Urban-Microscale Planning for the 1980s

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A number of observers have noted a basic change in what the government, especially at the federal level, can be expected to do or afford to do. Because of this change, the way in which public services, including transportation, are delivered will not be the same in the future as it has been in the past. There will probably be less money available for public services, and the emphasis in the coming years will be on more efficient use of existing resources, self-help, partnerships between the public and private sectors, and a more market-oriented delivery of public services.

The purpose of this paper is to identify some of the changes that are occurring that will affect transportation planners and to offer some opinions concerning approaches that should be taken during the next few years to make the best use of limited public funding while the necessary level of urban mobility will continue to be provided.

The challenge to the transportation planner in the 1980s is to work with limited public resources to provide the free movement of traffic, effective alternatives to the single-occupant automobile, and an attractive urban environment for the pedestrian. The situation implies that new coalitions of support must be built at the local level and new institutional arrangements constructed to manage urban transportation systems. All parts of the urban transportation system--traffic, transit, paratransit, and pedestrian movement--should be planned and managed in a coordinated manner. There will be opportunities for the development of services that are not based on public policy statements but on the actual needs of the community.

Funding for urban transportation, whether highway or transit, has been threatened with cutbacks at all levels of government. The chances for major highway projects, significant transit fleet expansion, or new rail transit facilities appear slim over the next few years. Many believe that this is a phenomenon caused by a temporary swing to the right in the nation's politics. However, a number of observers of government and the political process feel that the change is more fundamental and that the current political situation is not the cause of the change but rather the result of it.

In a recent article in the New York Times Magazine, Theodore White reviewed the past several presidential elections and concluded that by 1980 the electorate was disenchanted with throwing money at problems and was receptive to the message that "government was choking them, wasting their money, forcing up prices, poking its nose into local affairs" (1, p. 77). The election in 1980, says White, "could be viewed only as a climatic episode in a stretch of history that went back for 20 years or more" (1, p. 32). John Naisbitt, senior vice president of Yankelovich, Skelly and White, sees some more basic changes in progress. He feels that the United States is shifting from an industrial society to an information society and that decentralization is replacing political power and that the concentration of power is shifting from the Congress to the states. He feels that we are entering a postindustrial society with more freedom for the worker (2).

The magazine Transatlantic Perspectives, in the preface to an article by Ted Kolderie, summarised the political and social changes by stating that "Western societies are searching for more effective and efficient ways of providing public services, and the search is leading them...toward new models built around concepts of choice and competition...use of nongovernmental service providers...self-help and user financing" (3, p. 6). A private-sector view is given by Robert M. Price, the president and chief operating officer of Control Data Corporation, who states that "many times the only way to assemble the resources to meet a great social need is cooperation with other companies and government" (4, p. 23).

These comments are included to show that basic changes are under way in the United States that will affect society as a whole and certainly the role that transportation and the transportation planner will play in that society. As Naisbitt points out, "Just as in 1800 the fact that 90 percent of the labor force were farmers dictated the societal arrangements of the day, the fact that most of us were in industrial occupations until recently dictated the arrangements of a mass industrial society—which are now out of tune with the new information society" (2, p. 11).

An illustration of the changes that are taking place is found in reports of new work schedules and the trend toward flexible hours (5, p. 76; 6, p. 27). These changes will have significant impacts on traffic flow and public transportation. A change to a four-day work week, for example, will cut peak-period transit ridership by 20 percent. Cities have lost most of their manufacturing jobs and the suburbs continue to grow as central cities decline in population.

The above references are important because, although they may not involve transportation directly, they confirm on a grand scale the experience and observations of transportation researchers over the past few years. Pikarsky and Johnson feel that the changes in transportation are dramatic enough to amount to "renegotiating the social contract" (2, p. 10). In other words, the roles of the individual and of the public and private sectors must change to meet the realities of present-day life.

Another interesting feature of the reference articles is that they are remarkably similar in identifying the characteristics of the change we are encountering. In reviewing the way people have lost confidence in the ability of government to solve their problems, that they are tired of dealing with bureaucracies, that the private sector must play a role in the solution of social problems, that partnerships between public and private sectors must be created, and that the delivery of public services must be more market-oriented. As Kolderie sums up the problem, "In the same way that, around the turn of the century, the United States needed a new conception of how to act in order to deal with the failures of the private sector, it now needs a new theory to permit it to deal with the failures that have begun to appear in the public sector" (3, p. 6).

This new social order should have a dramatic impact on highway and public transportation planning and implementation. Planning of transportation facilities and services in the past was affected by the considerable amount of money available for street and highway construction and more recently fixed-route transit, low-cost parking, and the seemingly limitless supply of land. The availability of federal funds tended to skew local decisions in the direction of whatever the government would pay for. Just as we tended to sacrifice homes, parks, and pedestrian areas to the automobile in the 1960s, so we ignored the changing demands for public transportation and concentrated almost solely on...
fixed-route transit in the 1970s. As the DOT report Transportation Agenda for the 1980s (8) so aptly puts it, "Transit as we know it today remains ill-suited for our many travel needs."

Before determining how this social order will affect urban-microscale planning, it is important to define what the term means. There seems to be a lack of consensus on the meaning of urban-microscale planning, so for the purposes of this paper the term refers to the planning of transportation services for an area such as urban CBD or a non-CBD work location. It involves detailed planning of a variety of services to meet the specific needs of various market segments. Urban-microscale planning must be comprehensive and coordinate the various elements that make up the urban transportation system, including fixed-route transit service, commuter ride-sharing, private bus service, social agency transportation, taxis, bicycles, and pedestrian movement. In addition, the involvement of employers and merchants must be considered since they can have a significant impact on the way services are provided and priced. An important subset of urban-microscale planning will be site impact analysis, which will consider many of the same services but only how they affect a specific major building or development.

Urban-microscale planning will differ considerably from the way planning was done in the past. There will be no solution to transportation problems or a single set of routine procedures to follow. The techniques that work for regional analysis will not be applicable, and the planner will be confronted by a need to analyze a number of different services affected by a variety of institutional structures.

This situation implies some basic changes in the way transportation is planned. First, the use of mathematical planning models will become relatively less important. This is not to say that they will not be needed, since detailed service design will depend on analysis of the market to be served. However, a good case can be made that the major service impacts will be caused by changes in the legal, regulatory, and institutional environment. Several years ago, a planner in a major city told me that we really needed a good demand model for vanpooling. However, at that time vanpooling was not legal in most states, and the best model in the world would not alter the fact that no one would ride because the service could not be legally provided. In similar manner the involvement of employers and merchants in public transportation can have effects that will overshadow the operational features of a service. For example, it has been observed that strong employer involvement in a ride-sharing program can cause other variables such as the desire to drive alone, smoking, and the lack of desire for social interaction to be reduced.

The importance of nonoperational variables raises questions about the role of the planner in dealing with these issues. Although I think a philosophical discussion of the extent to which planners should be involved in nonoperational issues is beyond the scope of this paper, it is certain that these issues cannot be ignored when transportation services are being planned.

During the coming years, I feel that it is important that fixed-route transit be seen for what it is a service designed to respond to market needs and not as bus and train operators. There is a tendency to think that it is necessary to have only one transit operator in an urban area and that allowing more will lead to fragmentation and the destruction of the system. Nothing could be further from the truth. Localities that operate their own transit services within the service area of a regional operator find them cheaper and more responsive to local need. Transit authorities should start to see themselves as mobility providers developing service options to meet market needs and not as bus and train operators.

Another aspect of dealing with fixed-route systems is to stop equating regional systems and monoplies. There is a tendency to think that it is necessary to have only one transit operator in an urban area and that allowing more will lead to fragmentation and the destruction of the system. Nothing could be further from the truth. Localities that operate their own transit services within the service area of a regional operator find them cheaper and more responsive to local need. Transit authorities should start to see themselves as mobility providers developing service options to meet market needs and not as bus and train operators.

The task outlined above is easier said than done. However, a number of recent articles (9-11) have offered suggestions on ways to address urban mobility problems in the 1980s, and a considerable amount of experience has been gained through the programs sponsored by the UMTA Service and Methods Demonstration Program. The following suggestions are made for consideration in developing the planning tools necessary for the task.

The changes that are foreseeable in the coming years create a lot of problems but also offer a lot of opportunities—so many, in fact, that it is hard to know where to begin. However, I see the biggest change in public transportation planning to be the decline in the role of fixed-route transit and the creation of supplementary and complementary services that will most likely be operated in the private sector. This raises a number of key questions. How will the public and private sectors interact? What type of relationship will be the most appropriate? How will private bus services, taxis, and vanpools interface with public transit? If transit is replaced with a service such as a taxi-feeder, will the demand be the same? How can market forces be used to the greatest effect in public transportation?

Many CBDs and suburban employment centers are significantly increasing, but the trend appears to be toward the creation of supplementary and complementary services that will most likely be operated in the private sector. This raises a number of key questions. How will the public and private sectors interact? What type of relationship will be the most appropriate? How will private bus services, taxis, and vanpools interface with public transit? If transit is replaced with a service such as a taxi-feeder, will the demand be the same? How can market forces be used to the greatest effect in public transportation?

Mathematical planning models will become relatively less important. Parts of the transportation system can no longer be planned in isolation from one another, and we must try to understand the interaction between various parts of the system in order to make logical trade-offs. This situation raises many questions and points out the need for a battery of analytic tools to aid in making rational choices.

The above discussion indicates a much more chaotic situation for the planner than exists today. In addition to the uncertainty of the institutions that must be dealt with, many more service options are available and resources must be used more efficiently. Parts of the transportation system can no longer be planned in isolation from one another, and we must try to understand the interaction between various parts of the system in order to make logical trade-offs. This situation raises many questions and points out the need for a battery of analytic tools to aid in making rational choices.
In my opinion, a key element to any transportation plan is the management and control of parking. On-street parking is believed by some to be one of transportation’s sacred rights. Others believe that only a superabundance of parking will ensure the success of office buildings and commercial facilities. I feel that both of these assertions are untrue, and planners will not only have to find ways to control parking but will also have to make parking growth and management part of the transportation plan.

Unrestricted on-street parking can have negative effects in residential areas. In CBDs it is often not a good use for scarce street space. Giving up a lane of street space so a few cars can sit idly for hours makes little sense, and the charges for on-street parking have no relation to the economic value of the street space. However, it is not enough to simply oppose the expansion of parking facilities. Parking proliferated because people drove cars; they drove cars in part because they had no alternative or were offered an ineffective transit service. This led to the adoption of zoning codes requiring large numbers of parking spaces in new buildings. However, it makes little sense only when it is part of a plan that includes alternatives such as transit and ridesharing that are actively supported by employers and merchants.

There are several precedents for controlling on-street parking through the use of residential parking permits, and a number of employers have shown that with an effective ridesharing program, the need for new parking facilities can be eliminated and land can be put to more productive use. A challenge for planners is to help local decisionmakers overcome their fear of not having enough parking and show how parking requirements can be lowered and the money and land put to more effective use.

Another important element of transportation planning that is often neglected is pricing. There are many facets to transportation pricing, including pass programs, employer subsidies of commuter trips, merchant support, distance-based fares, peak and off-peak fares, self-service fare collection, and the use of credit cards. Some of these concepts are still experimental but will be developed during the next few years. Whatever the number of proven pricing options may be, they should receive careful attention during the planning process. There is an obvious need for analytic tools to select and design the best approach to pricing.

A topic related to pricing is determining who the recipient of a subsidy will be. Traditionally subsidies are given to transportation operators in exchange for providing a certain level of service. However, subsidies can also be given to users, who can then purchase service in the marketplace. This concept, known commonly as the user subsidy, has generally been used to support taxi trips of target groups such as elderly persons. However, there is no reason why it cannot be applied to fixed-route services. For example, it can be used to lower the fare for low-income persons, thus removing a large barrier to commuting for people considered to be at a disadvantage against the poor. Planners will need to know how to design user subsidy services and evaluate the trade-offs of fare, service level, and demand.

An often-neglected person on the urban scene is the pedestrian. The habitat of the pedestrian has been sacrificed to the movement of automobiles without any consideration for the fact that there are many more pedestrian trips than automobile trips on many CBD streets. As an example, on one street in New York, most of the combined street and sidewalk width was devoted to vehicular traffic. However, 50 percent of the person trips on the street were made by pedestrians and another 25 percent were by bus. Therefore the lion’s share of the space was devoted to 25 percent of the trips. Another anomaly was that pedestrian flow was not smooth because traffic lights were timed for automobile movement.

This does not mean that the automobile should be banished. There is a tendency to look at the extensive automobile-free zones in European cities and wonder why the same cannot be done in the United States. I do not think that the European experience is widely applicable in this country due to dramatic differences in the layout of our cities. However, there is a possibility of some middle ground such as the Woonerf concept developed in the Netherlands. This approach allows automobiles to enter urban spaces but not to dominate them. They are guests in a human environment rather than the other way around. The problem of planning for pedestrians is probably more complicated than some others because it is not just a transportation problem but is part of a more general question regarding the shape of our cities. Again the institutional issues may be paramount; however, some of the management will probably be called on to analyze how pedestrian facilities will affect other parts of the transportation system.

Another usually neglected person on the urban scene is the cyclist. Since bicycles do not mix well with people or automobiles, it is difficult to determine what to do with them. It is apparent that some people prefer bicycling. However, the number of bicycles currently in use is probably no indication of true demand since only the most stalwart would venture forth into such a hostile environment. There appears to be a need for research into the demand potential based on economic use. The expenditure of funds on facilities that is commensurate with the anticipated demand. In the meantime we should discuss methods for making bicycling safer and more attractive and determine how bicycle facilities will affect other transportation modes.

Having raised a number of issues, I feel it appropriate to present a few examples to show how these problems can be addressed. In Hartford, Connecticut, and Denver, Colorado, attempts will be made to bring together the city government, the transit operator, employers, merchants, the ridesharing programs, and parking interests to manage all aspects of the urban transportation system. In a coordinated fashion parking or not consuming disproportionate share of resources, but enough will be available for short- and long-term demands. It is envisioned that transit will serve the shorter commute trips and that ridesharing and private bus services will carry long-distance commuters. This approach, known as the transportation management organization, may not provide the whole answer, but it is a step in the right direction.

A more specific example of the challenge to microscale planners can be found at the El Segundo Employment Center in Los Angeles, California. Although there is a large workforce, the location is essentially built for the automobile age. Buildings are far apart and there are acres of parking. Attempts to serve the area with fixed-route transit failed for several reasons. Transit routes are designed to serve anonymous aggregates of people, but what is needed is a service to serve Joe Jones that the front door of his place of work 5-10 min before his shift starts and to pick him up when it is time to go home. Transit buses met the morning starting time but were too early or too late in the afternoon. Buses stopped too far from the entrances or they did not come close to the homes of workers. In
short, the service was not laid out to meet the specific needs of the employees.

In order to meet these needs, a fixed-route bus service concept known as employment center bus service was designed by the Aerospace Corporation and demonstrated under UMTA sponsorship. The service was operated by the Southern California Rapid Transit District (SCRTD), and the routes, based on market surveys, were designed to pick up passengers close to home or at park-and-ride locations and to take them to the entrance of their workplace. Several important lessons were learned. We found that the service was attractive to workers, and a respectable but not overwhelming ridership developed. More important, we discovered that SCRTD could not operate the service on a continuing basis. This was not due to operational problems but to the fact that this type of service was so personalized and required such a high level of planning and management that SCRTD did not have the staff resources to accommodate it. However, personalized service was the only type of transit that was successful for trips of less than 15 miles. It became apparent that the only hope for the service was heavy employer involvement. As a result of the project, employers saw that transit was a viable option for a portion of their workforce. A transportation organization was formed among the El Segundo employers, and they are promoting ridesharing and transit service. The important points to remember are that the success of the project depended on microscopic service planning, personalized service, and institutional development.

These brief examples indicate that the institutional change mentioned in the beginning of the paper is already taking place. Developers of non-CBD work locations such as the El Segundo Employment Center recognize the need for collective modes of transportation, and they need the assistance of planners to design effective service to meet their needs. Although attitudes are changing, it would be worthwhile to note the words of Robert Price that "the attitudinal barriers are also formidable. First is the ingrained resistance to change among some business people. Because many are uncomfortable with change, which involves considerable risk, they prefer to 'fine tune'" (4, p. 23).

We can no longer afford just to fine tune our current systems; change is upon us and the nature of the response to this change will determine what role one will play in designing the transportation system of the 1980s.

In summary, the planner of the 1980s will be faced with problems that will provide opportunities for the creative development of new approaches for providing transportation. However, in order to do this, planners must focus on market needs and plan services to meet them. Conventional solutions will still be appropriate in many cases, but unconventional services will have to be tried. Planning will not rely as heavily on a single set of mathematical analysis tools but will have to be more flexible to be able to analyze the variety of new services and institutional relationships that will occur. Market research and new-product development will be necessary to meet the diverse needs of different segments of the population.

The emphasis of the 1980s will be on more efficient use of existing resources. Fixed-route transit will receive less emphasis and will be viewed as one of a number of transportation resources that must be planned as a system that includes streets, parking, transit, automobiles, pedestrian rights-of-way, and nonmotorized modes. New institutional structures emphasizing partnerships between the public and private sectors will be developed to manage these services.

REFERENCES