National Transportation Policy - - The Basic Prerequisite for Progress

Vukan R. Vuchic
University of Pennsylvania, vuchic@seas.upenn.edu

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National Transportation Policy - The Basic Prerequisite for Progress

Abstract

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NATIONAL TRANSPORTATION POLICY -- THE BASIC PREREQUISITE FOR PROGRESS

A Statement Presented at the
House Transportation Appropriations Subcommittee Hearing

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By:
Vukan R. Vuchic, Ph.D
Associate Professor of Civil Engineering
-Transportation
University of Pennsylvania
A review of many government reports, reading of professional literature or observation of their functioning clearly show that our transportation systems have many problems. Actually, it is more than that: in some ways our transportation is in an acute crisis. Many drivers and transit riders in our cities, shippers and transportation company managers would not disagree with this appraisal.

The fact is that large segments of our transportation systems are unreliable, inefficient and wasteful; their environmental impact is often harmful; but above all, one of the basic findings of the Doyle Report from 1961, that our national transportation does not represent a system, is probably as correct today as it was at that time.

Coordination among modes and long range planning are today much weaker than a complex transportation system which must serve our advanced economy and society requires. As a consequence, confusion and lack of direction better describe the present condition of both long distance and urban transportation, than national planning and progress.

The purpose of this brief statement is to review the causes of the present conditions, pointing specifically to the important issues of our present policy, or rather, lack of it. Some selected problems are defined and their possible corrections suggested.

Causes of the Problems

Although the fact that transportation has major impact on the total economy and society which is not reflected directly in its financial structure was recognized as early as the 19th century, we have in many ways ignored this fact in practice: "business" aspects of many transportation services
wrongly play the dominant, if not exclusive, role in many government decisions, rather than being carefully weighed against other important factors.

In our exaggerated belief that a "free market" is the best regulatory method in all economic sectors we overlook the fact that if some modes of transportation are largely government-owned and operated, others only partly so, and yet others have no governmental assistance—the situation does not resemble a free market at all! While in such a situation careful regulation and clear governmental policy are needed, our regulatory methods have been often rigid and obsolete and policy very vague. Then, during the recent sharpening of the urban, railroad and energy crises, instead of improvement of regulation—some voices suggest deregulation. Solution to inadequate organization is its improvement rather than its dismantling!

Steps Toward Solution

In most other advanced countries departments of transportation were founded several decades ago. The U.S., however, retained different modal agencies and remained much longer without any national transportation policies. Moreover, not only lack of coordination, but actual "fights" among modal agencies were common. This was particularly damaging to the common carriers.

Several excellent studies clearly defined the current problems and emphasized the need for a different approach to transportation. Doyle’s Report (1961) on the national transportation system and the Institute of Public Administration’s Study of urban transportation were, for example, outstanding documents of this type. When the federal Department of Transportation was finally founded in 1967, the intention and expectations were that the Department, incorporating all modes, would do what the uncoordinated, “negatively regulated” group of virtually independent modes could never do, namely:
a. Analyze all modes and work toward their integration into a single coordinated system;

b. Place primary emphasis on national, public interest rather than that of individual groups of governments, system operators, or users; and

c. Establish long range goals and policies to guide planning and financing decisions rather than be governed by needs of immediate crises and short run survival only.

Present State of Transportation Policies

There is no doubt that the Department of Transportation has undertaken a number of very interesting and useful studies and programs. An example of a thoughtful and constructive analysis of transportation policies was presented by the Department of Transportation in the document "A Statement of National Transportation Policy" in 1971. However, the progress has not been steady and, recently, intensive opposition to clear policies and progress in developing more efficient, modern transportation systems was initiated utilizing obsolete economic principles and technical misinformation. Thus, we see that already the 1972 National Transportation Report gives a rather shallow non-analytical description of the existing systems, often extrapolating trends rather than deeply analyzing problem causes and carefully developing changes achievable by policies. Little questioning is found in it of the existing policies (or lack of them): no positive, clear definition of improvements in urban transportation is given. Investments into existing facilities, their expansion, and investments into new systems are explored as "alternatives" as if they were mutually exclusive.

The same indecisiveness and lack of direction is found in the
document "Urban Transportation (Dilemmas at a Time of Decision)" by the House Public Works Committee (1973): the Report quotes many more statements against than for improvements in urban transportation; it brings more confusion and misinformation than solutions: and it shows a total unawareness of the modern professional thinking, legislative and financing policies as well as the state of modern technology in urban transportation systems (rapid transit, light rail and bus) in the countries which have overtaken us in this area (e.g. The Netherlands, West Germany, Switzerland, Sweden).

Reviewing in summary, the above listed improvements expected from the leadership created by the Department of Transportation have so far brought the following results:

a. "Unimodalism"—a narrow orientation toward a simple "best" mode and often fighting against other modes continues to be strong. A search for simple panaceas, based on gross simplifications of problems, appears to be stronger than work on balanced multimodal transportation systems. For example, individual groups argue for the following "solutions":

--Deregulation as solution to our transportation problems. In urban transportation, the argument goes, deregulation would result in introduction of jitney and taxi services which are "more efficient" than conventional transit. Proofs for this are quoted from 1910-1920 period and from present practices in cities like Caracas, Sao Paolo and Damascus. The facts that this type of service is unreliable, creates chaotic street conditions, segregates "better" people from the "plebs" using regular buses, collects lucrative services leaving others to regular transit, and that it is used where wages are low—are not mentioned. Neither is it mentioned that all advanced countries have been improving their urban transportation through better regulation rather than deregulation; and that many cities with large jitney systems are now
building rapid transit systems (e.g. Mexico City, Sao Paolo, Tel Aviv and others).

--Carpools as the "best alternative" for increased efficiency in urban transportation. There is no doubt that increased carpooling can be efficient and highly desirable for alleviation of peak hour congestion. But encouragement of carpooling does not negate the need for new rapid transit and bus services, improved traffic regulation on streets, coordinated parking policies, etc.

--"New Modes" will be the only solution since "conventional transit has lost the battle with automobile" -- is another line of thinking contrary to facts. Our public transportation lost its patronage not only because of automobile competition, but also because it offers a very inadequate service. Ample evidence in this and other countries exists that modern transit service can divert a substantial number of automobile drivers. New modes can bring some improvements, but they cannot replace fully either conventional transit or private automobile.

b. Minimum cost solution and preservation of current practices are often more important goals than creation of an optimal transportation system from the public point of view.

--Numerous studies have been undertaken searching for minimum cost solutions. Utilizing unrealistic assumptions and incorrect methodology, these studies often suggest that the lowest cost solution, even if it offers a greatly inferior service to other alternatives, is the "optimal one". The absurdity of this approach is obvious.

--An example of considering existing practices as "tabu" is the problem of labor practices. Large deficits of our commuter railroad services should not be surprising when one knows that crews on those trains consist
of 3-8 persons instead of the 1-2 required. It is not at all true that any change of obsolete labor practices would damage labor unions. With some initiative and imagination it would be possible to increase efficiency and retain or even increase number of jobs. This step, however, also requires improved management in many cases.

c. Instead of long-range goals and policies, solutions of current crises still dominate many actions. Two examples:

--The Federal Railroad Administrator declared that the basic goal of the Northeast Railroad reorganization is to bring the "bankrupt" railroads to the level of "solvent" ones. It would appear that unless a more efficient total railroad system in the Region is created, it is only a matter of time before the next ones would become "bankrupt". Another question is whether the classification of "bankrupt" and "solvent" railroads, regardless of their physical and organizational condition, is correct; if the same approach were taken toward other modes and various subsidies ignored, would we not refer to Mohawk and Eastern Airlines. Sealand and many other transportation companies utilizing public support as "bankrupt"?

--In urban transportation great emphasis is being placed on solutions with immediate results at the expense of long-range solutions. This approach has brought us into the present crisis for decades transit companies have had survival rather than progress as their main goal; we do not seem to have learned from that experience.

**Some Examples of Policy Deficiencies**

To illustrate by specific examples the problems created by these policy deficiencies, two examples will be presented: the planned reorganization
of rail service in the Midwest and Northeast Region, and some trends in urban transportation.

The DOT report on the reorganization of Northeast railroads deals with a multibillion-dollar railroad system vital to that part of the country. Yet, that report has a number of serious deficiencies, such as:

--No precise definition is given of public need: what type and quality of railroad service in relation to other services should be provided;

--It leaves the question whether "solvent" railroads will or will not join the Consolidated Rail Corporation unanswered; they will only be "urged" to join;

--It puts more emphasis on preservation than on improvement and modernization of the railroad system. No mention is made, for example, about electrification which all modern railroads around the world have been rapidly introducing;

--The need for improved management and labor practices is not analyzed;

--Long distance passenger and commuter services are only mentioned in statistics; no discernable attention has been given to them in the plan development;

--No consideration is given to utilization of abandoned rights-of-way which can be invaluable for such uses as public transportation in urban areas.

In light of the current problems and national needs for improved railroad freight and passenger services, these deficiencies are astonishing.

With respect to urban transportation some major problems are:

--Little work has been done on formulating a total urban transportation policy which would incorporate all modes and facilities.
There is no definition or standard for the type and level of service which public transportation should provide in cities. Little national planning can be done without such a definition.

Minimum cost solutions regardless of their service are often considered to be "the best" ones. Experience from actual systems, that more costly but higher level of service systems attract more users than lower-investment-lower quality ones, is ignored.

Serious consideration is given to a policy of "no new rail transit systems". The reasons for such a proposal have been based on studies performed by laymen in the field, false data and distorted "theoretical analyses". At the time when more rapid transit systems are under construction around the world than ever before in history, when new light rail systems are being built in many medium size cities of advanced countries, stopping the progress in that direction in the United States is proposed!

In most aspects of public transportation, as well as in regulation of automobile traffic in cities the quality of work from management through maintenance has not been improving. We could learn much in these areas from other countries. Ignoring their progress is commonly justified by the incorrect rationalization that their solutions "do not apply here". Abundant evidence exists that many problems are quite similar and that many policies different from ours have been applied elsewhere with much more success.

Existing Paradoxes and Their Solutions

The following are some of the paradoxes of our present situation and the required improvements:

In many cities parking cannot be enforced to free an additional lane for buses, but a block-wide right-of-way can be cleared for 6- or 8-lane freeway
Correction: coordinate planning of new facilities with utilization of existing ones.

-Highly mobile private automobiles lose their mobility in cities due to congestion;

Correction: provide an acceptable level of service by transit on independent rights-of-way; and regulate peaking of traffic through parking rate policy.

-We drive $3-5000 automobiles over streets with potholes and obsolete traffic regulation (no maintenance funds);

Correction: increase taxation on automobile use (e.g. gas tax), but provide efficient and safe facilities.

-Millions of dollars are available for multilane highways, but thousands are not available for 5-foot walk-ways or pedestrian crossing markings (pedestrian safety probably comes out poorly in the benefit/cost analysis!).

Correction: Include pedestrians as not only equal, by preferred participant in urban travel.

-Tens of millions are spent on development of "new systems", while the basic characteristics of modern rail transit systems which have proved high efficiency and reliability are unknown in the United States.

Correction: improve expertise and plan modes on the basis of their proved value rather than temporary "fashion".

-Use of gasoline tax for other transportation (transit, parking, etc.) was considered "unjust" until recently. If only a 5-cent/gallon tax was introduced and used for improvements of all urban transportation facilities, the available sum would be considerably higher than the funds proposed by the President. The outcry was that motorists could not pay that. Now they are paying 15-20 cents
more than a few months ago, but without any benefit from the increase.

Correction: stipulate that a portion of gasoline price increase be allocated to public facilities (streets, traffic regulation, transit and pedestrian areas).

Some Recommendations

It is obvious that all these corrections are not unrealistic to achieve if a rational, specific and progressive national transportation policy is formulated. Some of the most important steps in that direction should be:

-Define realistic goals and objectives the national transportation system - consisting of all operating modes - should meet. Then devise methods how to get from the existing situation to such a system.

-Consider policies as influential forces on systems: perform planning instead of trend extrapolation.

-Adopt a positive attitude toward all modes. Develop each to its optimal potential and role, rather than some to maximum while others for "preservation" only (e.g. the railroad restructuring plan).

-Analyse experiences and practices in countries which are ahead of us.

The following items deserve particular attention:

-Transportation policies;
-Financing methods;
-Approach to urban transportation;
-Traffic engineering techniques;
-Modern rail transit systems;
-Transit organization and operation.

The last, but possibly the most important step, should be the improvement of our expertise in transportation systems: engineering, economics, city planning and other aspects. Transportation experts should lead toward public goals rather than spend most of their efforts in fighting citizen groups, as is the case with
many today.

The major task of formulating a transportation policy is clearly achievable. But it requires leadership and determination. I am confident that the political leaders, government officials, and we transportation experts, with dedication to this goal, can meet this task. We owe that effort to our nation.

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Attached herewith is a recently published brief analysis of some urban transportation problems relevant to the topic of this statement.
Quo vadis, ASCE?

A critical view of the congressional testimony by the American Society of Civil Engineers on the Highway Trust Fund

YUKAN R. VUCHIC, M. ASCE
Associate Professor of Transportation Engineering
University of Pennsylvania

Three members of the ASCE National Transportation Policy Committee appearing as representatives of the Society, testified at a hearing of the U.S. Senate Committee on Public Works on May 25, 1972, that uses of the Highway Trust Fund should be broadened to some additional items, but remained restricted "solely for highway-related purpose." (See CE, Aug., 1972, p. 69.) It is questionable how representative this position was. I believe this policy of separate financing for individual technological modes is neither based on a comprehensive approach to urban transportation systems on a functional basis, nor does it correspond to the current needs of our cities and society.

The Urban Transportation Crisis

There is no doubt that transportation problems in our cities are extremely serious. Development of our transportation systems in recent decades has focused much more on rural and suburban transportation than on important, although complex, urban transportation systems.

While many of our freeways had adequate funding through the Highway Trust Fund and corresponding sources at the state level, financing of local arterials and streets (both capital and operation) have been highly inadequate and often nonexistent. As a result, there has been an over-emphasis on construction of new facilities, while modernization of existing facilities has been neglected. At present, street design and traffic engineering measures in many of our cities are of a lower quality than they were 20 years ago. They are far behind facilities in some progressive foreign countries.

Even less adequate are our transit systems. Held for decades without capital investments and on the verge of bankruptcy due to the philosophy that transit operations should cover their total costs, the industry today has obsolete equipment and operating procedures, excessive labor and lack of professional talent. The decreasing level of service has resulted in an increased reliance on peak-hour usage and captive riders only, causing further deterioration of systems. Modern operations (e.g., fare collection, scheduling, information systems) are virtually unknown in this country.

Pedestrians are another neglected aspect of our urban transportation: instead of providing for attractive and safe walking in city streets, many engineers and architects treat pedestrians basically as obstacles to mechanized traffic. (See photo.)

These illogical policies have created the present situation: our cities build eight-lane freeways, but do not have funds to paint pedestrian crossings and coordinate traffic signals; multilevel parking garages are constructed, often for subsidized parking while subway stations are dark and unsafe and rail transit vehicles on some systems are up to 50 years old.

One of the distinct characteristics of cities, and one of the reasons for their existence, is a high degree of mobility. Their transportation systems should provide fast, reliable and comfortable transportation for all persons, regardless of whether they own a vehicle or not. This advantage has been largely lost in our cities: as a matter of fact, in some of our cities transportation is in many respects not as good as in rural areas, since the existing transit services are not an acceptable means of travel.

The trend in transportation which has led to this situation and to the extremely serious negative consequences that we now have, not only in terms of direct physical impact (pollution, noise), but in creating an environment in which it is unattractive for people to reside, conduct business, or use recreational facilities, has caused a small revolution in our cities. The opposition of the population has spread not only to the projects which would be damaging to cities, but to nearly all major public projects. It is extremely important in this situation that engineers understand the causes of dissatisfaction and take a leading role in responding to the interests of urbanized areas, rather than stand in opposition to all criticism and claim that they have been doing the right things all along.

The Highway Trust Fund concept

The Highway Trust Fund concept
These photos illustrate what can be done in modern subway systems. One shows a typical U.S. station (Philadelphia) and the other a new system in Montreal, Canada.

was a practical, useful and efficient method for financing the Interstate Highway System. However the Trust Fund concept also has some deficiencies, among which is the aforementioned bias toward construction of new facilities in urban areas and toward highway-oriented programs. Another problem is the difficulty of modifying or discontinuing it when the needs of the society change with the time, as is the case today.

It is important to understand that the Highway Trust Fund was formed primarily with practical considerations in mind. The degree of equity often imputed to the Trust Fund concept is grossly exaggerated. If one takes the highway system as a unit by itself, it appears logical that the drivers through their taxes on gasoline pay for the construction of highways. However, highways are only one component of the transportation function. Under the initial concept of the Highway Trust Fund, an automobile commuter in the city is paying through his taxes for the Interstate System in that city and elsewhere in the country, even if he is driving only on local streets. However, use of those taxes for his neighbor commuting between the same two points, but using a vehicle of different size (bus or train) is prohibited!

**ASCE Committee's stand**

The Committee's testimony correctly suggests that the uses of the Highway Trust Fund should be broadened. But it fails to recognize the transportation system as a system and retains the strong bias which has caused so many of the problems we have at present. Let us analyze its individual statements.

The Committee sees the private automobile as the basic mode of transportation, and expects that its role will increase in the future, while mass transit is considered as a supplementary system primarily for travelers oriented to central business districts and for service to those who do not own automobiles. While this concept is correct for small cities, the failure to recognize that public transportation must be treated as a vital and often dominant mode of transportation in medium and large cities is damaging since it ignores several important aspects. First, introduction of the automobile as a basic mode of travel in large cities is physically and financially unfeasible and socially undesirable; experience has proved that. Second, public transportation must represent a system on which persons can travel throughout the metropolitan area, rather than to one point and back during peak hours. A modern transit system that serves the whole city does not exist at present in the U.S. and that is one of the major reasons for decreasing numbers of transit passengers.

Limitation of the role of transit to peak-hour movements and service to non-drivers would give this mode only the most uneconomical type of services. Yet, the ASCE testimony, suggesting this role for transit, at the same time stands against operating subsidies to transit systems!

Perhaps the most illogical and damaging statement in the testimony is the recommendation that the use of the Highway Trust Fund be restricted "solely for highway-related purposes." Thus buses would be included, but other modes of public transportation would not. The principle that the Fund could be used for transit if it is performed by vehicles on rubber tires, but not for vehicles which run on steel-wheels cannot be supported by any logic. This stand is part of a strong campaign and prejudice against public transportation in general which has now, under great public pressure, accepted buses as a "desirable" mode, but still carries an even more vigorous cam-
campaign against rail systems than ever before. With regard to rail rapid transit, the testimony suggests only that studies of its impact should be made. Thus the mode which is the most space-efficient in carrying passengers, provides the highest level of service and which can be built in numerous medium and large cities around the world, is suggested for studies. Truly modern rail technology is hardly known in this country since its progress here is impeded by various interest groups. Under the recommendations of the testimony even the proposed new systems such as various automated systems would also be excluded from funding since they would not be "highway-related."

The statement that "it is essential that there be adequate metropolitan area planning and coordinated development of both highway and mass transit systems" and that there should be more local autonomy is making detailed decisions on use of federal funds, certainly highly desirable, is in direct contradiction to the suggested limitation of funds on the basis of technological mode.

It is interesting that the testimony opposed use of the Fund for transit operating subsidies or for highway maintenance, although it endorsed it for construction programs such as bridge replacement, TOPICS, etc. This proposal demonstrates the pitfalls of earmarking funds in general. The TOPICS program, which represents probably the most cost-effective use of the funds for improvement in urban highway transportation at this time, certainly cannot be considered as a "construction program." It covers the improvements which are mostly regulatory, not structural, and actually represents maintenance of local highway facilities deferred from the past several decades. Application of the Highway Trust Fund for TOPICS demonstrates that under same conditions funding of operation and maintenance can be more effective and desirable than funding of capital improvements.

Changes needed in urban transportation policies

Our urban areas desperately need drastic improvement in transportation systems and facilities. To achieve this, the existing policies should be reoriented as follows.

- Deterioration of public transportation systems must be reversed. New rapid rail, light rail, bus, and other modes of transportation must be constructed and existing ones modernized so that they represent an acceptable transportation system for most travelers and that they operate more economically than at present. The concept behind the initial Highway Trust Fund, to make heavy investments in order to reduce the operating cost of the highway system, must be applied to transit also.
- Automobile travel in urban areas must be improved through reconstruction of facilities and greater application of modern traffic engineering measures. Auto travel in high density areas, however, should be discouraged or prevented through design of pedestrian area, and through a pricing system for parking and/or driving in those areas.
- Recognition of the desirability of pedestrian travel in cities should result in improved design and in reduction of the negative side effects of our transportation systems.

The question is, then, how one can finance these improvements if there are continuing needs for funds for further modernization of the Interstate and other highway systems. Although the urban improvements should certainly have priority at this time, the problem can also be solved by an increase in taxation, which the ASCE testimony did not consider at all. A few cents of increase of gasoline tax would create large additional funds for these purposes. Having in mind that our motorists pay for gasoline only about half of what motorists in other countries pay, and that frequent “wars” among our major gasoline companies produce fluctuations in the price of 5 to 8¢ per gallon without public reaction, an increase in taxes would hardly seem objectionable. The resulting improvements of public components of our transportation systems would correct the existing trends leading our cities to the extreme of private affluence and public poverty.

Does ASCE lead or oppose progress?

In summary, the testimony of the ASCE representatives contains major contradictions and is based on an approach to transportation through individual modes rather than through the total transportation system. Although the recommendations of the testimony do represent a step forward from the initial concept of the Highway Trust Fund, they oppose the major changes which our cities and our society need so badly at this time.

We should recognize the means by which civil and transportation engineers would again take the lead. Opposing progress does not help in the cause. The stand of the National Transportation Policy Committee should be re-evaluated.

(Editors note—For the final outcome of the bill, see Byline Washington, p. 142.)

A former government consultant, Volkan R. Vachter heads the graduate program in Transportation Engineering at the Towne School at the University of Pennsylvania.

June 1973  Civil Engineering-ASCE  61