

URBAN MOBILITY: A STRATEGY FOR GROWTH

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INTRODUCTION:

A number of factors threaten urban mobility in the 1980's. Fuel prices and availability, while relatively stable at the moment, might at any time become unstable and restrict our national automobile oriented culture. Traffic congestion and air pollution can also be expected to have a negative effect upon mobility.

Already the transportation routines of many citizens have changed in response to these factors. Public transit ridership and ridesharing have shown gains over the last seven years.

As we face the mobility problem of the 1980's, public financing has become even more constrained, necessitating a strategy which seeks to maximize urban mobility with diminished resources. Our success in this task will largely determine the future of our urban areas, and will have a significant effect upon our society as a whole.

It has become popular, over the past few years, to state the solution to the urban mobility problem in terms such as this: "As gasoline becomes more expensive and scarce, people must abandon their automobiles and begin to ride buses and trains instead." While this characterization of the solution is not without some justification, it is not a comprehensive solution to the problem, because much of the urban transportation demand cannot be served by public transit. There is also an assumption that public transit is available as an alternative in the event of a serious energy shortage. What is not understood, however, is that many transit services are already severely overcrowded. It is also important to recognize that some transportationally handicapped people find fixed route transit services impossible to use because of an inability to get to and from bus stops.

What follows is a description of the urban mobility situation; and strategies for growth which are available to local officials.

URBAN MOBILITY - PROBLEM OF PERSPECTIVE:

A major impediment to solving the urban mobility problem is that the solutions are often stated in terms which are at odds with the realities of today. There are two major problems with the present approach. The first is that public transit no longer is able to serve a large percentage of work trip destinations. This is because of the great dispersion of population and employment which has occurred over the past 30 years. The second problem is that the transit market in 1981 is significantly different from that which existed when transit carriers became public authorities. These two problems will be described in greater detail.

It is suggested that meeting the urban mobility problem of the 1980's requires approaches which are based upon valid current assumptions, and which recognize the reality of the constrained financial resources available. Furthermore, we must always remember that in a free society, incentive, and never coercion, is appropriate as a means to reduce utilization of private automobiles.

It will be proposed that the answer to the urban mobility problem involves a balanced complement of approaches, not all of which require intense government involvement. The resources are available, but in order to utilize them, we must begin to think in terms which permit their identification. The result will be an improvement in the mobility as government moves from being merely the provider to being a facilitator of mobility.

URBAN AREAS OF THE 1980'S:

A number of reasons have been given for the decline of the private transit industry. Most of the cause is the increased usage of the automobile, combined with very inexpensive energy.

One of the results of the increased automobile usage was the great dispersion of both residential areas and employment locations.

American urban areas of the 1980's scarcely resemble those of the 1940's, just before the great decline in transit ridership. Population densities have plummeted, while urban areas have spread over large areas. The attached chart illustrates this trend. Early 1980 census reports suggest that this population dispersion has continued. In Los Angeles, where the trend has been opposite the other cities, the divergence is partially explained by the fact that the 1950 data included the entire city of Los Angeles which had major non-urbanized portions in 1950.

In terms of employment densities, all major urban areas have experienced a dispersion of employment locations. Areas such as Northern New Jersey, Route 128 in Boston and Orange County in Southern California exemplify this trend.

This automobile oriented urban area of 1981 cannot be served by approaches which presume that the structure of the 1940's remain.

THE PUBLIC TRANSIT MARKET:

As the urban areas were changing, the impact of transit was lessened and ridership was largely limited to the transit dependent. Transit was saved by the public sector because its demise would have left portions of the urban community without transportation, by reason of income level and disability. Thus the first purpose of public involvement in transit was to preserve mobility for the transit dependent.

1950-1970 AREA AND POPULATION DENSITY: SELECTED URBAN AREAS

Urban Area	1950		1970		Percentage Change	
	Land Area (Sq. Miles)	Population Density	Land Area (Sq. Miles)	Population Density	Land Area (Sq. Miles)	Population Density
Atlanta	105.5	4,814	435.0	2,696	+312.6	-44.0
Chicago	707.6	6,954	1,277.2	5,257	+80.5	-24.4
Los Angeles	1,370.0	4,736	1,571.9	5,313	+11.5	+12.2
New York	1,253.4	9,810	2,425.1	6,683	+93.5	-31.9
Philadelphia	311.6	9,379	751.8	5,349	+141.3	-43.0
St. Louis	227.8	6,150	460.6	4,088	+102.2	-33.5
San Francisco	287.3	7,038	681.0	4,387	+137.0	-37.7
Seattle	122.9	5,057	413.1	2,997	+236.1	-41.7

The transit dependent are characterized by their dependence on transit for nearly all of their trips (not just for the work trip). As subsidies grew in the early 1970's, new areas were served in the hope that the benefits of public transit could be obtained for more dispersed areas. In the early 1970's, there was sufficient transit system capacity to carry all those who chose to ride.

There were significant changes soon to come, however. The gasoline availability crisis of 1973-4 greatly increased transit demand, and the crisis of 1979 added even more. These new riders had previously utilized their automobiles, and now were switching to transit largely because of the cost of gasoline. These new riders were not in need of subsidies because the full cost of their transit ride was well below the cost of their gasoline and parking. Yet these riders were typically subsidized at a higher rate than the transit dependent. These new transit riders tended to use service only for the work trip, and continue to make other trips by automobile. It is important to keep in mind the economic distinction between the transit dependent, and this new group of transit riders.

THE PUBLIC TRANSIT SITUATION TODAY:

The changes of the 1970's have very seriously changed the transit situation. No longer is there capacity for all who wish to ride. Central city services have been overcrowded now for a number of years. These services, on which transit dependent primarily rely, are often so crowded that patrons must often wait for several full buses to pass before they are able to find even standing room on a bus. Commuter express services are also overcrowded. These services became full during the 1979 gasoline allocation crisis, and have remained full.

On the other hand, many of the services established during the growing days of subsidies in the early 1970's continue to have large surpluses of space available. This is not to suggest that these services have not seen patronage increases, it is, however, to illustrate the contrast between the shortage of service which exists in some parts of our transit systems at the same time that surpluses exist on others. In short, the demand for services exceeds the supply in the central areas and on commuter services, while some other services are characterized by supply much greater than demand. In a time of serious financial constraints, this represents a particular resource allocation problem.

But there is an even more difficult problem than this situation illustrates. The central services which are overcrowded are those most utilized by the transit dependent, those to whom transit subsidies were to have been originally directed. At the same time, the underutilized services tend to be in areas of very limited transit dependency. Thus the transit dependent are often subsidized at far lower rates than are the non-transit dependent. This is so because average subsidies per passenger tend to be many times higher in suburban areas than they are in central areas, on the average more than four times, and in some cases, the difference in Los Angeles County exceeds 50 times. Subsidies on the overcrowded express services are also many times those of the central

city transit dependent, because of the provisions in labor contracts which make such services so expensive to provide.¹

And so, public transit policymakers are faced with serious problems of equity at a time when there are no resources with which to address the overcrowding which exists in parts of the system.

There are other serious problems which require at least passing attention. First operating costs continue to rise more quickly than inflation, with the effect that service reductions are often required. At the same time, operating subsidies are growing slower than inflation, and there may be decreases in subsidies in the future.

Summarized, the public transit market has greatly improved, largely because it has been able to attract riders who are not transit dependent as gasoline prices have risen.

Yet transit service is provided in a way which presumes that all riders must be subsidized, transit dependent or not. This was an appropriate assumption for 1970, but it is a doubtful validity today. The result of having a transit system which responds to the needs of 1970 when it is 1981 is that there is no capacity for growth. Demand goes unsatisfied, and mobility is restricted by our present approach.

And so, how shall we provide for the necessary growth without the public resources available to finance growth?

THE MOBILITY RESOURCES:

Besides public transit and dial-a-ride resources, there are at least two additional resources available:

The first, private bus operators, have made significant contribution to mobility in the Los Angeles area. The private sector is currently providing almost as many daily express trips as are provided by the public sector in peak-only services. There are more than 100 private buses in daily operation, charging fares only marginally above public sector fares. And these services provide without either public capital or operating subsidy.

The second resource, ridesharing has the advantage of providing individually tailored services to areas of limited employment density. Again, there is no subsidy required, except for matching services, where government has a significant role to play as facilitator.

¹In analyzing public transit services it is important to allocate costs in a manner which reflects the true cost of providing the various types of service. In Los Angeles County, we use a three variable model (vehicle miles, vehicle hours and peak vehicles) developed by Simpson & Curtin. This model renders costs which result in a fare box recovery of less than 50% on express services (despite the fact that these typically have premium fares of three times the base fare). Some traditional cost allocation methods are not sensitive to the high labor costs of such service.

URBAN MOBILITY: A STRATEGY FOR GROWTH

Improving urban mobility requires an approach which maximizes the available resources, by taking advantage of their respective strengths.

Dial-A-Ride services are very expensive, yet are very necessary to many transportationally handicapped citizens. Therefore, public resources should be committed to such services only to the extent that they serve this special group. We should not be carrying patrons on dial-a-ride who are able to ride available fixed route services; we cannot afford it.

Public transit best serves areas of high employment density and high transit dependency. Patronage in such areas is significant enough to keep subsidies per passenger low, and to thus maximize the use of public subsidies.

The impact of service could be increased by two further changes:

First, reallocation of services from areas of underutilization to overcrowded areas would increase public transit patronage.

Second, public transit services could be increased by converting the present operating subsidy programs into user-subsidy programs for low income citizens. Such an approach would necessitate a minor fare increase on well patronized lines, and would eliminate the inefficient practice of subsidizing all public patrons, regardless of need. Services could be increased as a result of recovering full costs from patrons not in need of subsidies.

Private operators have been shown to be effective in providing effective express services. Public transit is unable to increase express services because of the high subsidy levels per passenger. However, express services may be increased by the private sector, out of profits earned. For express services to be provided by the private sector frees the public transit operators from providing a service which greatly drains their resources, in exchange for the opportunity to provide mobility for five or more times as many new passengers in more productive services.

Ridesharing is most effective in providing mobility from areas of low population density to low density employment areas. For such work trips, no other mode can compete. However, ridesharing has an important part to play in all categories of work trips.

CONCLUSIONS:

We are faced with having to improve mobility, and there is no simple solution. Our cities can no longer be served by transit as they used to be. Yet public transit has a significant role to play, with its important task being the movement of transit dependent citizens. The present universal approach to public transit subsidies makes expansion of service impossible, but more effective utilization of subsidies, and increased services could be obtained by utilizing "user" subsidies for the transit dependent, while collecting a fare which covers the full cost of the ride from those who do not need subsidies.

Commuter bus services can now be provided by the private sector, and expansion of such services will be made possible by profits. Ridesharing should continue to serve an important function, and can be expected to grow significantly, especially in areas of dispersed employment densities. Besides the actual mobility provided, the great advantage of these non-public sector approaches is that they will reduce pressures to increase taxes for transit. To encourage growth in these areas is for government to improve its effectiveness in facilitating mobility.

But in order to take advantage of these opportunities to improve urban mobility, we must begin to think in terms of the 1980's, and not in terms of the 1940's or even the 1970's. If we continue to think of subsidies as a prerequisite to the improvement of urban mobility, then we shall fail to improve mobility. If we continue to conceive of our urban areas as they were in the 1940's then we shall fail to improve mobility.

If however, we begin to think in terms of utilizing available resources to provide mobility, then urban mobility will be improved. This will require marshalling all of the available resources, public and private. And if we are successful, our urban areas will be the invigorating and economically healthy places which they were meant to be.