

Prescribing The Future, Not Predicting the Future: Are Our Planning Methods Up to the Challenge?

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Preface

This paper was written as a speech for the opening session of the Sixth Conference on the Application of Transportation Planning Methods. Accordingly, it is written in first person and reads like a speech rather than a traditional research paper. The content has been modified slightly from the speech text to clarify or elaborate on certain issues and subsection headings have been added to increase the readability.

Good Morning, I appreciate the opportunity to share with you some of my perceptions and ideas regarding transportation planning and the challenges that will confront us as we are tasked with building that often-talked-about bridge to the future. I have been interested in the effectiveness of planning since 1976 when I submitted a dissertation proposal to evaluate the effectiveness of transportation planning. I persevered, finishing that task some ten years later and have enjoyed reflecting on the effectiveness of the profession at regular intervals.

In preparing for this talk I felt that I should have a good joke to tell. So, being a contemporary planner, I logged on to the web and typed the key words “Transportation Jokes” into my favorite search engine. I got back an alphabetized list of projects — Boston central artery project, channel tunnel, Denver airport, Detroit people mover, Dulles toll road extension — I decided that continuing with that list would offend my whole audience, so I changed my key words and found a story about three planners and three engineers.

Three planners were in line behind three engineers waiting to buy a train ticket for a commuter rail trip. The three engineers only bought one ticket and the planners were intrigued and followed the engineers on to the train. When the conductor came into their car collecting tickets, the three engineers went into the next car and entered the restroom. When the conductor reached that car he noticed the occupied sign and knocked on the door. One of the engineers handed out the ticket and the conductor went on.

Later that same day these two groups again arrived at the station at the same time for their return trip. The planners were in line first and were a bit haughty as they asked for a single ticket. They noticed that the engineers didn’t ask for any tickets and were perplexed, but continued on. When the conductor entered their car the planners quickly went to the next car and entered the rest room. The engineers followed a few moments latter. Pausing a moment, one of the engineers knocked on the restroom door and said “Conductor, ticket please.”

Disclaimer

Many of my comments in this talk will relate to public transportation, not because I think that public transportation has done a particularly good, or particularly bad job in planning, but rather because that is the area of planning where the majority of my experience exists. It is also an area that epitomizes many of the critical issues facing the transportation planning profession.

Most of what I say today are things that I feel quite strongly about, but some issues are raised primarily to stir discussion. So don't hold me accountable or ask me to defend everything I say. And, these ideas are certainly not reflecting the views of any of my clients or for that matter, many of my peers.

The focus of these comments will be on what I feel are the challenges ahead of us as transportation planning professionals. Accordingly, it may be perceived as somewhat critical of current practice as it notes areas where I believe we need to do a better job.

But, rest assured, I do believe that — sometimes in spite of ourselves — the transportation planning community has in fact done a very commendable job. We do have fantastic levels of very affordable mobility for the vast majority of the population. We have been responsive to social changes and trends. We lead the way in addressing the needs of the disabled community and in utilizing all manner of public participation in planning and decision-making for transportation infrastructure and services.

We are making progress in incorporating new technologies and we clearly have made great headway in addressing environmental and energy efficiency issues. Safety has improved dramatically. Roads do connect across political boundaries and sometimes bus routes do too. We export our technical expertise in planning, design, and technology and we have done a good job in developing a more interdisciplinary and diverse workforce over the past few decades.

We do invest in research, though not as much as some of us would like to see. Transportation costs are not negatively impacting our international competitiveness, and the condition of our transportation facilities is actually improving by many measures. We should celebrate these successes and perhaps even learn some lessons from them.

Key Frustrations

In spite of these successes, there seems to exist within the profession some key frustrations that keep us from taking pleasure in our accomplishments. First, I sense we collectively feel that we are falling farther behind. We often talk about transportation needs grossly exceeding resources. It's easy to attribute our good fortune today, not to the recent success of planners, but rather, to the prior generation of transportation professionals and decision makers who perhaps were more willing to make investments and hard choices.

Imminent gridlock is often referenced in local transportation plans, and numerous studies show huge gaps between needs and resources. The data all suggest that in terms of infrastructure investment per person, per vehicle mile of travel or per licensed driver, we are clearly not keeping pace. We are consuming our surplus capacity and cutting our reserve capacity very short. In the past, our transportation investments often focused on connecting points on a map and providing accessibility. With that task mostly behind us, we are now principally focused on providing capacity. Yet, we haven't made much headway in convincing the public of these needs.

There seems to be a significant disconnect between the planning profession's perceptions of need and those of the public. When we are done calibrating our demand models, we may have to calibrate our perceptions of need to more closely correspond to those of the taxpayers and voters. Perhaps this disconnect is a result of our inability to convince the public of the consequences of consuming the surplus capacity in our transportation networks. Perhaps we have raised the specter

of gridlock one too many times. We have been threatening communities with imminent gridlock for decades and yet, average travel speed for most trips has improved. Perhaps it is the habit we have of talking about how volumes on roadways are 50% or 100% greater than what they were designed for. We cannot put two gallons of water in a one gallon bottle, yet, we in transportation have a convention that indicates most of our urban highway facilities are operating over their capacity. Little wonder the public may be confused or suspicious.

While we are often advocating increased capacity, we are slow to recognize that one of the virtues of crowded roadways and ten-hour peak periods is that our infrastructure investments are being productively used. If we were a private sector toll road operator we would not be complaining about our roads operating at a volume capacity ratio greater than one. We also often fail to account for how adaptable the public is in ensuring that gridlock never really arrives. “The sky is falling!” warnings will not help if we are not right.

In addition to this disconnect between the planners’ and the public’s perception of need, the second major concern that I believe confronts many transportation planners is a feeling of guilt, or at least nervousness, regarding the environmental or quality of life consequences of our transportation system. Even the most ardent highway advocate, or advocate of personal freedom of choice, has to feel some uneasiness when faced with the vision of perpetual ribbons of asphalt clogged with cars, lined by businesses surrounded by parking lots, noisily nestled under a noticeable brown haze in the sky.

There is, perhaps, a realization that there is not the space or the resources for our transportation behaviors to be adopted by the developing world and perhaps not the resources to enable us to continue down this same path for a second century of the internal combustion engine dominated travel. Yet, building twenty miles of light rail in every urban area with at least a million people, prefacing every plan with the word intermodal, talking about a balanced system, or even spending 20 percent of any new transportation trust fund revenues on public transportation services for the two percent of the public who chooses transit, may be doing little more than making us feel better and consuming scarce transportation investment dollars.

Other Perspectives on the Future

This conference is not alone in reflecting on the future of the transportation planning profession. Before addressing specific characteristics of our planning practices I would like to share with you a few thoughts that have influenced my thinking about the current status and the future of our profession. I would highly recommend four different items for your reading list.

First, looking back, I reviewed a speech written for a 1961 ASCE Planning Conference by a fellow named Wilbur Smith. This paper, titled Urban Transportation Tasks of the Future, outlines the perceived challenges facing our profession at that time. After numerically characterizing development and transportation trends, the authors says:

Despite significant strides in technology, the continuing expansion of the American urban area has made the daily movement of goods and people a difficult and complex problem. ...The transportation plan of every urban area must take into account the desires of individuals. At the same time, it must deal with the abilities of individuals to pay for the level of services they desire and with both the abilities and responsibilities of government to provide or assist in providing basic components of each part of the urban transportation system.

Wilbur Smith
Urban Transportation Tasks of the Future, 1961

It is interesting how true that quote remains today.

In a similar vein, I reviewed another 36 year old publication. This was from Mass Transit magazine. The cover had an artist's rendering of the Bay Area Rapid Transit system on it. Most intriguing, however, was an ad in the magazine by General Electric. The top half of the ad was a rendering of an intermodal station complete with a collection of various modes logically laid out to enhance transferability. The accompanying text outlined a statement that would need little editing to fit into most of today's transportation plans.

For Commuters in thousands of towns and villages that surround America's traffic choked cities, travel in 1970 will be fast and convenient — if planning for coordinated metro transportation begins now. Improved and expanded commuter rail service is the key to better metropolitan transportation of the future. Millions of dollars will be saved if action is taken now. ... Before all these improvements can come about, commuter rail and rapid transportation must be integrated into a single, metropolitan-wide transportation system.

Mass Transit Magazine, 1961

The third item I would recommend is an unpublished paper prepared by Manuel Padron for an American Public Transit Association Operations Planning Conference a few years ago. Titled, "Impacts of Changing Demographics on Transit Planning," this paper is a particularly insightful review of the challenges we face today. It evidences a transit professional's frustration with the extreme challenge we have in making transit effective in light of the unrelenting and extremely powerful forces of suburbanization and decentralization. After elaborating on the difficulties of designing transit services for suburb to suburb trips, Mr. Padron said,

Under these circumstances, what can we, as transit and transportation planners do? I wish I could tell you, in all sincerity, that we are facing "new challenges and opportunities", to quote the familiar phrase. What it really means is: I'll be damned if I know what we can do.

Manuel Padron,
Impacts of Changing Demographics on Transit Planning

Finally, in preparing these thoughts, I reviewed a book that looks to the future. The short book, *Avoiding the Collision of Cities and Cars: Urban Transportation Policy for the Twenty-first Century*, is authored by Elmer Johnson, and based on a study sponsored by the American Academy of Arts and Sciences in cooperation with the Aspen Institute. It was published in September 1993. This particular book outlines a series of policy initiatives designed to provide a road map for helping overcome the social costs of our current auto dominated transportation system. It is well researched, reasoned, pragmatic and outlines a series of solutions to our transportation problems that few of us spend much time thinking about.

We, the participants, believe that our recommended long-term strategies are still achievable in a democratic society, but only if they are preceded by pricing and other habit-changing strategies that confront people with the unpriced or underpriced cost of urban vehicle travel and the importance of new norms of social behavior.

Elmer Johnson
Urban Transportation Policy for the Twenty-first Century, 1993

This book certainly suggests a new set of skill requirements and challenges await the transportation planner.

So What Does this Mean?

So what does all this have to do with how we go about planning now for our future? Have we made any progress in the past 30 years? Are we making progress toward a better future? Have we figured out a way to overcome the negative externalities of single occupant vehicles (SOVs) or found attractive alternatives to them? While the above references no doubt raise a number of issues concerning how we do our planning, the remainder of this discussion is focused on some of the key issues that I feel confront us today. It will concentrate on three main questions.

- First, has the goal set for transportation planning gotten so broad as to suggest a need for a radical new model of planning, funding and decision-making for urban transportation?
- Second, are we quickly moving from an era where we focused on predicting the future to one where we appear to be more interested in prescribing the future. And, if so, does this require a fundamental rethinking of how we go about doing planning? and,
- Third, does the planning environment that we have helped create facilitate an objective information-based decision process? Or have we replaced analysis with advocacy?

The Broad Based Goal Set

I'd like to start by challenging one of the basic premises fundamental to the planning process as we are applying it today.

I believe that the single biggest challenge we face as a profession may be that we have let our goal-set get so big that we may be losing site of our mission and that we may be creating an unwieldy planning process. As each of you know, the planning process consists of a series of steps from problem definition and goal setting, continuing through the development of alternatives to the evaluation of alternatives to a recommendation, decision and implementation phase. We can add some extra steps, acknowledge feedback loops or emphasize component activities such as public participation, but nonetheless, planning applies a time honored problem solving process.

The set of goals we are dealing with for transportation has gotten extremely broad. We have simply taken the maxim that "transportation affects everything" to the extreme, and we now want to capture all those interactions in our planning and decision-making structure. We no longer restrict our mission to providing safe, cost effective and affordable transportation capacity, we are now attempting to right many of the wrongs in society via transportation investments. Indeed as a culture advances it is common to embrace a larger set of interests and concerns, but if we do that, then we need to do it very carefully.

Today's planning efforts include goals as far ranging as ensuring social equity, restoring a sense of community, enhancing quality of life and neighborhoods, providing jobs, and reducing the national balance of trade deficit to assuring the highest degrees of safety and security in our travel. Over time, the planning process has adapted to the growing list of goals by attempting to expand the evaluation processes and the planning methods directed towards providing information for decision makers that address this broader range of factors.

This enlarged goal set has some important implications for our planning process.

Let me note four specific challenges it creates.

1. It pushes us into subject matters that we are not necessarily experts in, and in some instances no one else is either.
2. It substantially increases the number of players in the planning/decision-making process.
3. It suggests that the range of choices for solving these multifaceted problems should extend beyond just transportation investments.
4. It suggests that the decision-making forum for transportation projects should be general purpose governments whose responsibilities cover the full range of issues often implicitly addressed by the transportation proposal. It may also suggest that the funding source for transportation projects be a broad mix of resources from sources whose responsibilities include attaining the full set of goals being addressed by the investment.

Let me address these one at a time. **First**, let's review the profession's expertise in evaluating the impacts of transportation investments for some of the goals that we now take very seriously. Take, for example, the area of economic impacts from transportation investments. While it has long been understood that a good transportation system was an integral part of a strong economy, we have gone far beyond that. We are now carrying out economic impact studies for individual projects. The state of the art for this type of analysis is evolving quickly. We used to simply apply multipliers times the spending for the project and claim some rather dramatic impacts. Indeed the merits of the project were irrelevant. We could build a subway system in a corn field in Iowa and still claim tremendous economic impacts even if the only passengers were a small group of old ball players.

Taking this logic to the extreme, if we had cost overruns, we had even greater positive economic impacts by virtue of the multiplier effect. If I invented a matter transporter ala Star Trek and sold it for \$19.95 on late night TV, it presumably would have next to no economic impact since it wouldn't be creating large numbers of construction and operating jobs.

Not long afterwards we realized that net new money brought into a region was relevant in assessing economic impacts. In this scenario of evaluation, if I build a transit project with discretionary money, supposedly new money to the region, I could show a significant economic impact. If I built that same facility with local funds or formula funds, the economic impacts would be lower. Pork barrel projects have a high economic impact and formula or locally funded projects don't.

In this process of determining economic impacts we can have a high speed rail project claiming as an economic savings the reduced need to expand airports while at the same time on the other side of town we can have another study taking place that shows the economic benefits of expanded airport capacity. It is little wonder that we might be confusing the decision makers and perhaps misleading ourselves and the public.

Another area where we are struggling to clearly evaluate impacts is in the area of land use impacts of transportation investments, particularly transit investments. While we are sure there is a relationship, it is absolutely clear that we are far from a consensus regarding the nature and magnitude of these impacts. As recently as the November/December 1996 issue of TR news, some of the

foremost experts on the subject postulated very different assessments of land use impacts from transportation investments.

We particularly cite land use impacts as virtues of rail transit investments, and indeed there is evidence of impact. Yet, Atlanta, Georgia, where a tremendous sum of dollars has been invested in rail, has been labeled in the local media as “probably the fastest growing metropolitan area (in physical size) in the history of the world.”

Recently, Paul Weyrich of the Free Congress Foundation wrote an article for APTA noting the ability of transit to reestablish a sense of community in our urban areas. I can’t wait until planners try to evaluate projects based on the extent of “sense of community” that they create.

Our expanding goal set, while well intended, may be resulting in planners being incapable of providing accurate, meaningful or reliable data for informed decisions?

If we are going to have an expanded goal set, we need established, credible means of measuring goal attainment. We need to keep working on our methodologies for forecasting, measuring, and valuing impacts. Over the past few years the terms “junk science” and “junk research” have been used in the media to refer to advocacy driven findings that do not meet the standards of valid scientific or statistical methodologies. We need to be very careful that our transportation analysis does not become “junk impact assessment.”

Second, this expanded goal set increases the number of players in the planning decision-making process. There is a risk that we have made the process so complex that no one can understand the decision-making sequence for major decisions and we have virtually assured a long, expensive, cumbersome decision-making process. Some years ago I coauthored a paper suggesting that planners do a decision map to outline the sequence of decision-making steps and actors. Indeed as we expand our range of involved parties it will be critical that we fully understand the respective roles and responsibilities in the planning/decision-making process.

I cannot count the number of times I have heard the public say, “Its time to stop planning and time to start building.” Yet, with the decision processes we are putting in place, we may never get to implementation. Perhaps it is fortunate that there are resource limitations, otherwise the pace of planning and decision-making might come under much greater scrutiny.

While I would not want to disenfranchise anyone, and a little time and money are well spent for good decisions — we risk making transportation investments that try to do everything but do nothing well.

The **third** factor that makes me nervous about the broad range of goals is that we are not being true to the problem definition by having a solutions set composed of strictly transportation investments. Let me explain.

If I am trying to move people, save energy and influence land use, I may favor a rail system investment over roadway construction to accomplish these goals. However, I am only looking at transportation investment options to accomplish a range of goals that extends well beyond moving people. Perhaps I should include, in my choice set, a range of investment and policy options that address these goals from different perspectives. For example, in my choice set, I most likely do not evaluate an investment in an HOV lane coupled with a land use policy change and economic development incentive package. Perhaps a lower cost transit investment coupled with a tax

free development zone system would result in more optimal overall benefits. Yet, this is not a choice, since the funding and decision-making forum are transportation focused.

In some instances, transportation funding and transportation decision-making forums become the focal point for decisions that go well beyond providing transportation. The further beyond transportation benefits we go, the more it behooves us to look at packages of alternative investments and policies that have elements in them that have nothing to do with transportation.

The **fourth** and final aspect of the broad goal set concerns how we do planning and make decisions for these broadly defined goals.

Over the years we have often sought single purpose entities to plan and certainly to implement transportation projects. The theory was that we would get a dedicated agency with a clear mandate and mission to provide transportation facilities and services. This single purpose agency was theoretically not bogged down in general purpose government issues and transportation decisions would not be held hostage to politics or competing priorities. The dedicated agency provides a forum and a focus for action.

However, as transportation is increasingly defined as part of a larger whole, it may be time to revisit this issue. Perhaps we could end up with better integration of transportation investments with other aspects of our infrastructure investments, policies, and programs if we put transportation decision-making back into general purpose governments. Specifically, perhaps transit agencies could be more effective if they were closer to the land use planning responsibilities. Portland has certainly evidenced the value of coordinated planning of land use, roadways and transit investments. If we tried placing transportation within a general purpose government, and did not make progress on transportation issues, then perhaps there is not the mandate that we in the profession imagine for more transportation investment.

Similarly, if our goals are jobs, energy savings, land use impacts, and transportation, perhaps multiple funding sources associated with each goal should be sought for implementing projects. Transportation funds might pay for the majority of costs, however, to the extent that the most efficient transportation investment was rejected in order to accomplish other goals, perhaps other sources of funds should be sought to pay for these benefits. Maybe we would have adequate transportation resources if other sources of funds were sought to pay for benefits beyond those strictly attributable to the transportation improvement.

I warned you that some of these ideas were meant to stir up your thinking and might not be consistent with traditional perspectives.

Prescribing the Future?

The second major issue I wanted to raise deals with the issue of prescribing the future rather than predicting the future. For years the transportation planning profession has focused a great deal of time on forecasting what the future might be like and how it can best be served by transportation investments. We may be quickly moving from an era where we focused on predicting the future to one where we appear to be more interested in prescribing the future. Such a change may require a fundamental rethinking of how we go about doing planning.

There are several reasons for this change. First, in many of our urban areas, the built environment is more substantial than historically was the case, and the increment of change in a new plan is

necessarily more modest as a share of the total infrastructure. Thus, there is less uncertainty to doing predictions.

Second, we are significantly behind in our infrastructure investments. In many cases we do not need to forecast demand, we can count it. We are not building roadway investments for tomorrow's needs but rather for yesterday's or today's needs. Why predict future needs when we cannot afford to build them?

Third, we appear to be more willing to consider pro-active policies and investments. Some might consider this social engineering where we are willing to be more aggressive in making sure that the market responds in the way we want. Others would simply call this leveling the playing field or moving toward full social cost accounting for transportation policy. In any case, we appear to be willing to utilize resources in ways that shape the future rather than simply responding to it. The broad-based interest in increasing alternatives to the single occupant vehicle often suggests prescribing an investment plan designed to shape future choices by providing transportation capacity that does not necessarily match today's market statements of need.

If this is, in fact, the path we are taking, it suggests a huge range of impacts on how we go about doing our transportation planning.

Many of the transit studies we are doing now do not focus on whether we need rail now or in the near future, but rather on what level of development, parking capacity constraints or other factors will be required to make the transit investment effective in the future. We seem far more willing to lead rather than follow the public, yet this new direction has not necessarily been explicitly endorsed or acknowledged by the professionals, the public or the decision makers. We may be well served by being more explicit of our intentions and the risks and uncertainties in this new direction. This role as a prescriber of the future may require the planner to have a different set of skills and experiences than in the past.

This role as a prescriber of the future may require us to focus our attention on a smaller segment of the market. It is highly unlikely that we can make-over our urban environment at the regional scale, but rather may be appropriate at the corridor or neighborhood level. If, for example, we want to alter land use via investment in a rail system, we may be best served by focusing our investment dollars in a small enough area to make a real impact. Often the combination of our mode-specific agency agendas combined with our desire or mandate to be equitable in our allocation of transportation investments, results in our being forced into one-size-fits-all solutions to urban mobility. This strategy may not work for diverse regions with varying needs and interests.

The transportation needs, and the ability or desire of various areas to support a given investment or set of policies may vary dramatically across urban areas, yet, we often prescribe a single system solution to mobility problems. I am often intrigued how we determine that a rail investment is a fitting investment to support and reinvigorate an urban area, but then we proceed to extend that system into the far flung suburbs in an effort to chase the market and be equitable in our allocation of resources. Perhaps no rail lines should extend more than ten miles from the city center and those persons living farther away simply have to suffer the congestion and other consequences of not being readily served by high performance urban transit services.

Where Have All the Analysts Gone?

The final major issue I would like to raise is the role of the planner as an advocate versus an analyst. Over the past few decades we appear to have moved ever closer to the situation where most transportation planners are in fact advocates for a particular mode or solution to our mobility problems. This appears to have arisen from a combination of factors including our tendency to have mode specific agencies, the tight resource situation forcing some competitive fighting among agencies for dollars, and perhaps the inherent need to specialize in a given mode in our increasingly complex planning environment. Yet, this tendency may be resulting in us losing our objectivity when it comes to evaluating investments and policies. We seem to be in a culture that highly values positive team play and is quick to characterize any pragmatic assessments as “doubting Thomases” who don’t have the vision, are too negative, or aren’t team players.

I do want to be a little bit alarmist on this point.

In the sixties we heard comments like, “The military industrial complex never met a weapons system that it did not like,” and, “The Army Corp of Engineers never found a river that did not need a damn.” I am afraid that the transportation industry is having trouble finding an intelligent transportation system project that isn’t critical to our national interests, an urban area corridor that does not need a light rail system, a bus system that doesn’t need an automatic vehicle locator system, or a highway that doesn’t need at least two extra lanes. While we have projects that are not affordable, we have very few that are judged not worth implementing.

A number of the things we do perpetuate this tendency. There is the single purpose agency. In Florida, the Tri-county Commuter Rail authority did a strategic plan — guess what mode they recommended needed to be expanded?

Discretionary funding is another culprit. Targeted discretionary funding is far and away the best way to unlevel a playing field. If the choice is — build a given type of project or don’t get the money — not surprisingly the answer is a recommendation to build a project that matches the eligibility criteria for the funding source.

Even at the federal level, we (or they) have washed our hands of passing judgement on the relative merits of alternatives. That is now a local decision and the “Feds” are your partner in implementation. Nobody wants to be the person who says no or asks the tough questions. Why alienate someone by telling them their project is low priority — simply let the lack of resources kill the project later or see it get funded on someone else’s watch. In the mean time, keep spending money on the planning and don’t risk losing good will with a constituent.

In other ways we are hiding under the covers when it comes to objective evaluation of projects. One of the virtues of the ever expanding goal set is that we can cite the desire to attain some unmeasurable new goal as the basis for favoring a given alternative. If it can’t be measured, it can’t be argued. We may have created a situation where no one is watching the purse strings. Advocacy has become an extraordinarily influential aspect of transportation planning and investment decision-making. Where have all the analysts gone?

A few years ago I was talking to a friend who was involved in an alternatives analysis in a Mid-western city. He casually said that he sure hoped that the project would move into the engineering stage. I commented, “Oh, is it a good project?” He responded, “No, its not that, but my kids are in

high school and I don't want to move again for a few years and there are no other transit jobs in town." About ten years ago I had a senior consultant from a well known firm pat me on the shoulder and explain that the only way we ever get anything implemented is if we exaggerate a little in advocating our favored projects.

Just this past fall I was reviewing a paper submitted to the Transportation Research Board. The authors stated, "The public was not supportive of the project as we neared the end of the planning stage, so we redesigned the citizen participation process to build support for the project." Is that what we really want to be doing?

I suspect that most planners can relate to situations where you or someone you know has rung their hands in frustration with a "stupid" decision, yet the defining issues or the uncertainty inherent in the decision were not communicated to the decision makers.

Does the planning environment that we have helped create facilitate an objective, information-based decision process? I fear not!

A few years ago the country watched in horror and embarrassment as the chief executive officers of six tobacco giants publicly lied about their prior knowledge regarding the risks of smoking. While I am not accusing transportation professionals of lying, I am suggesting that we are creating an environment where the motivations may bring out the worst in people. It wasn't shocking to me that these individuals lied, but rather that the public was naive to the motivational pressures that created that temptation. Our institutional and funding structures create tremendous pressures for transportation planners to be advocates and not analysts. I think we need some of each.

While we have argued for a multi-modal process, has our institutional structure and competition for resources kept us from developing a true multi-modal planning perspective?

Conclusions

Not surprisingly, one can draw several conclusion from this set of issues. In fact, I did, rewriting the conclusions several times. Several key points merit reiteration.

Clearly planners' plates are full. In some respects, things have never been better. We have the best data sets and planning tools ever. We have the benefit of a growing body of relatively well documented experience. We have a diverse, well educated, and professional human resource base to call on. We have increasingly sophisticated methodologies to assess the consequences of our planning. But we have the most complex technical and institutional environment for decision-making. We have limited resources and we have an unparalleled degree of cynicism in the public and the media.

I believe it was in 1992, when the political pundits coined the term "It's the economy stupid!" to characterize the critical issues in the minds of voters. At this time I think we in the transportation planning profession would benefit by having a screen-saver on each of our computer monitors that says "It's the traveler stupid!" in order to keep us focused on our fundamental mission. If we are to embrace an expanded vision of transportation and acknowledge the interrelationship of transportation to the overall quality of life and economic well being of our community — that's good — but we should make sure we have a mandate to do that, adequate resources, and the appropriate expertise to do it effectively and accurately.

If we continue to move toward a day when we no longer forecast the future, but rather prescribe it, we need to get that mandate more clearly endorsed by the public and decision-makers. We need to recognize that it will require a different set of skills and perhaps a very different relationship between the technical and political aspects of planning.

If planners desire or are required to play the role of advocates, then we may need to rethink the structure of planning and decision-making. Somewhere, someone should play the role of analyst. If we need to be advocates then let's say so so the public and decision-makers can evaluate information accordingly.

Yes, we do have challenges and opportunities in front of us. We have a long history of accomplishment in transportation planning and engineering that will not be easy to live up to. We have the resources and the capabilities, we need to muster the resolve to be enlightened yet focused, visionary yet pragmatic, leaders yet servants, and analysts yet advocates — advocates for good transportation.