



The Californian paradox: laboratory of urban mobility?

Minutes of the second hearing, June 10, 2009

Introductory Remarks

A tribute is paid to François Ascher, founder of the City on the Move Institute and chairman of its Scientific Council, deceased on June 8.

Taoufik Souami, Lecturer, Institute of Urban Planning

I am pleased to welcome you to this second session of the Climate Change, Urban Mobility and *Cleantech* programme. As you know, one-third of all greenhouse gas emissions are generated by the transport sector. While targets to reduce emissions have been set for the building industry, the situation is still very open with respect to the mobility sector. Mobility is the result of a complex chain of individual and political decisions, and interdependent factors. In order to produce more knowledge about this subject and to assess the first solutions proposed, IVM launched this programme dealing with climate change and Cleantech in United States.

Why should we be interested in what is going on in the United States? We have identified a number of differences between the European and US approaches. In Europe, the approach tends

to begin with public policy leading to national and then local laws and regulations. In the US, mobility issues tend to be dealt with very differently by different states. For instance, this leads to what we have called the Californian paradox: a state in which, on the one hand, the private car is sacred and, on the other, there is a very high level of activism and commitment in tackling environmental and climate change issues.

Why considering in particular Cleantech? We felt it would be of interest to consider the perspective of Cleantech – technologies that have been developed to ensure a positive impact on the environment. Cleantech raises the issue of whether we are talking about energy substitutes or genuine reductions in the consumption of energy. Cleantech offer the possibility to consider economic issue in another way: will Cleantech promote a new economic cycle? The idea today is to consider the US experience and approach, and compare that to the situation in Europe. This is why we are inviting a number of US experts to each of our sessions. We want to hear from each other about the interesting experiences and the future perspectives

I will conclude with a few comments on François Ascher, whose work is clearly reflected in this programme of public hearings. François Ascher's work was characterised by a curiosity that went beyond disciplines and beyond national borders. In these meetings, we are taking the exact same approach that was François Ascher's, that is, we are approaching the same issue from a number of different angles. This programme also bears François Ascher's hallmark in that we are raising these new issues in a public discussion. The aim is to trigger a public debate, and raise a number of questions that are often only dealt with by specialists. Finally, François Ascher was an advocate of very thorough and pleasant discussions that included bringing contradictory views head on. I would therefore encourage you all to question and “contradict” whatever you hear during the meeting today.

Niels Albertsen, Professor, Aarhus School of Architecture

I have with me some notes I took at the very first meeting I had with François Ascher on 2 June 1984 at his home. At that time he told me that he hoped, in the future, to go hunting for knowledge all over the world. That is exactly what he did, and that is what he succeeded in. It is also why we are all here today. The dialogue we undertook that day was the beginning of a very fine friendship. I miss him very much.

The Price of Parking on a Great Street

Donald Shoup

Professor of Urban Planning, UCLA

I deeply regret that I never met François Ascher but I greatly admired his work. He was certainly one of the most famous urban planners in the world today, enjoying a wonderful and well-deserved reputation.

In terms of greenhouse gas (GHG) emissions, California has a long way to go to meet its target of reducing emissions to 1990 levels by 2020. US motor vehicles alone consume one-eighth of all petrol used in the world. 60% of that petrol comes from overseas, and is paid for with borrowed money. In addition, the US has 18% more vehicles than it has licensed drivers. Transportation accounts for 40% of California's GHG emissions. Per capita, those emissions are at about the same level as Germany or the Netherlands, although levels in the rest of the US are of course much higher. California's targets for the reduction in GHG emissions include the requirement that those reductions be real, permanent, quantifiable, verifiable and enforceable.

I. GHG Reduction Strategies

Three main transportation strategies have been developed to respond to the commitment to reduce emissions.

- First, increasing the fuel efficiency of vehicles, with a target of 15 km per litre by 2016.
- Second, reducing the carbon content of fuels by 10% by 2020.
- Third, reducing the volume of vehicle travel. This latter goal is much more difficult and threatening to achieve.

Other measures include ensuring that car tyres are properly inflated. It has been estimated that this could eliminate 700,000 tons of greenhouse gas emissions per year. As often with GHG regulations, this is forcing us to do something we should have been doing anyway. It demonstrates the fact that there is therefore no conflict between such measures and economic growth. Similarly, pay as you drive motor insurance converts some of the fixed costs of owning a car into the variable costs of driving it. Congestion pricing involves creating high occupancy lanes that can also be used by solo drivers if they pay a toll. A finely tuned schedule of toll prices has been developed in Orange County to ensure that lanes are never congested. For example, the toll jumps from \$4.25 at 2.00 pm to \$8.50 at 3.00 pm. In this way, a smooth flow of traffic can be ensured, again greatly reducing the GHG emissions from stalled traffic.

II. Focus on Parking

A number of regulations are also related to parking which – surprisingly for many people – also has an impact on GHG emissions. California’s parking cash out law requires employers to offer commuters the cash equivalent of any parking subsidy offered to employees.

I would recommend three principle reforms in parking policy. First, it is necessary to charge the right price for curb parking, which means that prices should vary according to the time of day or the length of stay. Second, meter revenues should be returned to the neighbourhoods that generate them. This will make performance-based parking prices politically popular. Third, off-street parking requirements should be reduced or removed. The overall aim is to ensure there are one or two vacant spaces always available wherever you go in the city, to avoid the need for cruising for parking. The goal is to keep about 85% of parking spaces occupied over time. Occupancy sensors can be used to report on whether or not particular spaces are occupied. Mechanisms can also be implemented to monitor failure to pay parking fees. Finally, consideration should be given to transforming land used for vehicles (parking) into shared space for bicycles, cafés, and even real estate.

I will conclude with a reference to the Paris paradox. This city has some of the most valuable and expensive land on earth, and yet parking is incredibly cheap here. Residents, for example, can pay €2.50 for a week of parking. There is unlikely to be a better bargain on earth! It also means that many people are probably spending their time *looking* for a parking spot.

In all of this, we should be guided by Abraham Lincoln’s statement that, “As our case is new, we must think anew and act anew”.

III. Discussion

Benoît Lefèvre, Institute of Sustainable Development and International Relations

Thank you for that very interesting presentation. California has been courageous in trying to reduce its greenhouse gas emissions through many different initiatives. Reducing mobility is a taboo topic in many areas, as mobility is considered to be a generator of economic growth. California has, nevertheless, attacked this issue head on. The use of Cleantech is also to be congratulated, for example through the pay as you drive systems or the measures to ensure proper tyre pressure.

I would be interested in hearing about how California was able to succeed in launching such ambitious strategies. Where did the will come from to try and address these problems? What kinds of alliances have been formed in tackling these issues?

Donald Shoup

There is a tendency in the US to hide the costs involved in what we do. For example, petrol prices remain low for the consumer and we try to compensate for that by requiring certain levels of fuel efficiency for vehicles. In Europe, people pay more for petrol and there is therefore a direct link between their behaviour and the associated costs. As a result, the European public is pushing to buy fuel efficient cars. In contrast in the US, it is necessary to push manufacturers to develop fuel efficient cars.

I suppose that the paradox lies in why a sub-national state would have a desire to implement measures against global warming given that this is a national and even international issue. It is paradoxical for states and even cities to implement policies against global warming. There are a number of active green coalitions in California like the Sierra Club who are pushing these issues. It may be that *collectively* we have a desire to have something different, even if *individually* we all want to keep driving.

It should also be noted that our targets are set for 2020, and we are continuing to increase emissions in the meantime. This is still something that is being put off to the future. Nevertheless, given that the US is such a litigious society, the government can expect a myriad of law suits if it does not deliver on those commitments.

Jean-Pierre Orfeuil

I would like to say a few words about François Ascher who was a professor of contemporary society. I worked with him for many years and can testify to his enormous qualities. Like many great men and women, his innovative and precursory ideas and proposals have gone on to become commonplace and widespread, a wonderful tribute.

With respect to Donald Shoup's presentation, it should be noted that the concept of time management in road transport is not very widespread in France; it is however to be found in the area of air transport. The requirement that GHG reductions be real, permanent, quantifiable, verifiable and enforceable is definitely something that should be taken on board in France. These terms are often to be found in US or UK texts, but only very rarely in France – as demonstrated by the example of parking prices in Paris.

I believe that both France and California are dependent on their histories and cultures. In both cases, the tools that were used in the past to tackle pollution are now being used to tackle climate change. However, I believe that tackling climate change is completely different from tackling pollution and it is necessary to identify the new tools to enable us to do that.

The 2006 Strategy Growth Plan is a 10-year investment programme in the transport sector with a budget of \$250 billion. It would be interesting to hear more about how it was possible to

implement such an ambitious plan. In the context of technological innovation, we have been hearing many rumours about Google's entry into the transport service market. Is there any truth to these rumours? How do electric vehicles fit into the debate about electricity supply and demand? How will they be handled by electricity grids? Finally, how can all of these seemingly contradictory ideas be made to work together? It would appear that people in the US prefer an approach based on standards and regulations. I am rather surprised that they do not prefer an approach based on pricing instruments.

Donald Shoup

Regarding the debate on standards versus market instruments, people feel that the standards will be "paid for" by the car manufacturers, and this appears to be a costless commitment for voters. Again, this is due to the desire to conceal the cost of change from drivers. Perhaps that is why we have been able to succeed in our measures politically: we adopt policies that appear to be paid for by someone else. In addition, the standards only affect new cars, and people can therefore continue to use their existing cars.

There was a hope that technology would solve some of our problems. The use of high tech parking metres and sensor technology can help us to manage a system that has been mis-managed for such a long time. Clearly, it is not possible to manage what you cannot measure. France's economists are famous for developing mechanisms to manage electricity use, for example. It is only a matter of time before that is extended to parking and road transport. It is of course difficult to make people pay for something that used to be free. However, by putting the money collected back into the neighbourhoods, the system becomes acceptable. This may be more difficult to achieve in France where the fiscal system is highly centralised.

Regarding Google and transportation, Google has taken over the publishing of online public transport schedules. I am not aware of any forays into transport itself.

When it comes to electric vehicles, we are currently exploring the carbon content of the electricity used by electric cars versus the carbon content of highly efficient fuel cars. In this area, batteries are a challenge, and may in fact represent *the* great technological challenge of the 21st century.

Niels Albertsen

Measures were presented that are aimed at changing the behaviour of people within a physical environment that has *not* changed. Are there any links between the measures presented and the measures being undertaken in traffic planning and urban planning?

I was interested to see an approach based on many micro changes rather than one based on implementing a major, all encompassing scheme. I was also interested in the idea of transferring

parking fee revenues to the relevant neighbourhood. That is an idea I will be taking back with me to Denmark.

Donald Shoup

Denmark has a 187% sales tax on all new cars, in what is known as a three-for-one policy – you pay for three cars and you get one! That is obviously a way to change individual behaviour. In fact, Denmark has as many cars per capita as the US had in 1967. This has been achieved through the use of very different policies on the built environment and on taxation. François Ascher's approach was based on the idea that roads were for everybody. Clearly, the roads are now no longer for everybody. Any photograph of Paris would show that most of that space is taken by parked cars. When we consider the price of parking in Paris, I cannot think of a bigger contradiction between a goal and a practice.

Constructing buildings on parking lots is a great idea but one that has not yet caught on. It has however already started in some areas, and is likely to catch on in the near future.

When people look back on us 100 years from now, they will say, “what did they think they were doing?” To paraphrase Jane Jacobs, the Canadian urban planner, we are not a rich nation because of anything we have done; we have inherited our wealth. We cannot repay those past debts; all we can do is make gifts to the future. One of the gifts that we can make to the future is to do a better job of managing what we have. We do a terrible job of managing our roads and parking. In almost every country around the world, transportation is the most incredibly mis-managed sector of the economy. It is more Soviet than anything else, with low prices, shortages, traffic congestion, etc.

Michel Micheau

I would disagree with some of the vision that has been presented by Donald Shoup. The French system is not as centralised as many people believe. A different approach has been taken to parking in Paris: parking was not regulated through pricing but by the use of much tougher measures. For example, footpaths were broadened and spaces given up for bicycle rental, unleashing the wrath of car owners. The period 2001-2005 was very important for Paris in terms of changing behaviours, and this raises the question of how far we can go in pursuing such brutal policies.

It is not really possible to compare France, Denmark, and California as it is necessary to take into account the histories of our societies and our cities. Cities are much more dense and multi-use in France; in Copenhagen, a major political change in 2000 led to a radical change in urban policies. France is in fact seeing a shift towards the use of former parking lots for housing, with many of the major retailers joining forces with real estate companies. For all of these reasons, we should

be very wary of our pre-conceived notions. It is important to take a multi-faceted approach to transport issues, and each country will develop its own cocktail of measures based on its history and on what it wants to achieve.

Taoufik Souami

We will now open the floor to questions and comments from the public.

Dominique Larrouy Estevens, Architect and Urban Planner, France

I work on public space projects in conjunction with the public authorities, and am interested in what can be done with modern cities that were designed around the car. In our discussions we seem to have completely forgotten the idea of public transport. What is the connection between the different tools that have been presented and other types of mobility? What is the link between car mobility and other types of mobility?

Environment Ministry

Our parking policy was initially aimed at increasing the level of rotation in parking spaces. It was successful and we had more and more cars, and less and less residents. When the policy was changed, we had fewer cars and more residents. I do not consider that this was a failure. I remember that in the 1990s, we used to talk about having zero emission vehicles by 2005. Reference was made in the presentation to a 2020 target for cars with a fuel efficiency of 15km per litre, something that already exists in Europe. I find it difficult to understand such a decline in objectives.

François de Cabarrus, WWF France

Given that Los Angeles has set itself the goal of being the city with the lowest carbon emissions possible, what measures will be taken to move people from using individual transport to using public transport, and which forms of public transport will be focused on?

Laure Wagner, Comuto

We are interested in driving the car pooling movement in France, and are hoping to encourage the creation of dedicated parking areas for people who participate in car pools.

Donald Shoup

I agree that as land becomes scarce, many operators including retailers will begin to understand that land set aside for parking is very valuable. I believe this is a good development, and that cities and municipalities should do the same. Charging drivers for parking is an effective way of generating revenues for public services. Those revenues can be used in many different ways. In San Francisco, they are used to subsidise public transportation. In London, revenues from the congestion charge go towards public transport. In Colorado, the meter money is used to provide free public transit passes to all those who work in the area. It could also be used to finance Vélib-type bike rental systems. Most of the major US universities have entered into agreements with the public transport authorities so that the university ID card serves as a free public transport pass. The university pays the authorities to finance this, and the impetus for this arrangement came from student pressure.

Mobility in California

Elizabeth Sullivan

Co-Founder, Streetline Networks, US

I. City CarShare

City CarShare was set up five years ago in San Francisco. It currently has 200 vehicles available around the city, and 12,000 members who have access to a fleet of unattended vehicles 24 hours a day, 7 days a week.

Owning a car in a city like San Francisco is extremely costly in terms of costs, parking, maintenance etc. However, sometimes people do need a car, for example, for major grocery trips, picking up people from the airport etc. The CarShare programme is ideal for this type of intermittent use. Becoming a member is very easy, and reservations can be made on line or on the phone, for immediate use or later use. A key fob unlocks the relevant vehicle in the fleet.

The factors that contribute to the success of such car sharing programmes are high density, a mix of users, a good pedestrian environment, low vehicle ownership rates, an onsite parking ratio of less than 1 to 1, community support, and sustained and direct marketing.

We are also trying to make the connection between car use and land use. One result of this has been the unbundling of parking spaces from housing requirements.

II. Streetline Networks

This is a new utility for city infrastructure management. It arose from an issue we faced with respect to vehicle management under the City CarShare programme. We began developing a system that would allow us to know which cars were available and where. We then found that the system could be extended to monitor the entire city. This also meant we could change the entire system for urban management of the city. For example, it enabled us to vary parking prices according to supply and demand, to direct meter maids to areas where people were not paying fees, or to send text messages to individuals indicating where parking was available or providing information on their parking status.

30% of car traffic in US cities is generated by people looking for parking spots. Streetline proposes a system that enables a more efficient use of resources by providing information obtained from surface of embedded parking sensors, traffic sensors, meter monitors, etc. When we began monitoring, we found that there was an enormous level of unpaid parking, associated with a relatively low level of citations. An internet interface now allows people to see where parking is available. This same service is also available on cell phones. Similarly, meter maids receive real time information on parking violations. A test carried out in 2009 showed that, in this way, productivity and revenues could be increased by 400%.

The underlying principle is that obtaining a fair price from people for the use of what is a very expensive piece of land is a huge potential source of revenues.

III. Implications

When it comes to climate change, the area in which we can have the most impact is with respect to the over use of the private automobile. People in the US respond more actively to “choice” and lifestyle enhancement arguments rather than dire warnings and prohibitive laws. Both car sharing and real time urban management rely on the Trojan horse method to drive change.

In California, growth patterns do not support transit development. San Francisco has adopted ambitious greenhouse gas reduction goals, and does indeed have some of the highest transit ridership to work in the region, by far. Nevertheless, the city has now begun adoption planning for what is considered to be inevitable climate change. Given California’s well deserved reputation for innovation and getting behind new ideas, I remain hopeful about the future.

IV. Discussion

Thomas Lagier, Veolia Environnement

I am surprised to see the use of these incremental solutions while the underlying idea of using private cars is not questioned. There does not appear to be a real desire to move to massive public transport solutions.

Elizabeth Sullivan

We should distinguish between car sharing – which is a network of cars that can be used by individuals as they like – and car pooling – which involves a number of people sharing a ride. The approach that seems to work in the US is the stealth approach, that is, we do not clearly show our aims but try to make the process as fun as possible so that people want to do it. I came to France expecting to see the government being more of a leader in these innovations, getting everyone on board. It is very difficult to talk about densification in San Francisco. Worthwhile projects can be shot down by the not-in-my-backyard (NIMBI) element. I am however hoping that the arrival of a new federal administration will contribute to changing this.

Emmanuel Raoul, Environment Ministry

How do users of City CarShare find available cars in their neighbourhood? In Germany, this is done through a GPS system that posts the information on a web site. Regarding parking fines, has any consideration been given to the UK approach which uses car topped video cameras to identify cars that have not paid their parking fees? Finally, the figures show that people living in more dense areas own fewer cars. Has any work been done on whether their mobility is also lower than that of people living in less dense areas?

From the floor

What measures, if any, have been taken with respect to mobility for the elderly?

Caroline Lemoine, IAU, Île de France

Are there any plans to connect public transport system with people who take part in car sharing programmes?

Elizabeth Sullivan

Cars can be located in the City CarShare programme through a system similar to the German one. Information is available on cell phones or the Internet. Point of Departure PODS are also in operation in proximity to the cars themselves. A formal analysis of car mounted video cameras has not been carried out as this raises too many privacy issues. In denser areas of San Francisco, people have a very high level of mobility within the city. I am not aware of work that has been done on their mobility levels *outside* the city. Obviously, when you own a car there is an incentive to use it more often to justify the sunk costs.

Regarding mobility for the elderly, San Francisco is at the forefront of this area with its Paratransit van service providing access for the disabled and elderly. People can use the service any time of day or night, on demand or by reservation.

When it comes to connecting public transit systems and car sharing programme, this is not yet being dealt with in an optimal manner. For example, every train station in Switzerland has a car sharing hub but San Francisco is still very much behind Europe in this area.

Donald Shoup

Car mounted video cameras have a number of uses, only one of which is identifying over parked cars. They are used in the UK for detecting stolen vehicles, outstanding parking tickets etc. For the elderly, a common policy is the use of taxi vouchers for people over 65, which can be cheaper than setting up a Paratransit-like system. It should also be noted that many people today feel there is too much of an emphasis on *mobility* and not enough on *accessibility*. People living in dense urban areas have access to much more than those living in suburban or rural areas. Focusing on accessibility could be one way of tackling the problem of excessive greenhouse gas emissions.

Taoufik Souami

I would like to thank our two speakers for their excellent contributions today, together with all participants. Our next sessions are being organised and we will be providing more information shortly.