate existing monies so as to purchase more paratransit service than is possible under the present circumstances of fragmentation, duplication, and waste. Reforms at the federal level are necessary to achieve this, but leadership from the states could bring significant progress.

A unified approach to paratransit funding at the federal and state levels would bring the missing elements of oversight and accountability to this area of public transportation. Allocation of funds should bear some relation to productivity and efficiency as well as effectiveness in terms of user population and ridership.

Metropolitan planning organizations and councils of government are potential intermediate levels of influence in developing sound approaches to the delivery of public transportation services. The needs at these levels are research and planning oriented and catalytic in nature. Little is being done at the regional level to identify the existing public and private paratransit services and resources. Public decision makers, users, and public and private providers should be brought together to evaluate the present conditions of funding, demands, and actual delivery of paratransit services. A mechanism such as an advisory committee can assist in reshaping the bits and pieces of paratransit funding and resources into a more identifiable program that delivers service in better relation to demand.

A possible scenario might involve the establishment of a regional agency with transportation and funding brokering authority only. This would avoid the typical conflict of interest in which both planning and fund-disbursal authorities rest with a public provider. The responsibility of the agency would be to disburse paratransit (and transit) funds based on considerations of competition, efficiency, and effectiveness consistent with the appropriate local transportation planning goals and policies.

Regulatory reform, particularly at the local level, is necessary to enable the private operator to implement the innovations required to serve paratransit demands. Paratransit regulations and ordinances should allow authorized taxi operators to contract with independent owner drivers and lease drivers. Shared-ride taxi service should be allowed in addition to exclusive-ride. Fuel-tax relief comparable with that granted to public transit should apply to taxicabs. These reforms are essential to enable the private operator to gain some control over operating costs and provide for easier entry into the taxi market for entrepreneurial drivers.

The involvement of private operators raises labor considerations. Section 13c of the Urban Mass Transportation Act need not have only negative connotations. As taxicab operators move into shared-ride service and function as mass transportation companies with or without UMTA monies, their employees may qualify for 13c protection whether or not they are unionized. Paratransit, particularly demand-responsive service, is distinct from transit. The responsibilities and functions of workers and the rules governing them are related to the characteristics of the respective modes. These differences should be recognized from the point of view that, although paratransit and transit are distinct, they are also supplemental. Paratransit operations and funding are not competitive with those of transit. Indeed, paratransit, which can operate as a feeder service and can relieve transit of the high cost of serving the transportation dependent, can be vitally important to the future of transit and transit jobs.

Several of the approaches to involving the private operator are short-range in nature and can be implemented at appropriate levels of government without delay. Others are longer range because of political complexities. Private operator involvement can have a positive effect on the delivery of paratransit services within the limits of realistic costs. Whether short- or long-range action is in question, it is now necessary to move beyond the current state of institutional and economic factors affecting the delivery of effective multimodal public transportation service.

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