THE BOSTON TRANSPORTATION PLANNING REVIEW

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The urban transportation planning approach developed in the 1950s and 1960s in the United States is practically dead. Where it has not suffered internal collapse from its own methodological shortcomings, the transportation planning process and the plans it spawned have been brought to a halt by its very constituents. Organized interest groups, municipalities, and private citizens displaying remarkable sophistication have successfully challenged their planners on grounds of environmental impact, community disruption, and socioeconomic shortcomings. The early promise of a systematic methodology based on firm quantitative grounds leading to the rational formulation of urban transportation policy has been the casualty of the so-called urban highway revolt.

From coast to coast, plans based on this planning process have collapsed when the facilities they recommended reached the implementation state. In each instance, examination of the implications of the plans exposed issues far outside the scope of the original planning process: conflicts in user needs, complex external effects on communities and the environment, and conflicts between long- and short-term impacts.

During the past 3 years, this conflict has gradually become embodied in federal legislation and procedural requirements dealing with air pollution, noise pollution, historical preservation, and so on. The essential elements of the planning process that is emerging are

1. Full consideration of alternatives, with the advantages and disadvantages of each analyzed rigorously and in writing,
2. Inclusion of a no-build alternative as a way of focusing on whether the facility is really needed, and
3. Public hearings and other opportunities for participation for the purpose of exposing the above analysis to criticism and public controversy prior to commitment on the part of the government to proceed with a project.

Although they set general goals for a new planning process, the federal, state, and local legislation and guidelines offer no new techniques or tested processes for dealing with what is rapidly becoming a

typical planning problem. Often planners are finding themselves uncomfortably in the middle of political, institutional, and community-interest groups. In Boston, an attempt was made to overcome these gaps in the metropolitan planning process.

Late in 1969 Governor Sargent appointed a task force to advise him on the growing highway controversy. The task force recommended a moratorium on nearly all highway construction within 12 miles of Boston—approximately $1 billion of construction.

The Boston Transportation Planning Review (BTPR) was initiated in July 1971 and is now drawing to a conclusion. It has tried, successfully I think, to address some of the weaknesses of the previous planning process. These shortcomings are concerned with the scale, breadth of evaluation, modal bias, and closed-shop appearance of past planning studies.

SCALE OF PLANNING

In the past, transportation studies proceeded for the most part sequentially from broad regional analyses through subregional, subarea, or corridor studies to facility design at the project scale. The decisions made at each step constrained the scope and flexibility of the steps that followed. As a result, transportation and nontransportation impacts and design issues at the subregional or project scale were rarely considered in the development of the regional system plan.

Conversely, because of predetermined or implemented regional system constraints, insufficient latitude remained at the subregional scale to permit joint consideration of transportation service and transportation-related impacts. Whether the transportation service improvements were worth the imposed nontransport impacts has consistently been outside the scope of previous studies and a question that was rarely addressed at any stage of the planning process. Nowhere in this process was there an opportunity to display the full range of costs and benefits of a particular facility to permit a fully informed decision.

This shortcoming and the need to expose a broad range of costs and benefits associated with potential transportation improvements led the BTPR to focus its major effort on definitions and evaluations of alternatives at the subregional scale. A key finding of the BTPR has been that a design scale of 200 ft:1 in. is necessary to test a facility for impacts at the corridor or subregional level.

The time scale as well as the areal scale of past planning studies also created several problems. The high degree of abstraction contained in the planning for the 25-years-from-now future—"the magic land of 1995"—was simply not concrete enough to attract the attention of the interests that, in fact, might be affected by it. In addition, that long-range focus blurred the real problems of implementation of the long-range plans and practically blotted out any concern for today's transport problems.

The BTPR focused its concerns on today's problems. A particular facility must be justified in terms of its near-term benefits, not simply that it is in accordance with a long-range plan. The philosophy followed recognized that we have a transportation system today and that the objective of the planning process is to augment and improve that system through time rather than replace it at some future point in time.

EVALUATION

The second shortcoming of past transport planning is that it has been largely directed by a concern to aggregate regional user benefits and capital costs rather than to distribute them among areas, activities, and socioeconomic groups. Metropolitan transport plans were evaluated primarily in terms of total travel-time saving at an average value of time for all users. This has led to many plans that

1. Neglect the transport needs of many transportation minorities;
2. Allocate the impacts, costs, and benefits of transportation system changes without regard to the distribution of transportation benefits they provide; and

3. Leave some people worse off than they were before the proposed transportation improvements without compensating them for their losses.

It is clear to me that this focus on the "average" person, particularly when average is defined in transport demand terms, has led in many instances to a subtle but significant transfer of benefits to the upper and middle income groups of urban areas and a corresponding transfer of costs to the lower income groups.

To respond to this shortcoming, BTPR focused its concern not on the development of a single best solution but rather on the description and evaluation of a wide range of potential transportation improvement programs. Such a process permits participants with a wide range of values to judge the desirability of the various alternatives according to their own values. Some 50 evaluation categories were developed with the participants. The traditional engineering benefit-cost analysis was only one of the 50 categories, and it was given no greater attention than the other 49.

In addition, the impacts were further disaggregated by community. The matrix formed by community versus evaluation category permits locally based interest groups to estimate the goodness or badness of an alternative with respect to specific local values.

The implication of the inclusion of a broad set of evaluation categories makes it increasingly clear that the absence of a single objective function or even a set of static objective functions deprives the planner of the ability to deliver to the decision-maker a single best alternative to any transport problem. Therefore, the study did not result in recommendations. The key technical act in the BTPR was to generate alternatives and expose their characteristics (the facts) to the broadly varying points of view of the participants.

Judging the relative importance of transportation service improvements as balanced against the inherent community disruption caused by such improvements is necessarily a political, not a technical, decision.

MODAL BALANCE

The issue of modal balance is increasingly appearing as the paramount technical-political issue. Many participants see highways not only as being impact villains but also as providing service to the "haves" in society and diverting resources from transit improvements that would serve those groups most in need of improved mobility.

CLOSED-SHOP PLANNING

The closed-shop appearance of transport planning stemmed on the one hand from the participants' assessment of their traditional professional prerogatives and on the other from an isolation resulting from the seeming irrelevance of transportation studies as perceived by residents or urban areas. The long-range and regional focus of past studies blurred the ability of both the profession and a general public to see the short-range and concrete implications of transportation planning. Private citizens and interest groups and often municipalities themselves saw little reason to be deeply involved.

The crisis out of which the BTPR grew stemmed from a deep conflict of values, conflicts that are felt in society at large and that emerge into the public spotlight in the form of battles between citizen groups and equally committed governmental agencies. Battles increasingly end in paralysis and stalemate rather than in creative reconciliation and decisive implementation.

The Boston Transportation Planning Review was an experiment in attempting to channel those conflicts into a process where people feel they are being heard and are in fact being listened to. In the BTPR, the functions of participation were fourfold.

First, a clear understanding of the issues around which transportation improvement must be planned can be developed only through close association with users or those

who will be affected. A community inhabitant has a better sense of the issues in his community than a regional transportation planner can ever have.

Second, people who are not full-time planners but who represent communities, business, environmental groups, or labor are not any less "professional." They have ideas. These ideas extend the imagination of planning professionals. In the case of BTPR, experience shows that participation forced planners to consider more seriously alternatives at the edge of what they might initially call "feasible," and that those alternatives finally emerged as serious candidates for selection.

Third, implicit in a multivalued transport planning process is the admission that transport benefits, to many people, are not more important than other effects of transport improvements—positive or negative. Individuals and groups value housing relocation, time savings, ecological disruption, and aesthetics quite differently. There is no common preference order—in short, there is no single public interest; rather there is a variety of public interests. The new planning process, therefore, depends on making available to participants complete information, which they in turn use to make up their own minds based on their own value systems.

Fourth, the participatory process serves as another channel by which public reaction to the facts can be channeled to decision-makers. Although most public and private groups and some individuals have their own traditional communication channels to decision-makers, the BTPR process provided another formula procedure for those reactions to be made known to the decision-maker.

In summary, a participatory approach to planning, as developed by the BTPR, recognizes that the questions under review are basically political questions, having to do with resource allocation, cost and benefit trade-offs, and distribution among different groups in society. Therefore, the decisions are political and not technical, and only elected officials have the mandate to make those types of decisions. The role of the planning process is to ensure that all those affected by such a decision are aware of the true consequences and that the decision-maker is aware of the range and magnitude of the public's reaction to the proposed action.

OUTCOME

What has the BTPR produced? What have been the outcomes of this combined technical-political approach that

1. Looked for solutions for today's problems rather than tomorrow's benefits,
2. Was concerned with who got what rather than some short-hand measure of total society benefits,
3. Was concerned about all transport impacts both positive and negative rather than travel demand, and
4. Was concerned with making all information broadly understandable to all parties rather than precisely understandable to a few.

After almost 2 months of deliberation, the Governor announced his decision. The moratorium on expressways within Mass-128 is now a permanent institution in Boston. Boston will pursue an increased transit program and a highway-oriented transportation management program. More important than the decision is the reason behind it.

It is not possible or desirable to try to provide sufficient highway capacity for all those who "demand" it. The costs, in terms of community disruption, housing relocation, and damage to natural environmental assets are too large; and the benefits, in terms of increased mobility, are too small.

Our limited highway, rail, and transit transportation corridors represent the only real physical opportunities to improve both our mobility and our environment. Therefore, we must focus our efforts on developing institutional mechanisms and physical facilities that allow the public to better manage the abundant resources of transportation supply already possessed to better serve Boston.

In effect, the Governor said:

1. There is no such thing as absolute demand;
2. It is always constrained by supply; and
3. At least with regard to highways, we already have a sufficient supply if we just learn how to utilize it properly.

Although Boston is only one case, I know it has had its predecessors and am sure it will be followed by others. To be of use in what I think will be the wider emergence of the technical-political transportation process used in Boston, the planning models, techniques, or whatever must produce broadly understood information. That information must be

1. Quicker, even at a sacrifice in accuracy (in fact, directions of change may be much more useful than elements of the absolute magnitude of change);
2. Broader in scope, particularly the effects of increased mobility (traffic numbers and accessibility supply are not enough, but must be connected to terms people understand, such as decrease in employment, increase in sales, and required labor base); and
3. Comprehensive at a point in time rather than during a period of time.