

---

# **Architecture and Interviews for Future Mobilities**

**Jade RUDLER, EPFL LAC**

**Conference paper STRC 2015**

**STRC**

**15<sup>th</sup> Swiss Transport Research Conference**  
Monte Verità / Ascona, April 15-17, 2015

## **Architecture and Interviews for Future Mobilities**

Jade RUDLER  
EPFL LAC  
Lausanne

Phone: +41 21 69 34878

Email: jade.rudler@epfl.ch

### **Abstract**

The aim of this research is to propose new tools and spaces for creating living conditions that do not require the use of a car. By conducting two qualitative surveys (one among mobility experts and the other among Swiss residents), we were able to identify new affordances adapted to users' demands for less intensive car use using architectural tools. Increasing actors' potential with more accessible affordances offers them alternatives to the car. To explore places' and inhabitants' potential for change, we will focus on how to translate individual discourses into architectural projects aimed at improving mobility conditions for users.

This paper presents the intermediate results of our resident survey based on our interpretation of inhabitants' discourses. How to translate these narratives into potential affordances?

Social science tools and architectural tools and skills are required to work at both the local and territorial scales. The method presented here proposes ways of reducing car use based on users' desires, practices and projections, and of helping planners develop concrete projects for mobility in the future.

### **Keywords**

MOBILITY FUTURE, AFFORDANCES, POTENTIAL, ARCHITECTURE, CAR ALTERNATIVES

## Introduction

This paper presents a study led as part of the FNS Sinergia *PostCar World* research project, the main question of which is: “What is a post car world?” The project explores the possibility of living in a car-less world and the conditions necessary for bridging today’s societies to a post-car world (PCW).

The research presented in this paper as part of the social science portion of the project aims to develop mobility futures and alternatives to car use in particular. Our research material is comprised of qualitative interviews prepared and conducted by sociologist Alexandre Rigal and architect Jade Rudler. This explains why the approach includes tools from both the social sciences and architecture. The intermediate results presented here represent 18 months of the project’s implementation.

In this paper, we will focus on users’ attitudes regarding their experience of space. Our interest here is users’ skills, including changes in their mobility as well as their reasoning and justification for using one transport mode versus another. Our goal is to understand why people use cars, as well as the frustrations and barriers experienced by non-car users.

In this paper we will focus on how to distinguish narrative “clues” that can then be translated into alternatives to car use. This will allow us to devise new tools, practices and spaces to accompany mobility changes. This creative portion of the project is in progress and will be presented in the next paper<sup>1</sup>.

---

<sup>1</sup> Rudler Jade, Rigal Alexandre, *Architecture and potential affordances for futures without car use*, a paper that will be presented at the *Association of American Geographers Annual Meeting* in April 2015

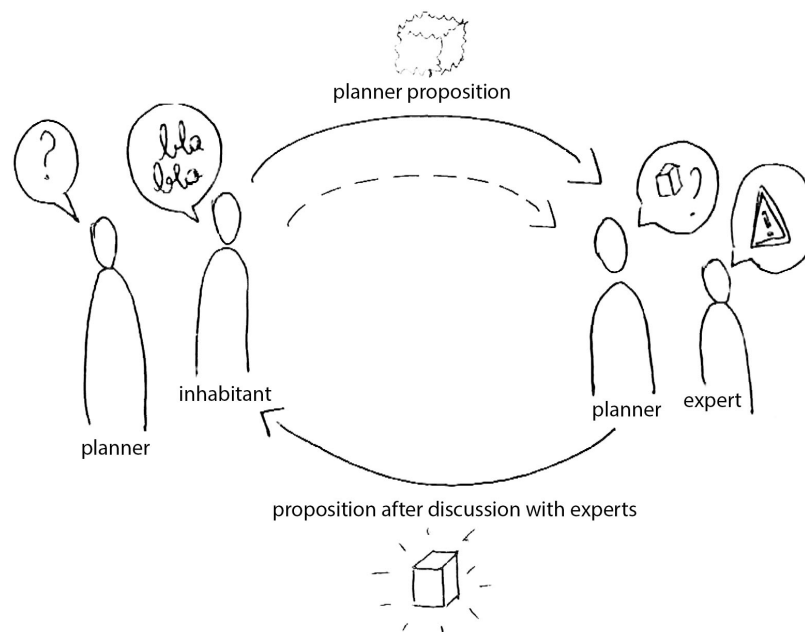
# 1. Methodology

The first stage involved conducting a qualitative, semi-directive survey of Swiss inhabitants.

The paper focuses on this first stage and an initial interpretation of respondents' discourses. In *Fig.1* it is represented as the period between the resident survey and the initial planning proposal.

As shown in *Fig. 1*, the experts will offer us suggestions for improving our initial interpretation, which we will then present to respondents to ensure that our interpretations correspond with the ideas and feelings they expressed. The proposal may then be modified based on their remarks. The experts will then assist us in making these potential affordances accessible.

Figure 1 Methodology process



Source: author

We have already interviewed approximately twenty people. We will continue the interviews until we feel we hear the same arguments being mentioned by other respondents, at which point we will end the interview process. The sample is distributed over all types of urbanity, but in only three areas of Switzerland in order to identify different uses of the same territory.

By interviewing people in Zurich, Lausanne-Morges and Lugano, we are able to represent the three linguistic regions of Switzerland.

Our goal is to obtain the greatest possible variety of projections of future relationships to the car, territories and mobility practices.

Concerning the sample, we selected a group that has very different ways of travelling and relationships to the car. We interviewed people without cars who would like to have one and others who would not, individuals with one or several cars, etc.

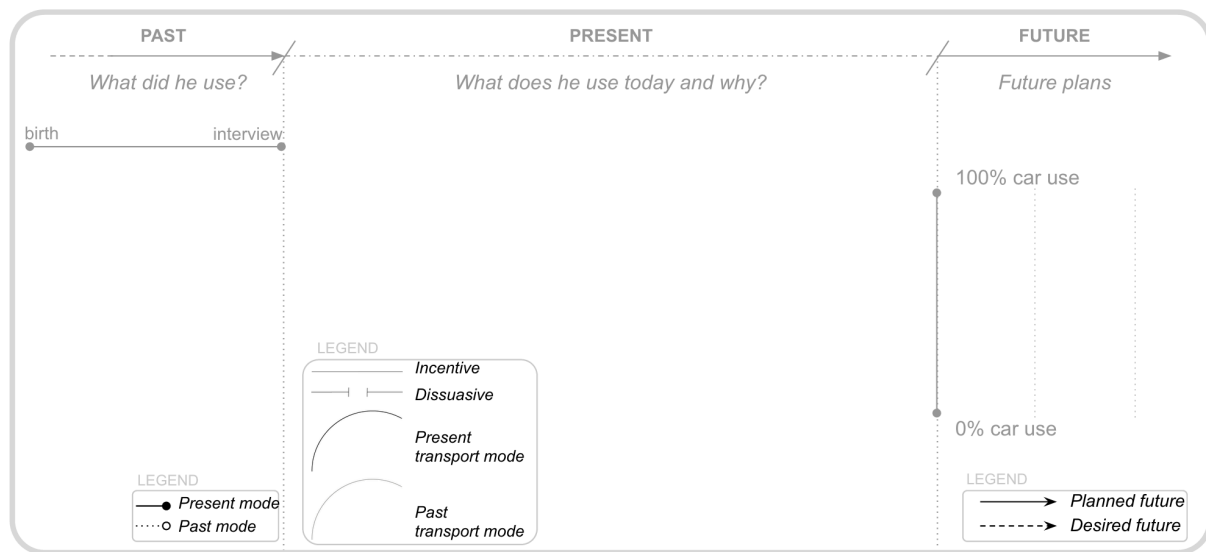
The shift from discourse to actual affordances is possible through a combination of two elements: interviews and a spatial analysis of the spaces of their everyday lives. We will now provide some more details about the respondent interviews before briefly explaining the content of the spatial analysis. These two elements will allow us to imagine new potential mobility affordances for mobility.

## **2. Users Profiles**

The interviews lasted 1-2 hours and were divided in three major themes:

- respondents' mobility practices
- their expectations (do they want to change their mobility practices?)
- their plans (what do they anticipate in the future? What are their desires? How do they imagine their environment without car?)

Figure 2 Respondents' profile grids



Source: author

In order to obtain a broader overview of the information collected during the interviews, we developed a profile divided into three parts along a timeline:

- PAST: what kind of transport modes did respondents use in the past?
- PRESENT: what type/s do they use today? why? rate respondents on a scale from 0 to 100% in terms of car use for mobility.
- FUTURE: what are their expectations for the future in terms of mobility? What plans, if any, do respondents have?

## 2.1 Mobility history: which transport modes do respondents use?

This first part of the profile represents changes in respondents' mobility practices over their lifetimes. It shows the transport modes regularly used now and in the past.

Changes in transport modes can result from a more general change of lifestyles (marriage, birth of a child, a new job, etc.) or from the accumulation of dissuasive reasons for using one mode and/or incentive reasons for using another. These factors become evident in the second part of the profile, where present and past transport modes used are described.

Though in actors' movements may appear rigid or automatic everyday life, the ways actors move changes over their lifetime. To illustrate users' skills in terms of mobility, we propose to look at their development based on their mobility histories.

## 2.2 Relationships to the car and other modes: why these practices today?

This second part of the profile is divided in three parts. The first is the present time in the mobility history, which lists all current and past transport modes used by respondents.

The second part provides an overview of respondents' relationships to transport modes mentioned. The black circles in *Fig. 2* represent current modes, whereas grey circles represent ones respondents tried but did not continue using. This helps us understand respondents' relationship to each mode and allows us to compare and identify paradoxes between purported reasons for using one mode over of another. We also were able to determine whether or not respondents are satisfied with their practices and what elements they would like to change. The information obtained help us understand the many reasons for which people use different modes.

The third part indicates respondents' use of the car for daily mobility on a scale from 0 to 100%, offering clues as to how willing they might be to live without a car.

## 2.3 Expectations for the future: plans and desires

The last part of the interview and analysis of respondent profiles concerns futures, and is also divided into three parts:

- How do respondents feel about changing their mobility in the future?
- What do they want in terms of mobility and in general?
- Can they imagine life without car? If so, how?

This part identifies respondents' needs and desires in terms of mobility, as well as their desire (or not) to live without car and in what conditions.

The information provided by respondents regarding the future is synthetized by two arrows (*Fig. 2*), one of which represents their future plans (unbroken line) and the other their desires (dotted line).

## 2.4 Profile examples

We will now illustrate how to use the profile grid using three examples from our survey.

Based on the interviews, our goal was to determine whether or not respondents would be willing to live without car and why. We also wanted to know under what conditions they thought it would be possible and desirable to live without a car.

Respondents who expressed the desire for a “post-car” lifestyle, those without a car and those who would like to decrease their car use will meet each other during focus groups that we will organize. We will present them with different scenarios, images and propositions for alternatives to car use, and ascertain whether or not we have correctly understood and interpreted the obstacles and frustrations they currently face. Could change result from the kind of affordances available to them? We will envisage new possibilities and discuss the validity of their materialization.



## Example 1: Profile of W.D.

### Past

Until he got married, W.D.'s mobility history included individual transport modes (bike, moped, and finally a motorcycle). He then sold the latter, bought a car and moved to an area with public transport services. He uses public transport to get to work and his car for other trips.

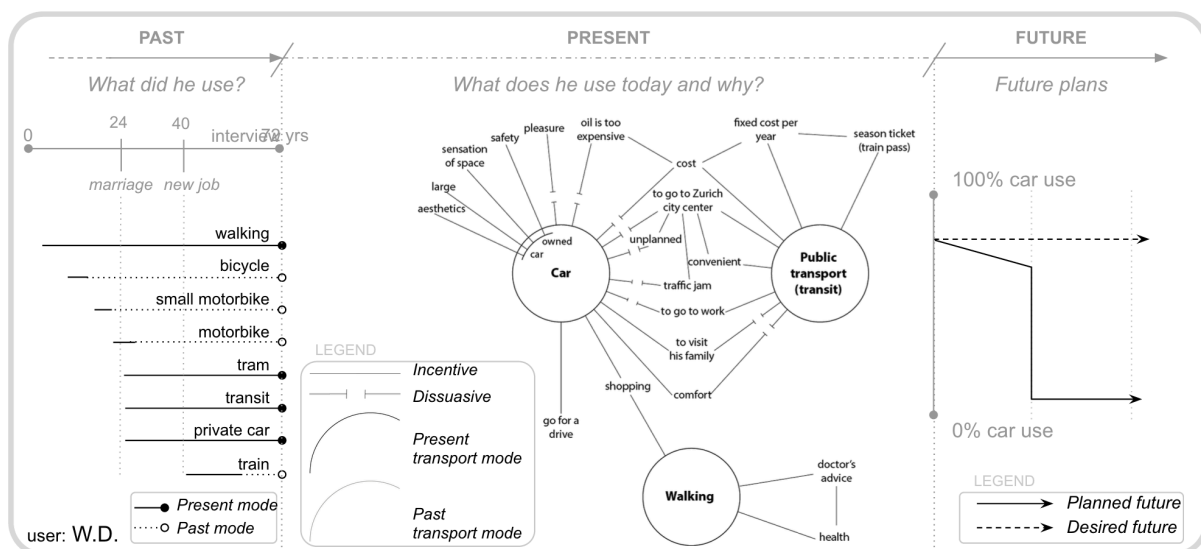
### Present

Today, W.D. walks, drives (an Audi A6) and takes public transport. In his profile he mentioned both positive and negative aspects of public transport and driving. His choice of transport mode depends on the situation. For instance, he takes public transport to get to Zurich center because of traffic and his car to visit his children because it is faster.

### Future

The dotted arrow (Fig. 3) shows that W.D. would like to maintain the same practices as today. He's 72 years old and preparing for life without driving car: he has moved to the village centre, close to shops and public transport. This residential location change has led to changes in his mobility practices: he walks more often to do his shopping.

Figure 3 Profile of W.D.



Source: author

## Example 2: Profile of C.E.

### Past

Because of a physical handicap, C.E. cannot drive. She could have passed her driver's test but was afraid to cause an accident. She tried a scooter and quickly abandoned the idea for the same reason. So now she walks and takes public transport – especially the train – for most of her travel.

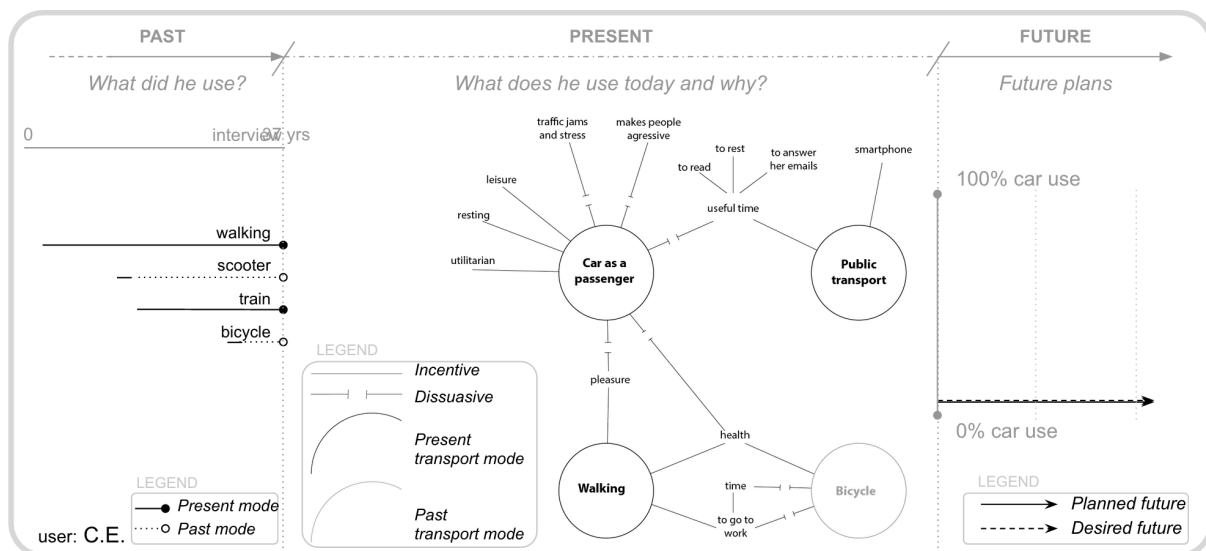
### Present

C.E. has organised her life around not having a car. It is a two-minute walk to her job, a train station and local shops. For other activities, she takes the train. On rare occasions when she needs a car, a family member or friend gives her a lift.

### Future

C.E. has never had a car and appreciates life without one, and thus has no intention of making any changes.

Figure 4 Profile of C.E.



Source: author

### Example 3: Profile of P.D.

#### Past

P.D. walked, biked and used public transport until the age of 30, when he obtained his driving license, at which point the car became his only mode of transport. Now he also owns a dog, with whom he cannot bike and who does not like public transport. This reinforces his decision to drive.

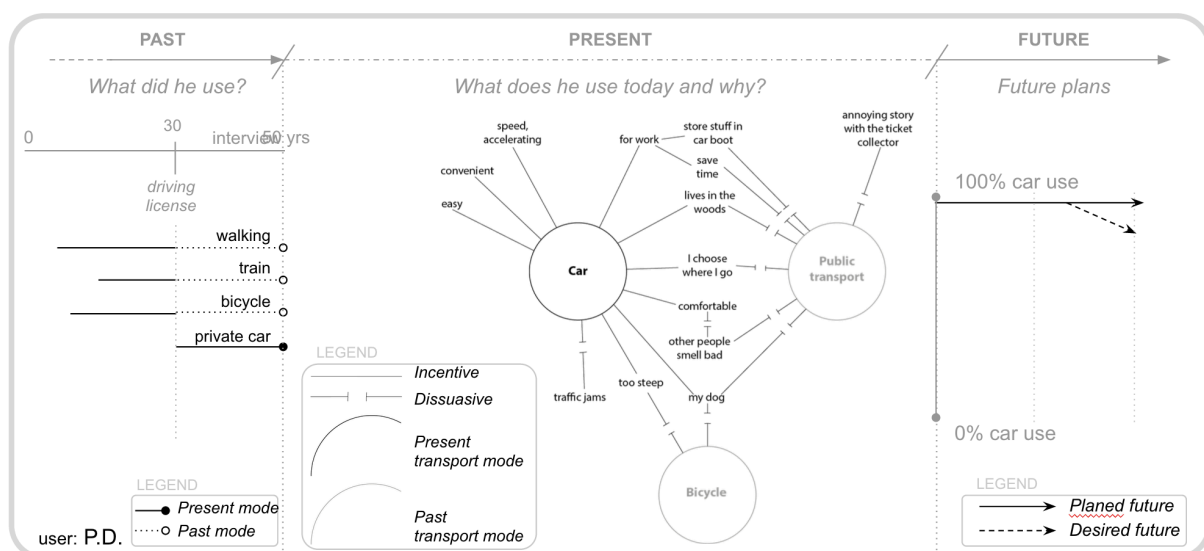
#### Present

P.D.'s relationship to mobility is largely based on comparisons between the car and other modes. He explains why he chooses to use his car exclusively.

#### Future

P.D. explained that he drives to work because having a dog does makes taking public transport or biking impossible. However, although he does not plan to make any changes, he says he would like to drive less. His profile is interesting in that he says he wants to change his practices but cannot see how.

Figure 5 Profile of P.D.



Source: author

The information in the respondent profiles offer us elements with which to envisage new possibilities. Nevertheless, simply envisaging relevant alternatives to car use does not give us information regarding the context. In order to envisage possible affordances, we must have in-depth knowledge of respondents' spatial environment, which will allow us to translate their discourses into new possibilities.

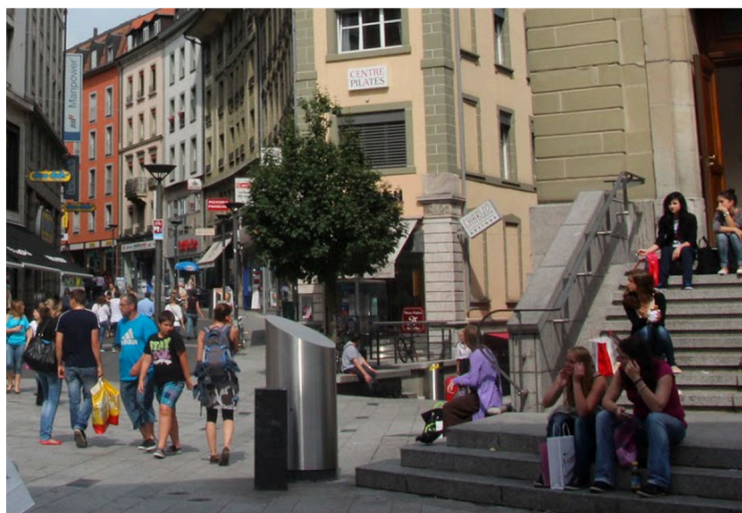
### 3. Spatial analysis

Potential affordances for future mobilities can be found in the link between users and their living environments. To turn discourse into potential mobility affordances, we must understand respondents, their living contexts and the links between the two.

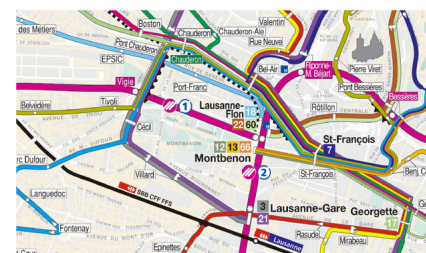
A spatial analysis was conducted for each of the three areas of our research field. First we conducted a sensory analysis by going to the places described in the interviews to get a better understanding of the ambiance and existing affordances.

Then we did a statistical and cartographical analysis. We listed the existing possibilities (services, public transport, accessibility, etc.) to identify hidden potential.

Figure 6 Spatial analysis



Sensory analysis ([www.boalingua.ch](http://www.boalingua.ch))



Public transport network

([www.tl.ch](http://www.tl.ch))



Accessibility in public transport

([www.swisstopo.ch](http://www.swisstopo.ch))

Source: author

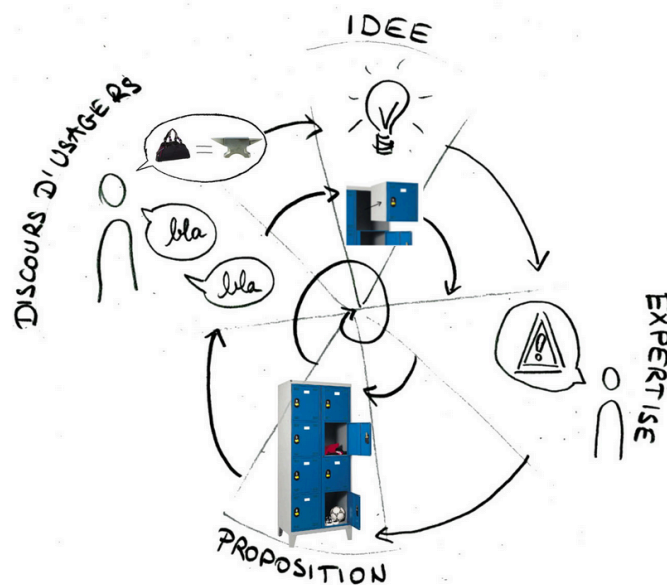
## 4. Architectural project

What could encourage respondents to live without a car? Under what circumstances might it be advantageous? Architectural tools were used to develop new possibilities and reveal potential affordances that might improve the possibility of life without a car.

We devised a wide range of potential urban planning affordances. For instance, lockers in train stations where people could leave their sport kits that could be rented only an annual basis and moved from one station to another depending on the individual's needs. Another example is facilitating the transport of bikes by train to improve the continuity of the journeys. Home delivery of grocery shopping is another possible solution, etc.

We will develop a personalized range of opportunities for change for each respondent. This part of the research will be undertaken in the upcoming months.

Figure 7 Example of a project translation based on discourse



Source: author

## Conclusion

As part of the *PostCar World* project, this field study provides elements for understanding mobility practices as well as offering indications of our Swiss sample's desire for change in terms of mobility.

The first step was to ask mobility and planning experts their expectations and feelings concerning changes in mobility. We shared our conclusions on this in the last STRC in 2014: experts seem to have difficulty envisaging the transition toward a PostCar World<sup>2</sup>.

The second step is the one presented here. We interviewed inhabitants in order to understand their relationship to mobility and their expectations for the future. As the study is still in progress, we have presented only a small sampling of our results here. The interviews revealed multiple reasons for respondents' modal choices, as well as their relationship to the car and their expectations and desires with regard to mobility.

Our next step will be developing scenarios wherein the alternatives developed were accessible and to present them to respondents in order to further discuss our interpretation of their discourses.

At this stage we have noted that each respondent's relationship to the car involved a combination of different factors that either encouraged or discouraged its use. We saw that respondents often do have the skills necessary for life without a car, and that their environments offer different possibilities for doing so. Yet, despite these facts, they still resort to its use. We can therefore conclude that technical solutions alone do not appear sufficient for generating a change in mobility practices and that, in order to conceive of mobility futures, we must take into account all of the factors that motivate people to use the car.

---

<sup>2</sup> Rigal, A., Rudler, J. (2014). *Post-Car World: Why Laugh at Change?* Paper presented at the 14th Swiss Transport Research Conference, Ascona, May 2014

## References

- Gibson, James J. 2013. *The Ecological Approach to Visual Perception*. Psychology Press.
- Hertzberger, Herman. 2001. *Lessons for Students in Architecture*. 010 Publishers.
- Joseph, Isaac. 1995. *Prendre place: espace public et culture dramatique : colloque de Cerisy*. Editions Recherches.
- Kaufmann, Jean-Claude. 2011. *L'entretien compréhensif*. Armand Colin.
- Kaufmann, Vincent. 2008. *Les paradoxes de la mobilité : bouger, s'enraciner*. Vol. 46. Lausanne: Presses Polytechniques et Universitaires Romandes.
- Rapoport, Amos. 2005. *Culture, Architecture, and Design*. Locke Science Publishing Company.