

Taking account of not motorized trips and road unsafety in a global urban development project.

Paper presented at the meeting organized by Consorzio Tyrrhenum & Ambasciata d'Italia a Bruxelles
Brussels, MAY 27th 1999

Author : Philippe Hanocq
Chargé de cours adjoint à l'ULg
Centre de Recherche en Aménagement et Urbanisme - Université de Liège
Faculté des sciences Appliquées Bât B52
1 Chemin des chevreuils B - 4000 Liège
Tel. : +32 (0)4 366 93 35
Fax : +32 (0)4 366 95 48
Courriel : p.hanocq@ulg.ac.be

Brussels, MAY 27th 1999 - Meeting organized by Consorzio Tyrrhenum & Ambasciata d'Italia a Bruxelles

Taking account of not motorized trips and road unsafety in a global urban development project.

*PHILIPPE HANOCQ - 1st Research engineer - CRAU Université de Liège
SESSION 4*

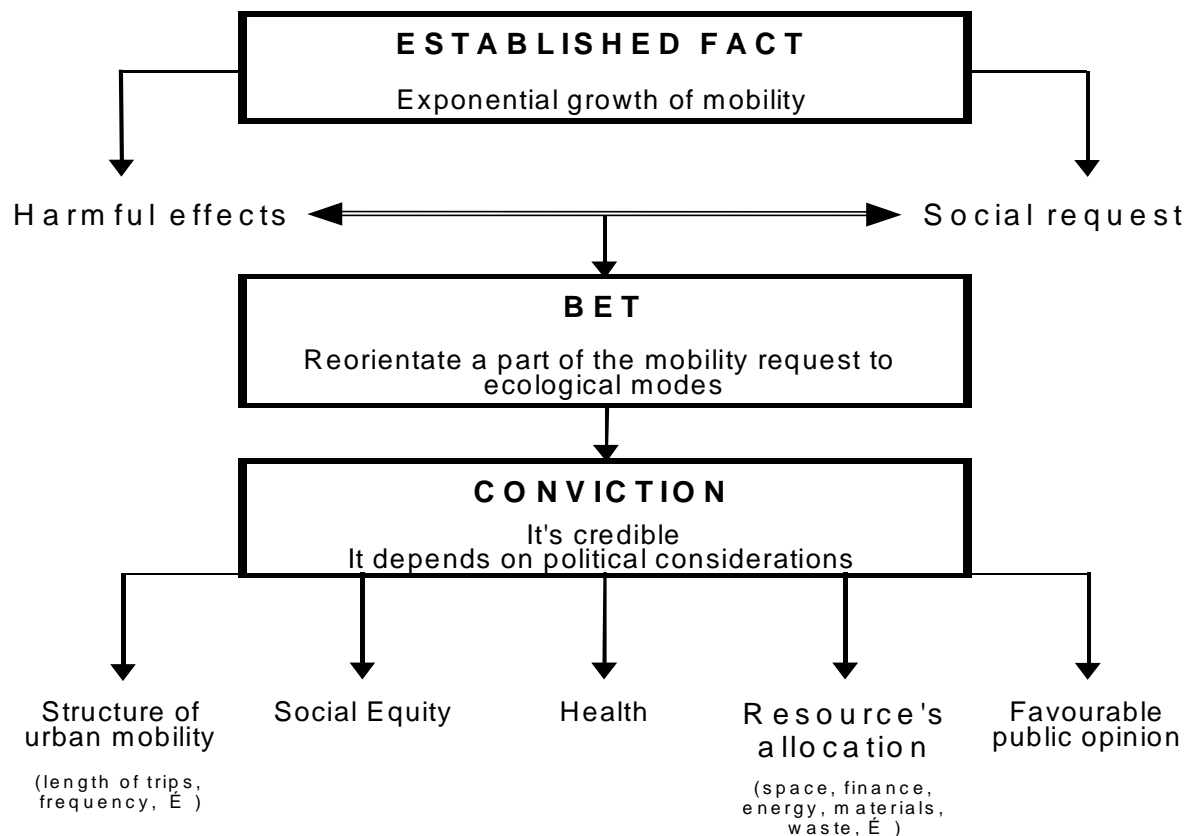
This proposal falls under the 5th European Framework Program, Key Action 4 " CITY OF TOMORROW AND CULTURAL HERITAGE ", point 4.4.1 " Strategic approaches and methodologies in urban planning towards sustainable urban planning ".

The goal of this proposal consist to impulse some new urban policies and attitudes to favour the use of not motorised modes in urban trips.

Several questions have to be considered :

- From the point of view of a sustainable urban development, it is important to control the **harmful effects** generate by the exponential growth of urban motorised mobility, for which the environmental and social consequences are now measurable. This control can only be done by public authorities, which are entitled to define the rules when the general interest is wounded. These rules consist mostly on functional (action on the infrastructure), lawful (prohibition - permission), tax (various taxes, tolls...) or educational (promotion campaigns) measures. All of these interventions have an incentive character, aiming at the same time the users (behavioural change) and the " mobility professionals" (cars manufacturers, private or public transport companies ...), since they force those to adapt themselves with the requested evolution.
- In addition, one regularly associates the level of mobility (motorised) and the level of economic development. From this point of view, it can't be question to plan the regression of welfare, reducing purely and simply the mobility in the developing countries, more especially as people are probably not inclined to give up what is perceived, wrongly or rightly, like the exercise of a fundamental right or freedom : the faculty to move more or less freely and the feeling of autonomy which results from this. There is then a strong **social request** for mobility.
- Therefore, there is a **confrontation** between two antagonist constraints, on the one hand the need to control the harmful environmental effects (especially we can't forget the prospect to generate a social and environmental disaster if the less developing countries reach soon our level of motorised mobility), on the other hand the need to take the democratic constraint into account asserting one's wellbeing through the autonomy of individual. This equation can be solved while trying to positively **reorientate** (from an environmental point of view) part of the request for mobility which is legitimately expressed. A possible solution, and it'll be our thesis,

consists in a partly **transfer from nowadays mobility to not motorised systems** (walking, cycling...) and this, totally in agreement with the principles of sustainable development. It's a bet, but it leans on several objective facts whose give us the conviction that those new attitudes are possible if some positive conditions regarding urban policies are joined together.

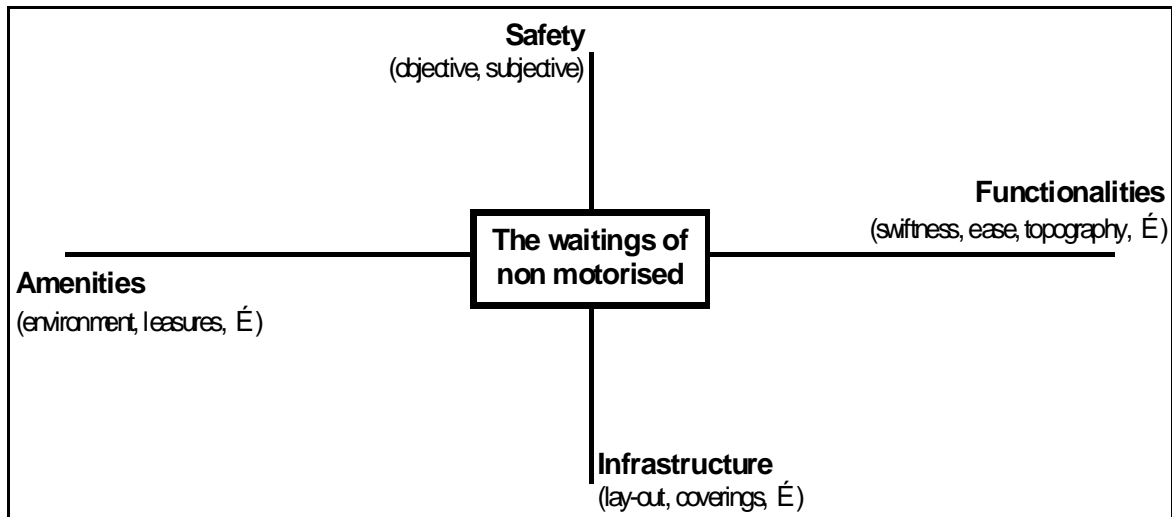


- Of course, other ways exist to attenuate the level of the harmful effects generated by mobility : technical reduction of the pollution level (noise, atmosphere...) of vehicles, intensification of use of Public Transport, development of telecommunications which could substitute to physical mobility, internalisation of some social costs (sometimes synonym of " right to pollute "). These ways remain in background but do not constitute the object of this proposal. In this proposal, we'll strictly abide by evaluation of policies concerning the non motorised trips which answer, by assumption, to environmental criterions of the sustainable development.

Then, we'll consider that not motorised mobility constitute, for a considerable share, a **credible alternative** to the car and this alternative **don't involve a fundamental questioning of the nowadays wellbeing**. In fact, what can ground such a conviction that this alternative way of mobility is possible and credible ?

1. Most of urban trips (origins and destinations in the same agglomeration) are lower than 5 km (threshold of acceptability for a frequent and comfortable use of the bicycle by the majority of the people) and many of those trips are lower than 1 Km.
2. The vehicle ownership of households in urban environment is relatively low (in Belgium, in the most important agglomerations, the statistics make appear a vehicle ownership of approximately 60%. In other words, approximately 40% of the households do not own a car). Under these condition, the alternative modes meet the principle of equity, put ahead in the policies of sustainable development.
3. Not motorised mobility is accessible to a large public and at low cost. Such a mobility doesn't generate any social segregation in accordance with the principles of equity and democracy pointed out above. The only restriction on this field would concern possibly the physically decreased people for whom motorised solutions are essential.
4. At the opposite, in the field of prevention of certain diseases (particularly respiratory and cardiovascular diseases) for which social costs are very high, walking and cycling are revealing completely profitable for the community and are contributing significantly with improvement of comfort of individual life.
5. The not motorised transportation modes are particularly sparing in space and in financial resources (these regarding at the same time users and community) in perfect conformity with the principles those are below the concept of sustainable development.
6. These modes are user-friendly and safety what meets the objectives defined for the city of 21st century, by the European authorities according to the goals of the 5th Framework Program.
7. They can also easily be recycled (take very little part in the increase of waste, in particular of not easily manageable waste like tires, oils, fuels... - generated by the motorised vehicles). Moreover, their production is completely sparing of materials and energy, which also answers one of the great principles of the sustainable development. Incidentally the production process, little sophisticated, can be reproduced without difficulty in the under-developed countries.

The waitings of people doing not motorised trips



8. Lastly, not motorised mobility is generally voted by plebiscite in many cases, and profits so of a broad democratic base. It is not a question of a theoretical concept resulting from a purely technocratic step disconnected from any social reality but on the contrary, it is a response to clearly identifiable waiting emanating from the citizens. So, local or European searches allowed to highlight in the population, using rates obviously very high for walking and cycling (for example, household's investigations reveal most important bicycles ownership than cars), as well as very positive appreciations concerning these modes of locomotion. It's particularly the case for the people for which walking or cycling constitute the main access to autonomy, that is to say the people which have not access to car driving because of their age (approximately, in our developing countries, the school aged population). It's still the case for the whole of population, doing specific activities such as leisure or " sociability " activities (visit, pleasure of city...). These people are thus far from being marginal.

These considerations show with sufficiency at which point " ecological " mobility could constitute, in a sustainable development prospect, a credible and socially acceptable alternative, and this, in a considerable proportion.

From this point of view, we think it's necessary to reach, at least, two objectives :

1. Determine the necessary and sufficient conditions to initiate in the "city of tomorrow" favourable policies to not motorised modes, taking into account the wished benefits in terms of sustainable urban development ;
2. Define some methods of intervention likely to increase gradually or to maintain at a high level, the share of trips carried out by these ecological means, because the sustainable development and the urban development must absolutely integrate the temporal dimension.

We estimate that these objectives can be achieved while making use of an analysis resulting itself from established facts : in practice, the shares of not motorised trips are far from being homogeneous from one city to another. In Belgium for example, the utilisation's rate of the bicycle for home-to-school trips varies from more than 40% in some cities to less than 1%. The climatic or topographic considerations do not seem very relevant to justify such a variation that one can only explain through political considerations, the presupposition being that the most interesting of them could be applied in many cities.

To do that, it could be of great help :

- to ***analyse and understand*** the differentiated situations existing in the cities of the E.C. countries ;
- to ***transcend this analysis and to translate*** it into specific proposals taking account of the "cultural" characteristics homogenising the practices by groups of cities that have to be defined.

Such an analysis requires, at least, two phases :

1. **a first scan** relating to factors which we will call "exogenous" (in relation to the policy of mobility). This aims to highlight the generic factors of urban, social and cultural environment which "pre-exist" and which be useful as a more or less fertile compost preparing the operational phase which consist in a detail layout of the city (second phase) according to sustainable development objectives.

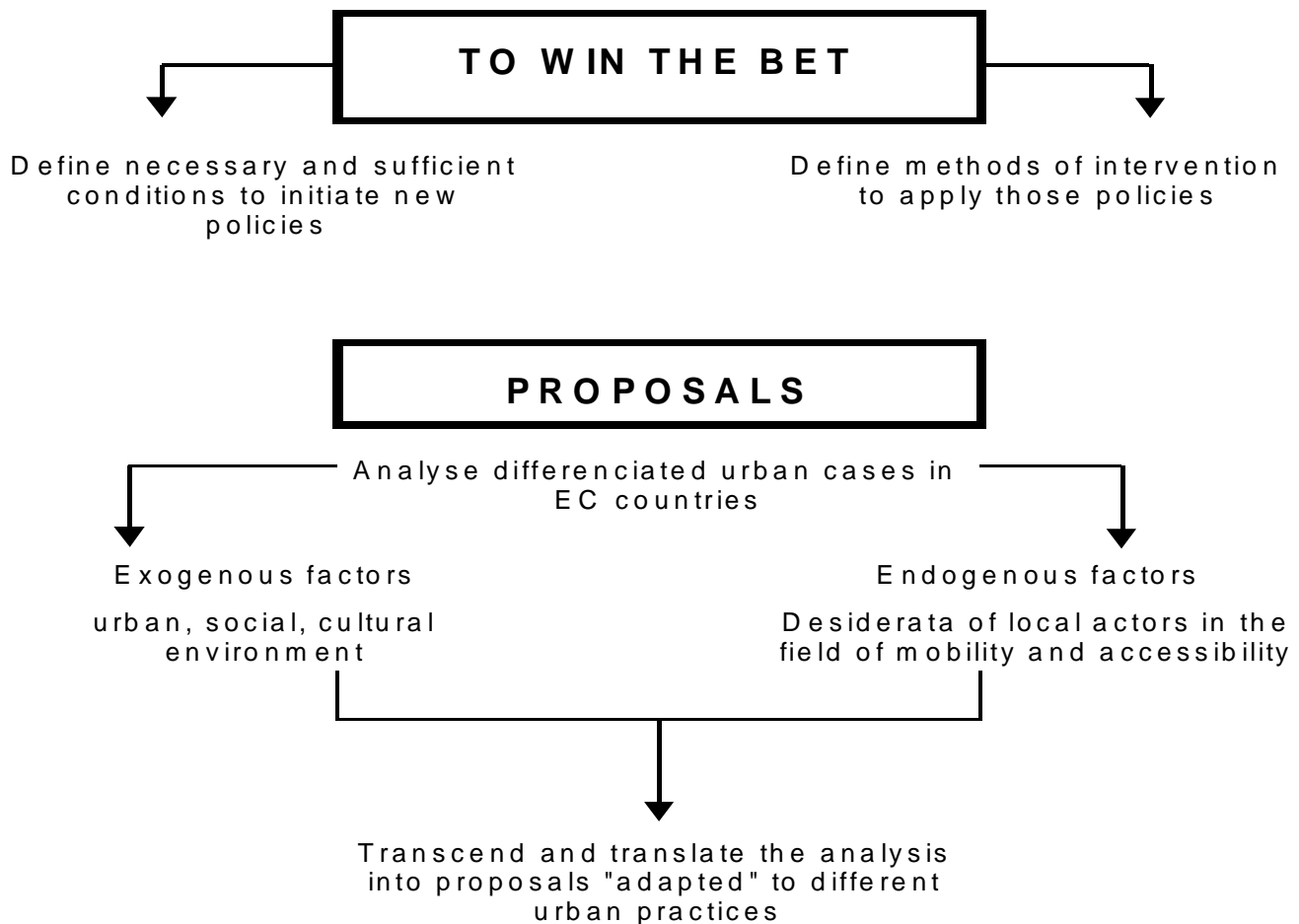
In our mind, we can compare cases presenting a certain typicality (cities recognised to be "Walker and biker-friendly" on one hand, very motorised cities on the other).

The analysis can lean on :

- **Sociological, demographic and cultural characteristics** (for example: the economic capacities of the population, the demographic stratification, the ambient social culture, technical / administrative practices, ...). These factors are called "***sociological factors*** "
- **The urban structure**, specially questions of density, general organisation of the communication networks (hierarchy, density, installation), formal specificity's, functional mixing. One will gather these factors under the generic name of "***urban factors*** "

From there, it should be possible to establish a "classification" of what we shall consider as the **basic conditions** allowing to initiate a favourable policy to not motorised people

2. **a second scan** fixing the desiderata (we'll call them " endogenous " factors in relation to a local policy of mobility) of the local actors (population, decision makers...) in the field of mobility and accessibility and so to reveal the acceptance for corrective measures or evolutions possible in regard of what it is actually proposed. It's then the question to analyse the glance that carry on themselves and on their way of life (comfort, wellbeing...) the protagonists of the different pointed cases, as well as to put in obviousness the impacts on the " sustainable city of tomorrow " that can generate different mobility practices.



This scan can be carried out through interviews of adequate persons or organisations, like : user's representatives (child / adult), experts / technicians of mobility and politics. The purpose of this analysis is to define the means of a policy of mobility which must be continuous.

In our mind, such an analysis would be, for practical reasons, limited on educational (promotional (marketing) and sensitising (education) means), functional (technical and normative aspects, unsafety) and formal (physical space organisation) fields, whose which are generally hold for essentials to develop a policy favourable to not motorised mobility.

One will be able thus to locally apprehend the minimal conditions necessary and sufficient to generate an environment favourable to ecological mobility. One will also determine the evolution of the requirement's level of the protagonists according to the former " assets ". This methodology should make it possible to establish a bill book of the priorities and to develop interventions from the point of view of constant adaptation to the request.