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Report - Synthesis

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Why don't we change our behaviours?
Acceptance and hindrance to a change of behaviours.
International comparison: The case of Nagoya.

Context and methodology

My thesis takes place in the concerns about the harmful effects of the continuous growth of car use, as regards social, environmental and urban aspects, in the Greater Paris region. There seems to be a consensus among experts about the urgency of actions to reduce car use. However, in spite of the implementation of various political measures (increases in fuel prices, car-parking policies, etc.), the expected change in mobility behaviour is long taking place.

My purpose is to examine why most people are not prepared to refrain from using cars in urban areas and what would make them change. I attempt to identify limiting factors to behavioural change and, thus, to suggest lines of action so as to create favourable conditions for the adoption of more sustainable mobility practices. My approach is transverse. It embraces three usually separately treated topics: environmental awareness, attitudes towards public actions, and representations and practices of mobility.

This research takes a sociological perspective with the use of qualitative methods. Information is collected by means of semi-directed interviews. The aim is not to give a representative picture of the population but to show a diversity of occurrences. This qualitative method should bring complementary insights to those provided by quantitative studies.

A field study was made in the Great Paris Region during 2005. Around 40 people were interviewed. A diversity of situations was represented as the mode used (automobile, public transport and bicycle) and the main types of trips made (Paris-to-Paris, Paris-to-suburbs, suburbs-to-Paris, suburbs-to-suburbs).

Some international comparisons were considered at the beginning of the research according to the same methodology and interrogations.

The SAKURA cooperation between France and Japan gave me the opportunity to make the first comparative investigation. This mission took 3 weeks: 2 intensive weeks in Nagoya and a few days in Tokyo.

The city of Nagoya was chosen because of the hosting laboratory facilities, and because its context is quite similar to the one in Paris. Its spatial organization which gives a lot of space to the car raises a first point of interest. The city also symbolizes the car by the presence of famous manufacturers like Toyota or Mitsubishi. Nagoya City is much more similar to the Greater Paris Region in terms of car modal share (N C : 67.7% ; G P R : 68%), despite a more important surface and a lower density in the Greater Paris Region.

Another interesting feature is the ecological commitment of the city, with the implementation of drastic measures concerning waste since 1999¹, as well as the organization of the Aichi World Expo 2005, dedicated to the sustainable development².

The objective of this investigation was to look further into our analysis in an intercultural dimension, so as to understand which form takes urban mobility in other cultures, on the one hand, and to show various manners to move and to use different modes of transport, on the other hand. We tried to grasp how the systems of transport were socially and culturally used, perceived and integrated (or assimilated).

At the same time, we contributed in the SAKURA cooperation. This kind of comparison provides additional insights on each own situation, about behavioural change.

The barriers of the language, the translation and the cultural differences, created biases and difficulties for the investigation. Because I do not speak Japanese, I had to interview individuals in English with the help of translators, which biased the interviews in two aspects: first, I was not able to normally lead the interview, and second, the translation gives rise to an interpretation which is not mine, and in fact here the translators were neither specialists in sociology nor in qualitative methods. Moreover, times of translation lengthened the time allocated for the interview and that forced me to curtail it, and thus to limit the number of questions.

Despite these obstacles, we could obtain a considerable amount of very interesting information concerning the practices of mobility, and on the perception of the environment and the policy in Nagoya.

18 face-to-face interviews were carried out in English, lasting more than two hours. We supplemented them with 15 interviews in a written form with other people who did not have enough time to take part in a face-to-face interview. A majority of women constitutes our sample. The ages vary from 20 to approximately 60 years old. I could obtain a diversity of situations as far as the used mode and the main types of trips and activities at destination are concerned. Except one or two persons, all the people interviewed who did not have a car were students³. I also carried out many observations.

In Tokyo, my stay was very short. Thus, it was not possible to do many interviews. We questioned two people working in a transport research centre who could give me explanations on the manners to move in Tokyo and on the organization of the transport systems. I also made observations on my own.

¹ Sources : Lettre d'information de CLAIR Paris, Avril 2003, n°45.

² The exposition was a big event which was held in the prefecture of Aichi, from March to September 2005, covering subjects such as environmental issues, advanced technologies, the participation of citizens, etc. For more information see: www.expo2005.or.jp/en/

³ The interviews were all anonymous. Thus all the names used for the analysis and written in the report are pseudonyms.

Results of the investigation in Japan

1. Standardized acquisition, rationalized use

The car is as much a symbol in the cycle of life as we have seen it in the case studied in France, in particular with the beginning in the active life and the family construction. Indeed, even if people get the driving licence at 18, they almost systematically acquire a car after a first recruiting and/or in a core family objective. From the interviews, it appears as normal in Japan to have several cars by household, and even several cars for each person in a family.

In addition to the socio-professional and familial status reflected by the automobile as well as the social symbolic of this object, Nagoya is the city of the car by excellence: the famous car manufacturer Toyota is established there, and the urban developments largely support the use of this mode. The other modes seem to have less place in the city: the cyclist does not have a dedicated space and has to share with the pedestrians. Public transport, although developing more and more, presents shortcoming in terms of service and road system, particularly in the suburbs, as well as in terms of schedules and frequency, and has also a very high cost compared to the price of gasoline for cars⁴.

However some rules in Japan could be obstacles having a car. For instance you must hold a parking space at home or rent a parking lot nearby before acquiring your car. For the interviewed the costs of a parking space are perceived high. Furthermore, there is not much private parking space on working places, and it is forbidden to park a car in the street. Lastly, the costs of a car and of a driving licence seem high but perceived like an inevitable investment.

If the car acquisition is not directly bound to the driving licence, the acquisition doesn't depend either on the use.

The interviewed Japanese people seem to have a more multimodal use of the car than French people have. In the French case, all goes as if car drivers choose the easiest accessible mode of transport at the origin, whereas for those Japanese people, the choice would take into account more the constraints at destination, looking for the best mode according to the trip and the activities they are going to make. For instance, going to the city centre, for shopping, having a drink, etc. For many people, using a car is proscribed for these activities. Among the reasons, are the trafficjams in the city centre, the limited number of parking places, and the expensive price of carparks. In addition, of the interviewed people no one drives after drinking alcohol. This rule seems to be quite well respected. Consequently, for a Japanese planning to drink some alcohol becomes a criterion for choosing the car or not. In France, most of the time people choose their car because they have one and they think it is the best mode of transport without necessarily comparing with the other options, they just take it. Of course, some of the interviewed French people do not use their car at anytime. Similarly, some Japanese people keep going by car to the city centre and shops, for instance because of all the items they buy. Besides, a lot of people choose the car to go far away because of the price of public transport, which is more expensive as the distance increases.

⁴ For instance, a private parking space is about 14.000JPY (100E) per month in the suburbs, and around 20.000JPY (138E) in the city centre. A public parking place in the city centre is about 100JPY (0.70E) for 20 minutes. The price of a driving licence is about 350.000JPY (2.400E). A car is between 800.000JPY (5.500E) and 5.000.000JPY (35.000.000E). A bicycle is around 30.000JPY (210E), and can go up to 100.000JPY (700E) for an electric one. The gasoline sale price is 125JPY/L (0.86E). About public transport, one trip is between 230 to 360JPY (1.60 to 2.50E), and there are different types of card such as a pre-paid card for which you pay 2000JPY (14E) and you get 2200JPY (15E) trip value; or a card by month or semester. All depends on the trip you do, it is by trip and not by zone like in Paris. The card allows only for one trip from one point to another. For instance, one of the interviewed people paid 45.000JPY (312E) for 6 months. For a month, one person paid 12.000JPY (85E), and another, 5600JPY (40E). If you drink alcohol and drive, which is strictly forbidden, you can get a fine of 300.000JPY (2.100E) and your driving licence withdraw for 3 months (according to the interviewed person). Parking your car in the street costs a 15.000JPY fine (105E).

Most of the Japanese people I interviewed do not go to work by car because of the uncertainty of the time travel. But those who can avoid congestion everytime and be sure to be on time, or those who do not have any arrival constraints, chose the car. But getting a private parking space at work is also a condition to choose this mode. Only a few companies provide some space.

While in the cases met in the Greater Paris Region, many people sought to optimize a shorter travel time (as they perceive it) and to decrease their mental and physical load, in the case of Nagoya, the individuals prefer punctuality and the certainty of the travel time. While the comfort and the pleasure of the mode are extremely present among the selection criteria of the French car drivers, they are not the priority in the choices of the interviewed Japanese people.

Eventually, we noted that many people first consider all available modes of transport before taking their car when other options were lacking. they opt for their car as a last resort. Thus, in Nagoya, I often met car owners choosing their bicycle for one trip of 15 minutes length that would have been met by car in Paris. The studied individuals do not travel by car for a short distance near their residence. These journeys were generally done by bicycle and sometimes by foot. On the contrary, the Parisians tended more to choosing their car automatically to reduce travel time from 15 to 5 minutes instead of choosing the bicycle or the subway. In The Greater Paris Region, one too often tends to oppose these kinds of transport rather than to make them complementary. In Nagoya, the car is rather used according to the possible alternatives. Often, the car takes a function of substitute when the other alternatives cannot satisfy the request for mobility.

Finally, it arises from the practices of mobility of the interviewed people in Nagoya, a strong tendency to multimodality. The individuals make use of various modes of transport according to the destinations, the activities and the associated constraints. All the different modes are used in a rather rational way. The constraints depend on the distance, time and punctuality, the cost related to the travel, the possibility of parking and its cost, and the restriction on driving with alcohol. Almost all the people questioned here have a bicycle and a car. Contrary to the Parisian practices, in Japan these two modes of transport are not opposed.

In the two studied cities, I observed that the congestion and parking space constraints seem to have an important impact on people behaviour to not use the car, maybe more than the costs⁵, even if these are still important. Consequently I can assume that measures to more constraint traffic and car parking, will be successful. But that kind of constraints are not enough to make a real change. In France I saw that despite of the development of public transport in terms of service and infrastructures, and despite the measures implemented to more constraint car use, people were not ready to change without a coherent and credible policy, and because of a lack of information to understand the reason and the objectives of a behavioral change. In the case of Nagoya, I can also assume that a big information and communication campaign is necessary as well as push and pull measures.

2. Environmental awareness and ecological practices

The inhabitants of Nagoya do not seem to be more aware of environmental problems than Parisian people are. Rare were the individuals worried by the pollution of cars. The urgency to carry out actions concerning transport, very seldom appears in their speech. When some people show a certain concern about it, they say that the government do not give them the means to move differently.

We can notice the same factors as those assumed in the case of the Greater Paris Region. First, these environmental issues are too far from them and do not let show concrete facts. In consequence people are not rendered sensitive to these issues. Second, they have a feeling of powerlessness, and they do not

⁵ Indeed, the public transport costs seem much higher than the car costs according to the interviewed persons. But as we notice in the case in France, often people do not have any idea of the cost the car could represent, or they count only the low cost of gasoline. The individuals consider only the cost for car use and do not take into account the purchase, insurance and maintenance costs.

know how to move in another way. Thirdly, they completely rely on the role of advanced technologies related to automobile engineering and to information systems. Finally, they said not to have other credible alternatives.

Parallel to these justifications, people incriminate the lack of information and communication about environmental problems, as well as the lack of measures constraining car use and supporting alternative modes.

But in addition to these justifications, another obstacle to the limitation of car use, which we had brought out in the case of France, proves to be the satisfaction of the individual needs. People refused constraining themselves for the benefits of the community. It seems as if they justified their lack of power while they felt too much constrained by a change of practice. According to an interviewee: "it is a good idea, but I can't do anything for that, I cannot move without the car, I need it everyday".

It is then interesting to make a comparison with the dividing waste practices which are paradoxically very thorough. Indeed all without exception divide their waste in different bins very rigorously. This rule appeared in 1999 with a call for emergency. Then, the government set up big information campaigns, and did an assiduous control. It also set up an important device with the presence of dustbins diversified in all the public places and organized very well the collecting of the different types of waste. Many inciting measures were set up too, like a reduction card for good actions for environment.

Beside coercive and incentive measurements, cultural characteristics support the effectiveness of these measures: that's the "face" role, in the sense of social sanction. Indeed in Asia, a strong cultural characteristic is to save one's face or to not lose one's face. If a Japanese was shown because he did not sort his waste correctly, he would lose his face. In the same way, if he makes a good deed he gains in face. Another characteristic also comes under the discipline of Japanese people. They are very respectful with rules contrary to the French people. In a second time, it is interesting to note that people are ready to take an active part in actions favorable for the environment if they gain something in return. Several projects are currently on the way: Eco Pon and Eco Money. In the first it is a question of gaining points and reductions passing a magnetic card at each trip by public transport, and in the second project, a question of gaining points and reductions in partner stores when a good action is done, such as for example refusing a plastic bag in a supermarket.

Thus, the individuals seem to react favourably for the environment under the authority of a strict rule or with a benefit in return, but also if they are sufficiently informed to become aware of the importance of these environmental questions by themselves. Dealing with the triptych: "information/communication - coercion - incentive" seems to be efficient.

3. Perceptions of the policies

We noted a weak implication in the decisions and political actions. The interviewed individuals seemed not to have or not to want to deliver their opinion on the subject. Moreover, only few measures were evoked, which we can hypothetically bind to the lack of communication on the question. Indeed, most of the time the individuals questioned in Nagoya were not informed of the actions carried out by the government in favour of the environment and the transport policies. Some people saw actions during the World EXPO AICHI 2005, which made apparent some actions and measures implemented or going to be set up.

Some people emphasized the lack of coherence of policy measures, which had been considerably brought out by French people.

For many individuals, the car infrastructures and the maintenance of the roadway system is evidence of the fact that the car is still largely a priority in the policies. Inquired people speak about "car-centred policy", "car system". However some noticed the strong development of public transport.

4. Conclusion

Finally, the analysis of this study carried out in Nagoya, partly shows the same obstacles and factors of no change in behaviours for more sustainable mobility, as those discovered in the case of the Greater Paris Region. In particular the Japanese are not more aware of the environmental issues of pollution and global warming than the French are, at least concerning transport. On the other hand they are definitely more concerned by other ecological practices, in particular the sorting of waste. This could be explained by the important information and communication campaigns concerning waste, as well as the set up of explicit coercive measures with an assiduous control, or implicit with the social sanction and the “face” role; without forgetting incentive measures.

But in addition to a coherent policy system based on the “information-formation - coercion – incentive” triptych, cultural characteristics have also their weight. I assume that these actions are efficient because the individuals gain a compensation for an effort for the community. But especially because these practices were incorporated, integrated and translated by the individuals in the form of social constraints, by combining them with a normative stake.

However, if the government succeeded in making people change their practices and respect the environment in the case of waste, it was not the case for transport. The authorities do not seem to have sufficiently informed the individuals about the car’s harmful effects on the environment. And the urban development is still largely favourable to the car.

Thus, we can say that there are universal variables to understand mobility, but some appear more in certain cultures than in others. However, in addition to this universality of the analyzers, there are specific cultural characteristics, such as the importance of time and particularly punctuality, the respect of the rules and of the authority. But in addition to these characteristics, the enforcement of coercive rules has an important impact on behaviours: the individuals comply with the rule under the pressure of severe punishments. The fines are very high in Japan and the laws are strict. In Nagoya, the compliance with the rule is integrated in the selection criteria of the mode. We can also bring out the strong attraction for playing games and in particular gambling (fruit machines, lotto, etc) in this culture, which seemed interesting to understand the individuals’ participation in the sustainable commitment.

Like G. Amar⁶, I think that in a society a mode of transport must correspond to a way of life. On this basis, I wonder whether the question is to change the mobility practices or to change the way of life. This idea is also evoked in the objectives stated in the report of Toshikazu Yoshida⁷ for the City of Nagoya. G. Amar suggests “making a transport system a whole element of the culture of a city”. But in addition to its functional aspects like infrastructures and adapted services, a mode must be filled up emotions and symbolic. We make the assumption that if the car is still anchored in the French and the Japanese life habits, it is not only because of the lack of infrastructures and the lack of credible alternative choices, but also because of the car’s strong symbolic system in terms of rituals in the life cycle and the social status, on the one hand, and the weight of individualism and the lack of sensitiveness to the car effects on the environment, on the other hand.

⁶ AMAR. G., 2004, *Mobilité urbaines, Eloge et devoir d'invention*, ed. L’Aube.

⁷ Toshikazu Yoshida, co-director, street planning division, housing and city planning bureau, City of Nagoya, communication for the 7th ASEAN-JAPAN Workshop-cum-Seminar on Urban Transport, 2005.