Interview ■ Professor Dr. Hani Mahmassani from Northwestern University and Robert D. Brooks from the infrastructure project specialists Parsons Brinckerhoff speak about the impact of the evolving political, economic and social framework on the American “way of drive.”
“Greater awareness of green issues”
Professor Mahmassani, Mr. Brooks, in 2008, oil prices jumped from one all-time high to the next, giving Americans a taste of higher energy costs for the future. How will economic forces like these influence mobility patterns in the USA?

Mahmassani: While we did see some changes associated with higher prices, they were not as deep or fundamental as one might have surmised. The American driving public has shown considerable resilience vis-à-vis energy prices. Concern for the environment is probably a greater motivation for change than the price of gasoline. For instance, people may be more willing to use public transportation when they lose their jobs, but then total usage could still fall when they no longer have a daily work destination to travel to. Of course, recessions also negatively impact state and local budgets. Without significant federal funding, it is harder to finance new public transportation projects even when higher gasoline prices generate increased interest in energy efficiency.

Brooks: To my experience, the American transportation system has proven to be remarkably adaptable to changes in market conditions for both consumers and producers. It is worth noting that an overall recession is likely to have a larger impact on the evolution of our transportation systems than the price of gasoline. For instance, people may be more willing to use public transportation when they lose their jobs, but then total usage could still fall when they no longer have a daily work destination to travel to. Of course, recessions also negatively impact state and local budgets. Without significant federal funding, it is harder to finance new public transportation projects even when higher gasoline prices generate increased interest in energy efficiency.

“...The car-dependent suburbs won’t collapse just because of high gasoline prices”

Or more concretely: some experts predict the collapse of the car-dependent suburban culture in the U.S. if fuel prices keep rising. Is this vision too pessimistic?

Mahmassani: In fact, I believe this vision is overly pessimistic. There are as many as three factors that mitigate the effect. Firstly, a lot more can be done to increase fuel efficiency of U.S. vehicles, including shifting from larger inefficient vehicles to smaller, more efficient ones. Secondly, improvements on the supply side are likely to continue, especially in the area of alternative fuels. And thirdly, the economics of real estate and families’ preference for more space and greater privacy will continue to contribute to the attractiveness of suburban areas. Change in this regard is more likely to come from socio-demographic trends, for example a tendency of empty-nesters to return to the city and its amenities.

Recently the Australian scientist Professor Dr. Jeff Kenworthy endeavored to evaluate the transportation quality of 84 cities across the world. Many U.S. metropolitan areas ranked rather low, mainly due to a negative estimation of their public transport systems. Is this a fair evaluation?
Brooks: I completely disagree with Kenworthy’s assessment. As Kenworthy admits himself, the weightings he used are subjective. I think the study placed too heavy a weight on public transport systems. And I would like to emphasize that those US cities that geographically and demographically exhibit opportunities for public transport systems have successfully adopted them.

Mahmassani: In my view, the negative evaluation of our public transport systems is generally justified. Seen overall, however, such comparisons are not always fair, especially when subjective assessments are playing a role.

“America is a melting pot – this is also reflected in our transportation systems”

What’s your view on the often repeated assertion that the U.S. transportation system must significantly increase multimodal transport?

Mahmassani: I expressly agree with that view. Multi-modality is one of the critical dimensions of modern transport services for both freight and passengers. And that’s of course also true in the U.S.

Brooks: I believe that the U.S. has a significant multi-modal transport system, when viewed across the entire country. Transportation planning has been, can be and is a valuable tool in identifying local areas of multi-modal improvement. In doing this, however, it is important to always keep in mind that regional and local conditions do vary, and transportation system recommendations must always be specific to the area. America is a melting pot and the diversity of the U.S. transportation system reflects the geographical and demographic histories of each area.

During the Bush administration, Professor Dr. Robert Cervero, from the University of California at Berkeley, wrote a short essay, stating that, “Institutional lethargy may prove to be a roadblock to new mobility options.” Is this still a current concern?

Brooks: It’s possible the provocative phrase “institutional lethargy” may have just been used to promote the article. But apart from that, early signs seem to indicate that the Obama Administration and the American public alike are open to allocating resources that increase the efficiency of the country’s transportation system. As with the New Deal, there is an increased national awareness of the value of renewing and maintaining our transportation infrastructure.

“There will definitely be greater awareness of green issues”

Mahmassani: Professional bureaucracies do not change instantly, no matter how much push they may be given by both internal and external forces. So some amount of “lethargy” will probably manifest itself. It is too early to know for sure to which extent. Certainly the tone and tenor of the administration are encouraging.”
Immediately after taking office, President Obama made a plea for a genuine global coalition in the battle against climate change. Does that mean that transportation in the U.S. is getting “greener”?

Mahmassani: I do have the impression that the concern for sustainability and climate change is a major policy focus area for the Administration. There will definitely be greater awareness of green issues, and it might affect policy. Especially in the area of transportation, we need to consider alternative scenarios for the future where fossil fuels no longer play a dominant role. However, these transitions will likely take place nearly seamlessly within the industry, without evident disruption to consumers.

Brooks: In today’s recessionary economy, U.S. citizens have become very conscious about saving money and making wise long-term investments that promote growth and green technology. For example, the large SUVs that used to draw admiration are now increasingly seen as energy hogs. The adoption of green transportation technology promises to provide long-term savings and wise resource usage for U.S. consumers and producers. The American entrepreneurial spirit has always been at the cutting edge of environmental advancement.

The traffic-related details of the recently adopted stimulus package met with varying approval by the experts. Are you among those who are rather excited, or those who feel somewhat disappointed?

Brooks: I do not see any disappointment in the professional transportation infrastructure community. People who are professionally involved in construction projects know of course that no overnight improvements can be expected in this field. And yes, many Americans are waiting to see the impact of the stimulus funding. However, even with “shovel-ready” transportation projects, it takes time for the construction plans to actually be implemented and for the money to start flowing into the communities.

Mahmassani: I think the White House has made a strong enough case that traffic infrastructure spending will increase economic vitality, and this reasoning is being echoed in and by several agencies and entities. However, many people need to see more evidence.

As time passes, people will be able to feel the economic benefits of the dollars being spent in their communities.

Mahmassani: I believe several groups within the U.S. Department of Transportation have a reasonable vision, though it...
needs to be updated in light of novel concepts and technologies. Then again, the federal role in regard to traffic signals is very limited and focuses more on usability and transferability of collected data.

**Brooks:** ITS technologies are only one element in the American investment in transportation infrastructure. Technical capabilities in transportation engineering have increased dramatically. However, local adoption of new traffic control and management systems has been constrained by a number of factors, including less than comprehensive education of policy makers about what technologies are available and what they can do; cost-benefits analyses of the transportation infrastructure as a whole; social concerns such as privacy rights; and budgetary constraints of states and municipalities. ITS technologies that can show efficiencies such as immediate energy savings and increased safety applications are best advocated.

“**In the best of cases, government will act as an accelerator of innovation**”

Localities and state governments have as much or more influence on transportation planning as the federal government. Does this make the U.S. more or less agile in adopting transportation innovations?

**Mahmassani:** The large number of potential clients increases the chances that some progressive entity may adopt a new technology or concept that the U.S. Department of Transportation may feel is not fully ready at a given time. These early adopters play a very important role in what technologies are ultimately adopted. In the best of cases, government will act as an accelerator of innovation.

**While there are many massive transportation challenges, you seem to be quite optimistic about the future mobility of American society. What is the foundation of your optimism?**

**Mahmassani:** For example the capabilities created by new technologies; the increasing environmental awareness; the return of attention to passenger rail transportation – and last but not least the stronger support from the Administration.

**Brooks:** The emphasis on local and state applications makes the U.S. much more agile in adopting new technologies than a more centrally planned economy. The local policy makers are in the best position to know what works for them and how it will fit within their budgets. The primary role of the federal government is in the sharing of information about new technologies and in subsidizing the adoption of socially desirable new technologies through financial incentives such as tax credits.

**Brooks:** As market conditions keep changing, we transportation planners are very optimistic about the innovative transport approaches that have been developed in the U.S. Regional diversity and a strong entrepreneurial spirit will continue to help the U.S. in providing solutions for the world’s transportation problems.

Professor Mahmassani, Mr. Brooks, thank you very much for the interview. «

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**Did you know ...?**

**Interesting facts and figures about the impact of mobility in the U.S.**

- American families spend more than 19 cents out of every dollar earned on transportation, an expense second only to housing, and greater than food and health care combined (Source: Center for Transportation Excellence)
- Congestion results in 5.7 billion person-hours of delay annually in the United States (Source: U.S. Department of Transportation)
- Drivers in one-third of U.S. cities spend more than 40 hours a year (an entire work week) in traffic that is not moving. (Source: Center for Transportation Excellence)
- The individual cost of congestion exceeded $900 per driver in 1997, resulting in more than $72 billion in lost wages and wasted fuel. (Source: U.S. Dept. of Transportation)
- A regular rush-hour driver wastes an average of 99 gallons of gasoline a year due to traffic. The average cost of the time lost in rush hour traffic is $1,160 per person. (Source: Center for Transportation Excellence)
- On-road vehicles are responsible for 44 percent of all carbon dioxide emissions in the United States, one-third of all nitrogen oxide emissions and one-quarter of all volatile organic compound emissions. (Source: Center for Transportation Excellence)
- 90 percent of Americans usually drive to get to where they need to go, averaging 87 minutes a day behind the wheel (Source: www.abcnews.go.com)
- 14 percent of Americans have changed or left a job because of the commute. (Source: www.abcnews.go.com)