

A foresight exercise into urban mobility

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Basic assumptions

The urban situation is broadly different in Europe and on other continents.

To understand urban mobility, observe its evolution in time.

This evolution can be seen as the product of two competing movements, provoked or stimulated by different factors.

At a given point of time, each city has its own combination of these two movements, depending on the prevailing factors and the prevailing policies.

Any such a combination is transitory, which generates some specific problems.

Basic assumptions

MOUVEMENT 1

Growth of individual motorized traffic ... to the expense of the ancient modes existing before cars and motorcycles were invented and manufactured (pedestrians and, later, bicycles).



MOUVEMENT 2

Control and/or decrease of urban individual motorized traffic, development of public transport networks, of pedestrian and of bicycle networks, speed moderation, attention to quality of public space.

Consequences for the urban environment

MOUVEMENT 1

Urban sprawl → social segregation
More space for motorized traffic,
Destruction of historical and patrimonial sites
Lengthening of car trips
Limitation of public transport
Noise and pollution
Sprawling parking areas and disappearance of « cosy » urban spaces
Creation of suburban commercial centres → destruction of small trades and neighbourhood shops.

MOUVEMENT 2

Densification of habitat
Balanced space allocation to individual motorized and non-motorized transport, to public transport modes and to urban activities other than transport
Moderation of speeds to make space sharing feasible and safe
Limitation of opportunities for car ownership
Minimizing noise and pollution

Effects on safety and security

MOUVEMENT 1

Endangered non-motorized road users whose needs cannot be met
Increasing exposure of drivers for the same level of accessibility
Low levels of perceived (and probably real) security for non-motorized road users in traffic areas
Low security levels in the less accessible neighbourhoods (further from activity centres).

MOUVEMENT 2

Reduced frequency and severity of all crashes (due to lower speeds and shorter exposure)
High levels of perceived (and probably real) security in public spaces where people interact

The main contributing factors

MOUVEMENT 1

Technology and industry (developing and producing cars and motorcycles)
Economic growth
Democracy (right of ownership)
Rural exodus
Social inequalities and status (preferring effortless mobility)
Cheap petrol

MOUVEMENT 2

Large scale environmental issues (global warming).
Health issues (noise and pollution)
Rising prices of petrol (scarcity, speculation, tax policies)
Technology and industry (developing alternative less-polluting collective and intermediate transport modes)

None of the motors of Movement 2 can be active without public policies and participation of citizen groups

The situation now

Movement 1 pre-dates Movement 2 except in some planned urban developments (New Towns, SCAFT guidelines, etc.). Movement 2 has mostly evolved to correct the unwanted effects of Movement 1 while maintaining accessibility.

Still mainly in movement 1 : fast developing cities (Delhi, Beijing, etc.). Older cities where low petrol prices and availability of space have facilitated large scale urban sprawl (Los Angeles).

Now mainly in movement 2 : cities in countries where strong policies have been implemented (for instance, the Netherlands, Sweden, etc.).

In-between : most European cities where strong factors push back to Movement 1 and factors for movement 2 are slowly getting stronger. The present state is unbalanced and local policies unsteady.

An ageing population requires ergonomic environment and modes of transport in order not to keep the citizens mobile

What evolution do we want?

Accelerating movement 2 through research, policy and activism. It is crucial because:

- ✓ global warming is proved and progressing fast
- ✓ Awareness of health issues related to pollution and noise is growing
- ✓ petroleum products are going to become scarcer and scarcer (sooner rather than later).

Caring for ageing and/or physically challenged citizens to help them continue with a useful and fulfilling life.

What is currently happening?

Industry and research focus on new technologies **in order to sell more cars** : electric cars, self driving cars.

None of these will contribute to slowing global warming and decreasing consumption of petrol (except perhaps electric cars....*if they can be autonomous on longer distances and electricity is produced through nuclear power*). Intensive consumption of rare metals for electronics is creating new (political and environmental) problems.

Pushing for new types of cars should increase demand for space allocation to individual motorized transport ➡ Return to Movement 1.

If Movement 1 starts snowballing, sizeable effects on the climate can be expected.

If we don't engage further in Movement 2, we risk the « Doom scenario » described in PQN (increased economic and spatial inequalities, increased social unrest, local violence and world-wide terrorism).

What about safety ?

Expected safety effects of self-driving cars rely on dubious hypothesis (*human error can be in programming softwares as much as on the road!*). In practice, the first years of introduction of self-driving cars in traffic will be a real-life testing period.

Industry is putting on the market new motorized « toys » (design scooters, powered motorcycles, etc.) solely for ludic purposes. Their safety effects have not been tested.

How can we push Movement 2?

Re-defining the urban role of individual motorized transport, optimizing the conditions for this role to be fulfilled and discouraging all other usage.

Priority space allocation to the **less polluting modes** and to public transport.

Policies based on **mobility, safety and health for all** (inclusive of elderly and impaired citizens).

Focussing research and industry on **new less-polluting individual and collective transport modes** in order to provide a whole range of alternatives to car and motorcycle mobility, including mobility of the most vulnerable road users.

Implications for urban planning policies

Urban planning policies to **densify** multi-function areas and **avoid uncontrolled sprawl** of residential neighbourhoods (*necessary to make mobility policies possible*), up-grade quality of urban public space and life amenities (*essential to make densification and a switch towards collective transport acceptable*).

Make cities greener (more acceptable, less polluted, healthier) : a condition to be included in urban densification and in public space allocation.

**To counteract some factors at work,
need for better politicians and for
increased citizens' involvement !**