# Institutional Dynamics of Paratransit Implementation

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**This paper argues that recent federal policy incorporates a normative theory of administration and planning that highly values coordinated efforts, comprehensive plans, and regional decision-making structures. It also argues, however, that the key planning question for paratransit should not be how to achieve service coordination and organized planning but rather what institutional factors and frameworks lead to successful paratransit implementation. Three major types of paratransit projects are examined—demand-responsive services, vanpooling, and special-client services—and it is concluded that, in each case, successful implementation has been linked to local community and business factors, individual labor-management agreements, and the involvement of existing service providers and local institutional frameworks. The paper further concludes that increasing federal involvement can significantly increase the cost of paratransit services and reduce the chance for implementation. Thus the federal government is challenged to develop rules and funding criteria that will, by making clear that paratransit is a legitimate competitor for federal funds, effectively accommodate the diversity of existing local governmental structures, political bargaining, and service providers.**

In what institutional settings has paratransit flourished? And where has it languished? These are the questions that frame this analysis.

The current commitment by the Urban Mass Transportation Administration (UMTA) to issue a paratransit policy statement and the consensus of the participants in the workshop on the institutional framework of paratransit at the 1979 Williamsburg Paratransit Conference both signal that the federalization of paratransit is proceeding apace. "Federalization" is not meant here in a pejorative sense. But it is intended to convey impacts that could be either positive or negative. On the positive side, federalization will further legitimize the use of UMTA funds for paratransit in circumstances where localities determine it to be the best approach to service delivery. On the negative side, federalization could encumber paratransit with a burden of red tape, administrative overhead, and procedural mandates.

Thus, this paper adds up to a critique of federalization: It urges maximum local discretion and argues against applying many of the ritual elements of the urban transportation planning process to paratransit. It challenges, for example, the cost-effectiveness of areawide coordination and the involvement of metropolitan planning organizations (MPOs) in service planning activities.

The basic conclusion is that paratransit can flourish in a community-level setting that leaves room for the play of political leadership, negotiation, and entrepreneurship. Conversely, its development could be slowed and its cost-effectiveness diminished if it is encumbered with the institutional overhead and costly procedures of so-called rational planning.

## "THE PROBLEM IS FUNDAMENTALLY INSTITUTIONAL"

When consensus proves elusive and when planning fails to produce the results expected, it is fashionable to say that "the problem is fundamentally institutional". The presumption is that a better institutional structure would have produced better results. This may be true. Unfortunately, there is no good evidence as to what kinds of institutional arrangements actually do produce better results.

In the absence of empirical evidence, federal thinking about what constitutes an appropriate institutional structure and effective planning process has been based on a normative theory of public administration. That theory emphasizes the value of coordination, comprehensiveness, and a movement toward regional decision making.

Thus, many political scientists, planners, and administrators disparage the sometimes chaotic institutional arrangements of metropolitan areas by describing them as "jurisdictional fragmentation", "interagency rivalry", "proliferation of special districts", "duplication of services", "wasteful redundancy", and "dedicated funding". From the point of view of these persons, jurisdictional fragmentation and segregated funds are the obverse of good government and rational planning. For them, the remedy is clear: consolidation of services, coordination of planning, reinforcement of the authority of comprehensive planning organizations at the metropolitan scale, and creation of modally balanced funding arrangements such as a consolidated transportation fund.

This diagnosis of the institutional dimension of the metropolitan transportation problem threads through many papers on transportation planning [e.g., that of the Advisory Committee on Intergovernmental Relations (1) and Revis (2)]. The same philosophy of public administration is the basis of such federal regulations as those that mandate the coordinated, comprehensive, and continuing (3C) and transportation system management (TSM) planning processes. The draft UMTA paratransit policy statement was based on this same philosophical foundation.

This paper, however, is based on the heretical position that both coordination and comprehensive planning

are costly. Most planners treat coordination and comprehensiveness as benefits. Here, they are viewed as costs—costs that are worth bearing if they produce better results, but costs nevertheless.

The merit of an institutional framework should be assessed on the basis of the results it produces—not on whether the planning it conducts is coordinated, comprehensive, or continuous. In fact, if the same results could be produced by an institutional system and planning process that is uncoordinated and episodic, then that framework would undoubtedly be preferable because it would not involve the transaction costs of 3C planning or the political costs of institution building. (Note the ceteris paribus and the "if" that qualify this assertion.)

The real question is not how to obtain service coordination or organize planning and programming activities under the aegis of an MPO. Instead, the real question is, What institutional factors make a difference when it comes to results? or, more specifically,

1. Do some institutional frameworks frustrate paratransit development—and do others increase the likelihood of implementation?
2. Do institutional constraints influence the cost of service?
3. Do institutional constraints bias the kind of service provided? and,
4. Do institutional constraints influence the quality of service provided and its market performance?

These questions are empirical and can be studied. They do not imply a priori that coordination and comprehensiveness are good; in fact, they require that the question be asked whether coordination and comprehensiveness make a difference that justifies their cost. They can also ask what institutional and political factors make the most difference and how purposive plans for institution building (or dismantling) that are based on results and not on normative theories of public administration can be developed. That is what this paper is about: the institutional ingredients that make for the success and failure of paratransit implementations.

The analysis is presented in two parts. In the first part, the forces that seem to have been most important in propelling demand-responsive services, vanpools, and special-client transportation toward implementation are identified. In the second part, it is argued that the current path toward the federalization of paratransit is an excessively costly one.

## INSTITUTIONAL POLITICS OF PARATRANSIT ADOPTION AND DIFFUSION

### Demand-Responsive Services

Demand-responsive services include dial-a-bus, taxi-based variants of dial-a-ride, and services provided on the basis of advanced reservation or subscription. Their common characteristic is that they go where the user wants to go—at more or less the time the user wants to go there.

Demand-responsive services have been implemented in a variety of institutional settings. Only a few have been implemented as a result of planning conducted at the MPO level and few if any have been selected for implementation after a comprehensive alternatives analysis. This means that the institutional arrangements and planning processes endorsed in the UMTA draft paratransit guidelines do not appear to have been very important in propelling demand-responsive services toward implementation—at least to date. The draft guidelines seek to integrate paratransit planning into the formal metropolitan planning process, although that process has not been a major part of the diffusion of paratransit in the past.

Where then have demand-responsive services thrived? And what has fostered their implementation?

Demand-responsive services have typically been implemented at the end of a community-level planning process. With the exception of Minneapolis-St. Paul, few have been fostered by technical planning initiated at the metropolitan scale. Implementation has followed several paths—paths in which different logics and different agencies have been involved. Those different implementation paths can be characterized in terms of their primary impetus. The forces that seem to have given the greatest impetus to paratransit diffusion are dedicated funding, demands for a fair share of the service provided by a transit district, and the demands of transportation-disadvantaged persons.

1. Dedicated funding: Demand-responsive services are not distributed uniformly across North America. In fact, they are heavily concentrated in two U.S. states and one Canadian province: California, Michigan, and Ontario (2).

In California, Michigan, and Ontario, state or provincial legislatures have established state transit subsidy programs that have explicit provisions for the development of community-level services. This state funding has stimulated a planning process at the community level that has been extremely successful in engaging local pride and the local political process in implementation. In terms of cost per rider, it appears that the California and Ontario programs are more efficient because they are more flexible and less technologically prescriptive, although the Michigan program is dedicated to dial-a-ride rather than to the more generic community-level transportation services.

Other states that have transit subsidy programs also seem to have more paratransit activity than the nationwide average. These states include Minnesota, Pennsylvania, and New York. In each of these, state funding has interacted with a local or community-level political process to increase the diffusion of demand-responsive services. Diffusion has been fostered by established political and intergovernmental relationships and has required little institution building. Just as important, planning typically has proceeded in a fashion that involved negotiation, community participation, and political commitment rather than modeling, detailed technical analysis, or plan making. In many instances, a mayor or mayor's aid has been a critical factor in forging consensus. And, perhaps most important, consensus rather than documentation has been the intended product of the planning process, because planning was seen as an exercise in political leadership that should be informed but not driven by technical analysis (3, Chap. 4).

2. Claims for service from local jurisdictions: Another stimulus to the diffusion of demand-responsive services is the annexation of suburban jurisdictions to transit tax districts. Community-level, demand-responsive services have been developed to recruit support for transit taxes in low-density areas that cannot support conventional fixed-route services. This has also allowed transit authorities to provide a fair share of service to communities that have supported transit taxes or transit district incorporation.

Thus, paratransit has fostered community-level support for regional transit services. This political logic seems to have been the cause of the development of demand-responsive services in Orange and Santa Clara Counties in California, in metropolitan Seattle, and in the Chicago suburbs.

3. Claims for service from special clients: If there is a trend in demand-responsive transportation, it is away from service to the general public and toward service to groups who have special needs. These groups include the elderly, the handicapped, and (sometimes) youthful nondrivers and low-income persons.

In some cases, demand-responsive services have been developed as an alternative to retrofitting conventional transit buses with wheelchair lifts. In other cases, they have been implemented by social service councils in response to client demands and needs.

The implementation of demand-responsive services for special clients has typically occurred at the municipal or county level. Planning typically has involved greater emphasis on negotiation, consultation, and client participation than on formal analysis.

Thus, demand-responsive services have resulted primarily from community-level planning. Agencies that have regional, systems, or network orientations have not usually been the catalysts for the implementation of these services. This raises questions about the efficacy of incorporating paratransit in the formal urban transportation planning process (as the draft paratransit regulations have proposed).

The political and institutional dynamics that have fostered paratransit development to date have had little to do with a rationalized or idealized planning process. Paratransit services have not been implemented because a comprehensive systems planning process was followed: settling on goals and objectives; establishing service standards and program targets; formally specifying alternatives; evaluating them on the basis of forecast demand, costs, and revenue; and then selecting and programming the optimal alternative has not led to the diffusion of paratransit. Rather, the diffusion of demand-responsive services has occurred because of the play of client demands, the pull of available funds, and the push of political leadership or profit-seeking entrepreneurs.

This conclusion, in turn, raises significant questions about the appropriateness of the philosophy of planning on which the draft paratransit regulations (and the lead role that they envision for MPOs) are based. Formalizing and rationalizing the planning of demand-responsive services could be counterproductive. It could dampen the play of local pride, political leadership, and private entrepreneurship. And it could burden paratransit with the institutional overhead and planning procedures that are the costly side of federalization.

The path of paratransit diffusion raises a second and perhaps more important issue. If dedicated funding and a community-based planning process have given demand-responsive services their impetus, then it is likely that the next wave of intense paratransit development activity will occur in rural areas and small cities.

Section 18 of the Surface Transportation Assistance Act of 1978 sets aside for transit development in non-urban areas a relatively small amount of funds that will be apportioned according to a population-based formula. The magnitude of funding available fits the scale of vanpooling and taxi programs rather than of conventional transit services. (The act also invites flexible application of the labor-protection rights of Section 13c of the Urban Mass Transportation Act of 1964.)

From an institutional point of view, the most significant attribute of Section 18 is the role that it assigns to the states in paratransit development. The states are expected to apportion Section 18 revenues, develop a program of projects eligible for federal matching funds, and provide technical assistance.

Many state departments of transportation have more experience than do MPOs in providing local assistance and in interacting with the local political process. But few have staff who have experience in service-oriented planning. This means that the most significant institutional issue for paratransit in the near future may well be the ability of transportation departments to develop clearinghouse capabilities that provide low-overhead assistance to small towns and rural areas that wish to qualify for federal matching grants. If the states can develop flexible but instructive techniques for simple but reliable analysis by inexperienced local staffs, they will probably make a more significant contribution to the diffusion and cost-effectiveness of paratransit than will the more formal and comprehensive approach contemplated in the UMTA draft paratransit guidelines. The challenge appears to be to develop analytical- and technical-assistance capabilities that inform local decision makers but do not burden local programs with out-of-scale overhead costs or documentation requirements. That is no small challenge—especially for transportation departments that have no experience with service-oriented planning.

Over the short run, it is likely that the best criterion for the states' performance will be the quality of the personnel they commit to the management of the program and the provision of technical assistance to localities.

Section 18 permits states to use up to 15 percent of the subvented federal revenues for administration and technical assistance. This is a disturbingly large commitment to overhead and the creation of an organizational infrastructure. Thus, a second criterion for the states' performance will be their success in providing adequate clearinghouse services at a cost more modest than the legislation authorizes.

## Vanpooling

The best-known commuter vanpool programs are those fostered by quasi-public agencies that function as ride-sharing brokers. Brokerage roles can include procuring vans and insurance, marketing the vanpool concept to employers and employee associations, and matching commuting employees in compatibly routed vans. The broker is a third party who provides services at no cost to participating companies and their employees. The broker negotiates transactions between commuters and vehicle manufacturers, between employers and employees, and between drivers and insurance companies.

Vanpool brokering has been effective in Knoxville, Minneapolis-St. Paul, Los Angeles, and the San Francisco Bay Area. The common attribute of these programs is a market-oriented approach that is decidedly entrepreneurial rather than bureaucratic in style. This style with its emphasis on direct salesmanship to workplace management has matured outside of the normal bureaucratic channels associated with highway and transit planning. In fact, the successful brokerage organizations are typically not public agencies but quasi-public corporations. Their organizational status is more important for reasons of style than of legal standing. Organization as a quasi-public corporation allows a ride-sharing coordinator to work directly with workplace management without being confined by the protocol of rank, title, and documentation that encumber larger public bureaucracies.

Corporate outreach is the centerpiece of the brokerage function, and the reception from workplace management is the critical ingredient in program success or failure. The outreach function distinguishes brokerage from more conventional ride-sharing programs that provide carpool matching services on a reactive basis. Because a favorable response from corporate management is the key to vanpool market penetration, it is worth

noting the kinds of companies that have been most receptive to vanpooling. Survey data (4) from the San Francisco Bay Area indicate that the most receptive firms have been those that

1. Operate in competitive labor markets and employ highly skilled employees;
2. Manufacture a high-technology product line that requires continuing research, development, and innovation;
3. Are located in suburban areas that have limited conventional transit services; and
4. Are planning plant expansions that will entail costly parking lot construction.

The firms that have been least receptive are heavy manufacturing operations and downtown-located firms that provide financial services or perform corporate headquarters functions. Thus, ironically, it has been most difficult to involve those downtown companies whose participation in vanpooling would have the greatest effect in terms of relieving peak loads on conventional transit, easing peak-hour transit-capacity requirements, and reducing long-distance automobile commuting trips.

The favorable responses from suburban research and development firms and the indifference of downtown employers begins to suggest that the skills and product line of the broker are not the critical ingredient in program success. Rather, the critical ingredients seem to be the attitude of workplace managers and the potential for corporate advantage.

The provision of no-cost brokerage services and a self-financing product does not seem to have provided sufficient incentive for many downtown companies to commit the management effort necessary to make vanpools work. The central institutional issue here seems to be one of incentives for corporate involvement rather than of organizational structure or entrepreneurial skills.

The incentive plan developed by a small community in the San Francisco Bay Area may offer an appropriate response to this motivation problem. Cupertino, California, has amended its zoning code to include what might be called a traffic-mitigation ordinance (5). The ordinance requires new employers to develop programs that will limit the traffic burden they impose on the local street system. Prospective employers can implement vanpool services, subscription bus services, preferential parking, or staggered work hours—whatever they determine to be the most economical means to effect a maximum traffic quota assigned to the parcel of land they intend to occupy.

Cupertino's approach—a fixed performance standard combined with a flexible array of approved responses—seems likely to reinforce corporate motivation to give vanpooling serious consideration. In fact, the California Department of Transportation is encouraging other California cities to adopt comparable traffic-mitigation ordinances. Thus, such ordinances could become a major thrust of ride-sharing promotion programs in California.

We must conclude that incentives that will motivate corporate commitment to the organization of vanpools and carpools are a critical institutional issue in ride sharing. In turn, the most critical players seem to be quasi-public ride-sharing organizations, workplace managers, and local zoning departments, rather than MPOs and the line bureaucracies that plan and supply highways or transit.

A dilemma of brokerage and ride-sharing promotion in general should be noted in passing. That dilemma is the problem of diminishing returns. Carpool and vanpool promotion programs seem to experience a performance cycle that involves a period of high cost and low response during start-up, a period of cost-effective activity based on high response from prime candidates for pooling, and then a period of diminishing returns after the market of prime candidates has been depleted. Employer outreach programs that target new employees and welcome wagon services that target new residents can buffer this problem of diminishing returns, but market saturation nevertheless remains a problem that affects the cost-effectiveness of ride-sharing programs. The performance cycle argues for caution in interpreting the early results of brokerage and pooling programs. Estimates of overhead cost per match are likely to be particularly misleading if average rather than marginal cost-accounting techniques are used.

The problem of diminishing returns argues against institutionalizing the brokerage function in a line bureaucracy and argues for contract arrangements that have a limited life span. Contract arrangements can allow renegotiation of the level of effort to better match the level of response. Reducing a program budget is, as a rule, more difficult within a bureaucracy than in a contract arrangement.

## Special-Client Transportation Services

Special-need, special-client services have been introduced by centers for the elderly, hospitals, clinics, recreation agencies, social welfare agencies, retirement homes, and a variety of associations and agencies that serve the handicapped.

Four types of service have predominated in special-client transportation. These include

1. Vans and station wagons operated by volunteers or the paid staff of social welfare agencies to collect riders and deliver them to a common destination,
2. Taxicabs subsidized through direct or user-side subsidies,
3. Vans operated on a reserved-ride, flexibly routed basis by social welfare agencies, and
4. Lift-equipment vans or minibuses operated by transit districts or authorities.

Funding for these programs has derived predominantly from formula grants made available to area agencies for the aging and discretionary programmatic grants available from a multitude of bureaus in UMTA and the U.S. Departments of Health, Education and Welfare; Housing and Urban Development; and Labor. The proportion of unpaid, volunteer drivers in these programs is unknown.

The typical large metropolitan area supports literally hundreds of paratransit operations scaled to serve a unique destination such as a general clinic, a clinic for the elderly, or a job-training center. In California, municipal-level taxi-voucher programs are spreading to meet the needs for trips to a broader, less-restricted range of destinations, and in rural areas, reserved-ride, flexibly routed vans predominate.

The proliferation of these services has led to proposals for service coordination, van-sharing, and centralized on-demand dispatching. Implementation of these proposals would move reserved-ride and single-destination services closer to true dial-a-ride services, operating on demand rather than with advanced reservations.

However, a limited, case-study-style analysis indicates that the merits of integrated multiagency services have been overstated. The argument for service integration, of course, is the expectation that vehicle productivity can be improved and, in the process, response

time reduced. This expectation has led to planning for the pooling of vans owned by independent agencies, centralized dispatching, and demand-responsive, shared-occupancy routing. [An example of this process at work is the evolution of "Operation Transportation" at the Canon Kip Community House in San Francisco (3, pp. 3-19).]

The resulting service resembles taxi service—except on two dimensions: fare and shared occupancy. In practice, demand densities seem to have frustrated the objective of shared occupancy, leaving only one distinction between taxi service and integrated social-service-agency van operations—fare.

In many—if not most—circumstances, this would argue for subsidizing taxi service rather than for initiating a redundant public service. The argument for procuring service from a taxi company (through direct or user-side subsidy) is reinforced by the typically larger size of taxi fleets and their corresponding ability to provide service at most hours of the day and night with less delay or wait time.

Thus, plans for service integration should be tested against the willingness of volunteers to drive for new clients. Such plans should also be tested against the objective of minimizing the cost of service coordination requirements. Taxi-subsidy programs seem more likely to survive these tests than the United Nations type of planning and coordination that would be required to consolidate the van operations of multiple social service agencies.

In turn, this conclusion suggests that the coordination of grant and contract administration may be the appropriate limit of service consolidation efforts—a far less demanding task than operational coordination. Once again, it appears that the piecemeal, incremental, and episodic approach to coordination is preferable to consolidation, comprehensiveness, and institution building.

Thus, in each type of paratransit service discussed—demand-responsive services, vanpooling, and special-client transportation—there seems to be little reason to engage metropolitan planning organizations in technical planning activities, no essential reason to involve the large-scale bureaucracies that build highways and operate line-haul transit, and very little reason to pursue elaborate planning and coordination efforts on a metropolitan scale.

Instead, the appropriate institutional framework for paratransit implementation appears to be the community, the workplace, the social service center, the labor-management bargaining table, and the procurement-of-service contract with the local taxicab company. If this is another way of saying that the institutional framework for paratransit implementation is already in place, so much the better.

## FEDERALIZATION AND THE COST OF PARATRANSIT

Poorly planned paratransit services can be excessively costly. But paratransit services that are burdened with the administrative overhead of an elaborate planning and management infrastructure can also be excessively costly. And so can paratransit services that are burdened with the wage rates and work rules of conventional transit.

The challenge is to find the middle ground between too little planning and too much institutional encumbrance. That middle ground should leave room for the play of entrepreneurship, local pride, old-fashioned political leadership, and the cost consciousness that comes from spending scarce local dollars.

It should also be recognized that paratransit can be planned and implemented by different actors at different scales: at the scale of the individual workplace, the industrial park, the center for the elderly, the major activity center, and the corridor. Different lead agencies, planning styles, and service delivery arrangements are appropriate in each of these different settings.

Can the federal rule-making process produce planning guidelines and funding eligibility criteria that will accommodate this diversity? Will those guidelines accommodate the desire of one community to fund a taxi-voucher program and that of a second to share the cost of a ride-sharing coordinator who works for the personnel department of the city's largest employer? Will the federal guidelines be flexible enough to finance the acquisition of lift-equipped vans that will be leased to a taxi company in one community and operated by a social service agency in a second?

Actually, it seems all too likely that the federal guidelines will promulgate a formal process for paratransit planning that resembles an alternatives analysis. More costly still, the federal guidelines seem likely to mandate an elaborate organizational infrastructure for the purpose of coordinating services and guaranteeing competitive bidding opportunities. They may also require the development and adoption of a paratransit element in each regional transportation plan.

In such a process, paratransit will be burdened with administrative overhead costs that will preempt funds that could be better used for service delivery. Is this a price that need be paid to legitimize the use of federal funds for paratransit?

Federal funds are already being used for local paratransit projects and programs. Negotiation of Section 13c agreements is proceeding on a case-by-case basis. And no formal planning procedure or analysis guidelines are prescribed. In short, paratransit services are being implemented without the benefit of an elaborate procedural and organizational infrastructure—just as TSM projects were being implemented before the TSM regulations were adopted.

The current ad hoc approach seems to have only two primary shortcomings. First, localities are uncertain about the eligibility of their projects for federal funding because UMTA has not articulated the range of alternatives that it will fund. And second, at least some UMTA personnel are cool to paratransit despite evidence of local preference and commitment. Both are problems that are internal to UMTA, not shortcomings of either local imagination or planning aptitude.

Thus, the paratransit policy statement should not be used to impose elaborate planning, documentation, and coordination requirements on local decision making. In fact, it should simply

1. Establish for the record that paratransit is a legitimate competitor for the use of federal funds;
2. Clarify the range of paratransit projects and programs that are eligible for different types of federal assistance, so as to reduce local uncertainty;
3. Leave Section 13c clearance to case-by-case negotiation; and
4. Leave institution building to negotiation at the local and state levels.

In short, the institutional arrangements necessary for paratransit implementation are already in place. The challenge is to leave local planning unencumbered by the rituals of rational planning. The imperative is to maximize the federal funds available for service delivery, rather than preempting them for the development of an unnecessary institutional infrastructure.

REFERENCES

1. Toward More Balanced Transportation: New Intergovernmental Proposals. Advisory Commission on Intergovernmental Relations, U.S. Government Printing Office, Aug. 1975.
2. J. S. Revis. Social Service Transportation. In Urban Transport Service Innovations, TRB, Special Rept. 184, 1979, pp. 10-20.
3. E. M. Rogers, K. P. Magill, and R. E. Rice. The Innovation Process for Dial-a-Ride. Institute for Communication Research, Stanford Univ., Palo Alto, CA, Sept. 1978.
4. D. W. Jones, Jr. The Major Employer's Role in Transportation System Management. Institute of Transportation Studies, Univ. of California, Berkeley, Nov. 1978.
5. G. Grigg. Traffic Intensity Performance Standard. Westernite, July 1978.