

1. Forum Meetings



The Mobility of Tomorrow: Theses and controversies

May 26th & 27th, 2011 at the Maison Rouge (Paris)
Actes

May 26th & 27th, 2011
at the Maison Rouge (Paris-Bastille)

with 110 mobility scholars and practitioners

These first “Theses and Controversies” were also the occasion for an exhibition of books by artists and photographers whose work is founded on mobile artistic processes.

Introduction

Introduction by Bernard Emsellem (Mobile Lives Forum) and Vincent Kaufmann (sociologist, LaSUR, École polytechnique fédérale de Lausanne, Mobile Lives Forum)

Philippe Bloch: Can you tell us what we’ve come here to do? What is the aim of the Mobile Lives Forum?

Bernard Emsellem: The purpose, perspective and idea of the Forum is to consider the fact that mobility is changing dramatically today. At SNCF, we need to encourage reflection on this observation and to understand mobility in order to take action. We are in a period where mobility is changing very quickly, so we need to understand quickly as

well. This is what led to the creation of this Forum, co-led with Vincent Kaufmann. The Forum is based on the premise that having a mix of researchers, artists and transportation practitioners and ensuring that the blending of these three perspectives allows for original advances. So, we tried to create a different way of doing this. As you can see, the Forum is atypical. As it is an experiment - at its core and in terms of its implementation - we would very much like to get your feedback at the end so we can figure out what worked and what needs working on.

Philippe Bloch : Can you also tell us a bit about the Forum's Steering Committee?

Bernard Emsellem: We called it a Forum because we wanted to foster debate outwardly and with the outside world. I'm not just talking about outside SNCF, but from the outside with regard to users. We would like to create experimental devices that people utilize to see what these devices can become and how. A scientific foresight committee is necessary in addition to this experimental aspect. We are fortunate to have Vincent Kaufmann chairing it.

Philippe Bloch: I was thinking again about the title " The mobility of tomorrow: theses and controversies ." Does that mean that we can debate? Is this the main goal?

Bernard Emsellem: The idea is to debate. Chances are that there are platitudes, habits and firmly-rooted convictions in the world of mobility. What we hope for is progress, but also to debate in order to progress.

Philippe Bloch: Vincent Kaufmann, how have you worked with the Forum?

Vincent Kaufmann: It's a very stimulating experience because it's hybridization in the fullest sense of the term, which I greatly appreciate. I'm a sociologist, and nothing bores me more than conferences where sociologists discuss strictly sociological issues. The confrontation of different viewpoints, the relationship of other fields of research to the world as well as to the art world and the world of the SNCF interest me. For me, creating a dialogue between these worlds is something tremendously exciting. I hope our discussions will be lively, because the goal is to have controversies and to debate.

Session 1: From movement to mobility: what has changed and what will

Speakers:

- *Catherine Morency (engineer, École Polytechnique de Montréal and a member of the Mobile Lives Forum's Steering and Strategic Foresight Committee)*
- *Vincent Kaufmann (sociologist, LaSUR, École polytechnique fédérale de Lausanne and Mobile Lives Forum)*
- *Bernard Emsellem (Mobile Lives Forum)*

Overview

The common theme that ran throughout this discussion was that of changes in travel practices. What are these changes? How can transportation operators cope with them? How can we incorporate them in travel models?

Vincent Kaufmann emphasizes the magnitude of the changes linked to transportation and telecommunication systems. He reminds us that, according to mobility turn theories, the way people move has a tendency to change the world. As mobility is at the heart of our modern societies, we cannot, according to him, settle for a narrow definition of mobility as an ensemble of movements. He prefers to define mobility as change: "Being mobile means changing roles, positions or functions. Therefore, there is a spatial dimension, but there is also a social dimension in the broader sense." In this perspective, the individual is at the heart of the reflection: he or she could very well use technical transportation systems to *not* be mobile, by increasing their travel to maintain residential ties, for example.

With such changes in transportation and information systems, SNCF is obliged to rethink its priorities. The growing importance of the concept of multi-modal travel has led the operator to question the pertinence of its actions. When other modes of transportation are less costly, should SNCF nonetheless create an offer, even though it will be financed by the taxpayer? Should equality in terms of access to transportation services, which is a public service mission, be based on geographical criteria (as is currently the case) or social criteria? Kaufmann reminds us that to this issue can be added differences in users' skills to access the offer available to them.

Intermodality has likewise become a concern for the company. Intermodality means the organizing of physical interfaces, information and rates between different modes of transportation, which supposes a minimum of coordination between the operators of these different modes.

Furthermore, environmental concerns lead to new constraints, such as the inclusion of "soft" modes in the management of interfaces, for instance.

One major development for SNCF is that it now tries to see travel *as a whole*, and not just movement between two stations. Travel is here to stay, and the way people use their travel time has become one of SNCF's focuses. Moreover, new information technologies are likely to cause major upheavals for SNCF, particularly regarding its fare policy.

Modeling is an essential decision-making tool for transportation actors. Thus, at SNCF, the development of new rail lines (number of tracks, frequency of service, etc.) is based on traffic forecasts that themselves are based on models.

And yet, these models struggle to incorporate the mobility changes that have taken place this past decade. The models create different scenarios based on trends and their assumed evolution. Vincent Kaufmann reminds us that empirical research is critical; sociological theories like the mobility turn cannot measure or quantify phenomena, which makes modeling impossible. According to him, this is the greatest weakness of these theories. Catherine Morency explains that, as experts cannot yet model mobility, they try instead to model activities schedules, which means understanding how people organize their activities schedules and coordinate travel around them.

Classic modeling approaches nonetheless have their limits. For example, modal choice modeling is based on the public transportation-car combo. Active (walking, cycling, etc.) and alternative (bike sharing, car sharing, etc.) modes cannot be included in these models. Incorporating the dimension of “well-being” in models is another challenge for researchers, as the hypothesis of an individual motivated by gain alone is unsatisfactory to sociologists. Our societies are teeming with aspirations and contradictory values, which produce a plurality of practices and representations. Kaufmann explains that this is a key challenge for modeling: “We are in a world where people with identical incomes and similar household composition have aspirations and make choices that are radically different.” Which leads Catherine Morency to conclude that “[w]e must include uncertainty in the choice. We choose the mode that is best adapted depending on the conditions, circumstances and objective. Which means that when we make a model, there cannot be only one answer. And yet, there has to be an answer.”

Changing current models is impossible if we are not able to gauge relevancy. By offering new longitudinal data (GPS tracking or the use of smart cards on public transportation, for instance), new technologies open up tremendous potential in this area. But using this data requires significant investments that to date have not been made.

Bernard Emsellem goes even further in his thinking; he proposes completely overhauling the way we try to satisfy the transportation demand: “I don't know if we should try attempt to produce the “right” answers to the demands or to create answers from among which people can make their own.” In a similar perspective, transportation practitioners are considering opening their data to the general public, the goal being to allow everyone to compare the possibilities offered by different modes of transportation for a given trip to allow for a modal choice that satisfies criteria that were not pre-determined by professionals, but by the user himself at a given moment. This is a real turning point that questions not only the role of transportation professionals, but their separation into separate branches according to the mode.

Some points for discussion raised by the exchanges:

- What meaning should we give to the term *mobility*? Its meaning varies from speaker to speaker, ranging from all physical movement to the link between this movement

and people's activities schedules to, more broadly, a change in space – be it physical, social or mental.

- Thanks to ICTs (information and communication technologies) , we can find out whether someone took the subway two stops or ten. Should the same fare be applied in both cases? Should users pay proportionally for their use or, on the contrary, pay more for taking the subway when they could have walked?
- Can we incorporate the subjective criteria of modal choice into existing models?
- Can carpooling, with its various constraints including the need for mutual trust between users, really be developed?
- Is not the rationale of the economic choices of operators like SNCF inconsistent with the rationale of choices for society, which is based primarily on social equality?

Session 2: Becoming mobile

First part

Session led by Yves Crozet (Economist, LET, University of Lyon, IEP)

Speakers:

- *Iragaël Joly (economist, GAEL, Grenoble-INP, INRA)*
- *Detlev Lück (sociologist, Federal Institute for Population Research)*
- *Sven Kesselring (sociologist, Technical University of Munich)*

Overview

This session, which specifically explored highly mobile individuals, was organized around the presentation of three studies that looked at the increases in the travel times of these individuals, the interrelationship between professional mobility and family life and the new forms of mobility brought about by ICTs (information and communication technologies) respectively.

The first study looked at the temporal dimension of mobility. Iragaël Joly presented the findings of his research, which focuses primarily on travel time and their evolution, and reminded us that Zahavi's hypothesis is at the heart of this field of research.

The Zahavi hypothesis is derived from the hypothesis that the average length of daily travel times in different cities and countries around the world can be plotted at narrow intervals: regardless of the country or city studied, the average daily travel time of

residents is approximately one hour (50-90 minutes depending on the case). The Zahavi hypothesis, established in the early 70s, states that there is a constancy of travel time budgets at the city scale.

And yet we have seen an increase in travel times in Europe in the past decades. This increase is largely underpinned by the increase in the proportion of persons whose daily travel time exceeds 100 minutes.

This change is important because it undermines Zahavi's hypothesis. Up until now, it was possible to explain urban sprawl by an increase in travel speeds which, given the constancy of travel time budgets, led to an increase in distances traveled. The question that now arises is that of the appropriateness of policies whose goal is to allow individuals to increase their speed travel in order to reduce their travel time budgets. If it is merely a question of saving time for people who are going to use it for other recreational activities and use travel time as an opportunity to do these activities, we are far from the original goal.

The study presented the different means individuals have for managing their mobility (i.e. transportation modes, itineraries, schedules and residential locations [with a trade-off between transportation budget and housing budget]) and, what is even more unusual, their activities. Within people's activities schedules, the time spent on non-mandatory activities and the travel time required to do them are subject to trade-offs and adjustments. The travel time devoted to shopping and leisure activities increases with the duration of the activity, but differs according to the activity. This activity-based approach assumes that transportation is a derived demand, meaning that travel itself is not a goal, but a necessity in order to do a particular activity at a given point in space. This interlocking complicates mobilities modeling. Moreover, the interactions between activities at home and travel and "embedded" activities and travel, while still poorly measured, provide interesting opportunities for future research.

Detlev Lück then presented his study Professional mobility and family life in Europe . Conducted in six European countries, this study looks at professional mobility, especially that of highly-mobile individuals, and how it affects their personal lives.

The study found that, across the six countries studied, 16% of people on average are mobile (according to the criteria used). Some differences were observed between the different countries, with notably less mobility in the smallest countries. Europeans tend to be both sedentary and commuters. They are strongly attached to the place where they grew up. France was the country with the greatest reluctance regarding mobility. In Germany, work-related mobility is more accepted. Mobility is likewise valued in Switzerland because it is associated with professional advancement.

The least mobile groups were 25-43 year olds, university graduates, workers with permanent contracts and, to a lesser extent, men. In fact, women's mobility varies considerably depending on their professional and family situations. Women without children who work full-time were almost as mobile as men.

Reconciling work and family life is difficult, especially for women. The most mobile are less likely to have a spouse and children. Meanwhile, people with children, particularly those between 25 and 34, were much less willing to move than others.

The mobility of both spouses had an impact on the division of domestic tasks and childcare. In general, women spend much more time on these activities than do men.

When the male partner is mobile, the difference tended to be even greater, while the division is more balanced when the woman is mobile.

Detlev Lück feels that employers should be sensitive to this problem, to facilitate greater harmony between employees' professional mobility and family life.

Meanwhile, Sven Kesselring presented his research on the relationship between mobility and ICT. He found that these new technologies are increasingly used by individuals to be mobile—the very definition of mobility that has been transformed by ICT. Thus, there are different forms of mobility, as demonstrated by John Urry:

- The physical movement of persons;
- The physical movement of objects;
- Imaginary movement through images, memories, books and, more recently, new technology;
- Movement through messages and communication;
- Virtual movement via the Internet.

Nowadays, virtual travel can also take place during physical travel thanks to Smartphones and laptops. Thus do different forms of mobility combine and interlock.

The Internet is often seen as an obstacle to social integration and interaction. In truth, new virtual mobilities allow individuals to stay in touch no matter where they are. In this new form of mobility management, geographical location becomes less important.

One participant, however, noted that given that electronic means of communication strongly encourage endogamy, one can question whether they are really mobility tools.

Iragaël Joly stresses that it is now up to researchers to predict how individuals will use new technologies and the impact it is going to have on physical travel. Today it appears that new communications technologies are not a substitute for travel, but rather provide an incentive. We can therefore assume that mobility in all forms will increase.

Some points for discussion following the exchanges

- Should we continue to work toward increasing the speed of travel if the free time gained simply allows individuals to try and move even more?
- Is aggregating the different forms of mobility (physical movement, residential mobility, social mobility, etc.) – which today are not valued in the same manner today – really operational? Does it really make sense?

- Should we consider specific measures that will enable women with children to be professionally mobile?
- Can virtual space truly replace geographical space?
- If ICTs facilitate and stimulate physical mobility, then are those who are excluded from the digital revolution condemned to immobility?

Mobility

For the Mobile Lives Forum, mobility is understood as the process of how individuals travel across distances in order to deploy through time and space the activities that make up their lifestyles. These travel practices are embedded in socio-technical systems, produced by transport and communication industries and techniques, and by normative discourses on these practices, with considerable social, environmental and spatial impacts.

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Movement

Movement is the crossing of space by people, objects, capital, ideas and other information. It is either oriented, and therefore occurs between an origin and one or more destinations, or it is more akin to the idea of simply wandering, with no real origin or destination.

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Car sharing

Car sharing is the pooling of one or several vehicles for different trips at different times. Three types of car sharing exist: commercial car sharing, peer-to-peer car sharing and “informal” sharing between individuals.

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Residential mobility

Broadly speaking, residential mobility refers to a household’s change of residence within a life basin.

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